

Framework for Circular Economy for the ASEAN Economic Community

Table of Contents

Part 1 Introduction	3
Part 2 Objectives	4
Figure 1: Framework for Circular Economy for the ASEAN Economic Community	5
Part 3 Strategic Goals	5
Strategic Goal 1: Resilient Economy	5
Strategic Goal 2: Resource Efficiency	6
Strategic Goal 3: Sustainable and Inclusive Growth	6
Part 4 Guiding Principles	6
Principle 1: Promote ASEAN integration and the development of regional value chains.	6
Principle 2: Take into consideration the broader impact on the economy, sectors, and society.	6
Principle 3: Recognise the unique circumstances of each AMS whilst supporting long-term growth prospects of the region.	7
Principle 4: Encourage ASEAN-wide coordination on knowledge, technology transfer, and capacity building.	7
Principle 5: Evaluate financial and institutional feasibility and sustainability, including practical applications, prior to implementation.	7
Principle 6: Function within the reality of international production networks and linkages.	7
Part 5 Strategic Priorities	7
Strategic Priority 1: Standard Harmonisation and Mutual Recognition of Circular Products and Services	7
Strategic Priority 2: Trade Openness and Trade Facilitation in Circular Goods and Services	8
Strategic Priority 3: Enhanced Role of Innovation, Digitalisation, and Emerging/Green Technologies	8
Strategic Priority 4: Competitive Sustainable Finance and Innovative ESG Investments	9
Strategic Priority 5: Efficient Use of Energy and Other Resources	10
Part 6 Enablers	10
Part 7 Implementation	12

Part 1 Introduction

Along with the pressing global issues of climate change and resource depletion, ASEAN recognises that its long-term economic resilience depends on achieving sustainable and inclusive growth. To realise this, ASEAN needs a new economic model that looks beyond the traditional 'take, make, use, dispose' economy, and embraces resource efficiency. This is where the circular economy (CE) model¹ – one that is restorative, regenerative by design, and makes effective use of materials and energy – comes in.

To encourage the adoption of CE amongst stakeholders, **ASEAN needs to consider a holistic approach** that addresses opportunities and challenges of CE from both the supply and demand side. Equally important, all initiatives must be supported by strong capacity building and educational programmes to ensure continuity and a promising way forward for the region. In supporting businesses to adopt the CE model, it is critical for ASEAN to **create a conducive ecosystem for circular products and services** by prioritising: (1) standards harmonisation and mutual recognition agreement; (2) trade openness and trade facilitation in circular goods and services; (3) the use of technology in greening the supply chain; (4) access to financing for green projects; and (5) efficient use of energy and other resources.

For ASEAN to fully adopt the CE model, **a demand-driven policy must also be in place** through regulations that prioritise the use of circular products. In addition, introducing fiscal and tax incentives, and reward mechanisms within the context of ASEAN Member States' (AMS) national strategies, will also encourage the adoption of circular business models. There also needs to be a mechanism to ensure the rights of both producers and consumers will continue to be protected under the CE model. A coordinated effort to reskill ASEAN entrepreneurs, and improve educational programmes for individuals in the region, on CE is also critical.

The transformation to CE model will be a progressive journey for ASEAN given the different levels of development across the region. It will require **policy frameworks and institutions** to guide AMS in pursuing appropriate CE-related policy interventions, **enhanced awareness and competence** across sectors to ensure effective implementation of CE-related initiatives, **digital technologies** to promote innovative business models, and **partnership and collaboration** amongst all relevant stakeholders across the three ASEAN Community pillars. To further progress the region's CE agenda, ASEAN will also need to identify and prioritise **sectors that will benefit from early transition**, particularly those where CE-related initiatives are either already in place or are in the pipeline, such as in agriculture, food and forestry, mining, energy, finance, and transportation, but the list can be expanded as appropriate. As the region progresses towards a more advanced stage of circularity, it is important to heighten the level of transparencies for companies to disclose the environmental impact of their operations through an **environmental audit mechanism to provide accountability and institutionalise responsible business practices**.

Transition towards CE is inevitable as both the private and public sectors begin to recognise and acknowledge the impact of climate change on development, particularly for developing countries. In preparing the region to be resilient and future ready, ASEAN is committed in building a more

¹ See, for example, (i) Ellen MacArthur Foundation webpage at: <https://www.ellenmacarthurfoundation.org/explore/the-circular-economy-in-detail>; (ii) The EU Circular Economy Action Plan at: https://ec.europa.eu/environment/topics/circular-economy/first-circular-economy-action-plan_en (iii) Empowering ASEAN for Circular Economy at: <https://www.eria.org/publications/industry-40-empowering-asean-for-the-circular-economy/>; (iv) Assessing the readiness of Industry 4.0 and Circular Economy at: <https://www.eria.org/research/assessing-the-readiness-of-industry-40-and-the-circular-economy/>.

circular economy by transforming the production and consumption pattern of its community to minimise waste. Specifically, **ASEAN's transition to CE will be geared towards resource efficiency, economic resilience, and sustainable growth**, and will seek to maximise the value of products throughout their lifecycles and prevent wastage as much as possible, while in the process enable AMS to meet their respective carbon emission targets under the Paris Agreement for climate change.

Whilst CE concept has been applied by AMS, discussions at the regional level have been limited, with most of the CE-related initiatives under the purview of the ASEAN Socio-Cultural Community (ASCC), mainly from the environmental perspective. As for the ASEAN Economic Community (AEC), existing measures are lacking alignment with CE principles and concept, and, thus, overlooking the roles of trade, technology, and finance, in ASEAN's circular transformation.

The **Framework for Circular Economy for the ASEAN Economic Community** (hereafter 'the Framework'), therefore, provides a **structured pathway for stakeholders to progressively adopt the CE model** in achieving the sustainable economic development objective under the AEC Blueprint 2025. The Framework is ASEAN's first strategic move towards promoting CE for long-term resilience. It sets out an ambitious long-term vision of CE, building on the strengths of existing ASEAN initiatives, and identifies priority focus areas for action along with enablers, to accelerate the realisation of CE in ASEAN.

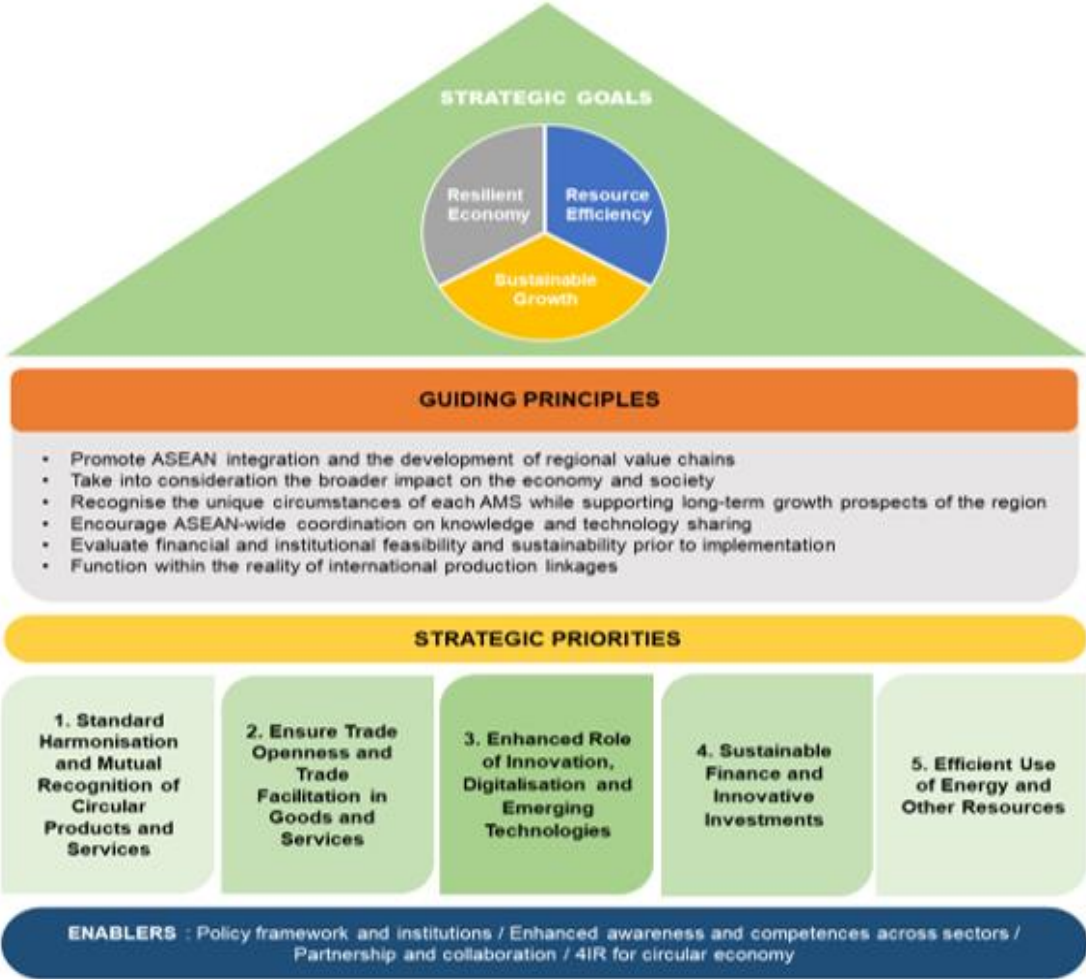
Part 2 Objectives

The objective of this Framework is to:

- (1) Define the scope of CE work for the AEC and the principles for guiding this work;
- (2) Identify strategic priorities and priority areas for expanding ASEAN's action agenda on CE, taking into account the current COVID-19 pandemic, the ASEAN Comprehensive Recovery Framework (ACRF), and other relevant ASEAN ongoing efforts in all pillars and institutional mechanisms; and
- (3) Propose possible new initiatives, and cross-pillar and cross-sectoral cooperation pathways in support of CE work, including by exploring potential entry points for collaboration and coordination with other ASEAN Community pillars, especially the ASCC.

The Strategic Goals, Guiding Principles, Strategic Priorities, and Enablers to be pursued to attain the afore-mentioned objectives are summarised in Figure 1 below.

Figure 1: Framework for Circular Economy for the ASEAN Economic Community



In identifying priority areas for ASEAN’s work on CE, the Framework shall give priority, but not be limited, to those where there are existing sectoral bodies in the AEC to which the CE principles can be effectively applied.

Part 3 Strategic Goals

In moving towards CE, ASEAN strives to achieve a balance amongst three interdependent goals:

Strategic Goal 1: Resilient Economy

Existing incentives, business models, trade patterns, built infrastructures, and innovation practices define the energy consumption and resource needs of an economy for decades to come. However, climate change and more frequent natural disasters, in addition to resource depletion and price volatilities, may disrupt economic activities. Resilience has become an imperative, to withstand economic shocks and strengthen an economy’s ability to respond to potential disruptions in the future. Adopting CE will enable ASEAN to improve its resource-

intensive development models that tend to be vulnerable to shocks. In the long-run, this shall minimise costs and risks, ultimately benefiting ASEAN.

Strategic Goal 2: Resource Efficiency

Whilst Strategic Goal 1 is about minimising disruptions, resource efficiency aims to maximise possible benefits through more efficient resource use, whilst enhancing economic competitiveness and environmental benefits. Fostering CE aims at governing and intensifying technological innovations, promoting green technology, offering integrated product and service models, extending financial support for circular value chains and raising consumer awareness on efficient resource use and environmental impacts. ASEAN commitment for CE-based policies and innovations to attain resource efficiency shall boost industries' competitiveness in domestic and foreign markets, both regional and global. Putting in place a strong regional ecosystem for eco-innovation in the ASEAN region is very important, to strengthen and support pioneering entrepreneurs, start-ups, micro, small and medium enterprises (MSMEs), and well-established business entities.

Strategic Goal 3: Sustainable and Inclusive Growth

Public and private finance communities are increasingly seeking Environmental, Social and Governance (ESG) opportunities as a part of growing international and domestic trend towards investment portfolios whose profit go hand in hand with sustainability. ASEAN has an opportunity to lead this global shift given its rapid industrialisation, wealth in natural resources, and economic integration, by becoming a hub for circular innovations, promoting complementarities in regional supply chains through technology exchange, whilst taking into account the different levels of development of the AMS. ASEAN needs to create an enabling environment to sustain growth and accelerate it such as through enhancing innovative business models and coordinating resources towards circular investments.

Part 4 Guiding Principles

Aspects of circularity are found in several AEC sectoral guidelines, targets, and implementation plans, whilst at the AMS level, there are also existing plans, policies, and approaches on or relating to CE. In view of this, this Framework provides six guiding principles to establish a common context for CE initiatives in the region:

Principle 1: Promote ASEAN integration and the development of regional value chains.

The AEC aspires to be a highly integrated and cohesive economy that fosters the development of regional value chains. Therefore, CE initiatives shall be trade-enabling and promote new integrated markets and investment opportunities, including for specialised goods and services, MSMEs, amongst others.

Principle 2: Take into consideration the broader impact on the economy, sectors, and society.

CE promotes resource efficiency in order to minimise the environmental impact of economic activities. Beyond this environmental objective, AEC CE initiatives shall consider the wider economic, sectoral and societal dimensions, such as the impact on prices, small businesses, employment, livelihood, and well-being. Human resource development, particularly upskilling and re-skilling, will be crucial in building labour competencies to par with the requirements of CE.

Principle 3: Recognise the unique circumstances of each AMS whilst supporting long-term growth prospects of the region.

AMS have their unique individual circumstances and socio-economic development priorities, such as green and bio-economy, that need to be aligned. AEC's CE initiatives shall take this diversity into consideration, whilst engaging in the collective pursuit of the region's long-term sustainable growth prospects. Adequate support shall be provided to AMS, where appropriate and feasible, in meeting the objectives of ASEAN.

Principle 4: Encourage ASEAN-wide coordination on knowledge, technology transfer, and capacity building.

Effective implementation of ASEAN CE initiatives requires close cross-sectoral and cross-pillar coordination, especially between the AEC and ASCC, and engagement with the broader stakeholders. A Community-wide collaborative approach and cooperation mechanism, including sharing of best practices and technology, shall be encouraged to advance CE in the region. As well, mechanisms to support these endeavours shall be established, such as online platforms for best practices, or partnerships with research networks, the private sector, and other stakeholders.

Principle 5: Evaluate financial and institutional feasibility and sustainability, including practical applications, prior to implementation.

For AEC CE initiatives to have long-lasting impact, they shall be pursued with financial innovation, institutional feasibility, and sustainability in mind. Financial innovations shall be evaluated based on their relevance and effectiveness, as well as applicability for AMS. Financial solutions and mechanisms that incentivise circularity and are sustainable shall be encouraged. This way, initiatives shall continue to perform and deliver benefits beyond the implementation period.

Principle 6: Function within the reality of international production networks and linkages.

Given that production of circular goods and associated services in the region entails considerable inputs from within the region and beyond, the Framework shall be cross-border in nature. Moreover, the continued importance of global value chains means that ASEAN-specific CE strategies need to recognise global best practices, and policies adopted by key ASEAN economic partners, whilst advancing ASEAN as a strategic regional and global player and partner on CE.

Part 5 Strategic Priorities

ASEAN recognises that CE efforts are still in the early stages, and credible policy commitments are needed to advance its CE agenda, supported by effective coordination and collaborations. In ensuring the mainstreaming and scaling up of CE, AEC considers five strategic priorities to set a pathway for the smooth transition to CE, in support of the continued pursuit of sustainable economic growth and integration in the region. The AEC shall take into consideration the following five strategic priorities:

Strategic Priority 1: Standard Harmonisation and Mutual Recognition of Circular Products and Services

The harmonisation of standard and mutual recognition arrangement (MRA) for circular products and services are required to facilitate circularity of trade in products and services. They are also

useful in ensuring mutual understanding, thereby promoting greater transparency, facilitating integration between value chains, and multiplying circularity. Essentially, keeping in line with existing and evolving international standards, regulations, and practices, standards serve an important function in facilitating international trade as these promote interoperability and product assurance,

Proposed Initiatives under SP1:

- (1) Explore trade-related standards and regulations that would support CE in the region.
- (2) Develop and promote the utilisation of MRAs for product and service standards embedding CE principles, in accordance with prevailing international regulations, standards, and practices, where these exist, including those of MSMEs.
- (3) Harmonise circular products and services standards with other existing MRAs and standards in various ASEAN sectoral bodies and pillars.
- (4) Initiate inclusive capacity building and develop guidelines on agreed priority sectors.
- (5) Establish commonly understood and reliable standards or taxonomy for the reuse of raw materials, second-hand products, and services as well as refabrication or re-manufacturing, to assist consumers, both industry and the public, to make informed choices and purchasing decisions.

Strategic Priority 2: Trade Openness and Trade Facilitation in Circular Goods and Services

As it stands, CE tends to be fragmented across sectors, focused on specific products or materials, and are in separate jurisdictions or product clusters. Therefore, international trade and trade facilitation matters for the transition to CE and its economic viability, by closing the loop for activities that span across country borders. Keeping trade barriers, including non-tariff ones, at their minimum levels, shall allow seamless movement of products or services, and facilitate optimal resource allocation at firm, country, and regional levels.

Proposed Initiatives under SP 2:

- (1) Alleviate unnecessary barriers to and promote trade, investment, and innovation in environmental goods and services to ensure the diffusion of the best available circular technologies.
- (2) Facilitate movement of second-hand goods and materials across border to support circularity efforts, such as through the development of a taxonomy to help minimise unnecessary regulatory burdens.
- (3) Ensure compatibility of environmental goods and services in ASEAN bilateral and multilateral trade negotiations.
- (4) Support businesses in their supply chain management efforts, which may include technical advisory and consultative services, testing beds for emerging technologies, and other ancillary services, where unnecessary trade barriers for CE exists.
- (5) Consider a review of existing agreements and regulations with aim of identifying entry points for circularity and addressing possible trade barriers.

Strategic Priority 3: Enhanced Role of Innovation, Digitalisation, and Emerging/Green Technologies

Circularity can enhance value chain efficiency, traceability, and resilience through technological innovations that leverage digital platforms, mobile devices, big data and analytics, blockchain, and artificial intelligence. Adapting a circular business model could also provide business

opportunities, especially for start-ups. The new frontier of the 4th Industrial Revolution (4IR) can further unlock the potential of CE, by for example mobilising capital, and monitoring the impact of sustainability commitments on the environment and, eventually, restore nature's closed loop cycles.

Combined with supporting policies, technologies and innovations have the potential to incentivise companies to adopt circular measures along the value chains.

Proposed Initiatives under SP3:

- (1) Promote inclusive dialogue and partnerships amongst private sector, academia and research institutions, governments including ASEAN development partners, and with CE experts, to collaborate on open innovations, effective policy frameworks for fulfilling circular objectives and facilitate knowledge and technological exchange and know-how.
- (2) Promote collaboration between ASEAN sectoral bodies, innovative technology platforms, investment structures, and business models that can accelerate the scaling up of promising circular innovations at different levels.
- (3) As appropriate, develop platforms or tools to manage resources such as databases, directory of relevant institutions or experts, and information materials on best practices or technologies; to provide a venue for learning or capacity assessment; to coordinate amongst stakeholders for the promotion of entrepreneurship or relevant programmes.
- (4) Encourage protection of intellectual property for environmentally sound technologies to foster innovations that promote CE.
- (5) Identify and seize the opportunities of digitalisation to reduce digital gaps amongst AMS.
- (6) Provide safety nets against the risk of economic disruptions in addressing technological gaps, to ensure appropriate and equitable circular transition.
- (7) Develop CE technology policy frameworks, certification protocols, and transparency mechanisms.

Strategic Priority 4: Competitive Sustainable Finance and Innovative ESG Investments

Competitive Green finance and social entrepreneurship are crucial in the transition towards CE. Foremost is support for sustainable investments from both private and public financial institutions, to promote the three strategic goals of a resilient economy, resource efficiency, and sustainable growth. Other potential ways to promote CE are mainstreaming CE in AEC-related projects, facilitating competitive financing for sustainable projects including large scale multilateral infrastructure initiatives, and financing new business models that support the transition to CE. A regional taxonomy in line with international developments would provide clarity to investors, thus encouraging the mobilisation of sustainable finance and investment capital into activities that support ASEAN's transition towards a circular economy.

Innovative financial instruments such as green financing can be leveraged for the upgrading of production technology along the value chains and for promoting production technologies that warrant circularity and sustainability.

Proposed Initiatives under SP 4:

- (1) Consider the use of different and new financial instruments for CE-related projects such as but not limited to, blended financing, green, transition and sustainable bonds, carbon pricing, and catalytic capital, in accordance with existing standards or mechanisms such as the

ASEAN Green Bond Standards, the ASEAN Green Catalytic Finance Facility of the ASEAN Infrastructure Fund, or through the development of an ASEAN Taxonomy.

- (2) Consider the use of fiscal and tax policies, such as green tagging for expenditures, fiscal incentives for green investments, environmental taxes, and reward mechanisms to support CE goals within the context of broader national strategies.
- (3) Consider the use of risk mitigants and investment enablers to encourage MSMEs and informal sector businesses to adopt CE principles.
- (4) Re-orient financial, institutional, and investment policies to prioritise responsible and sustainable businesses and infrastructure, including the development of green technologies and the transformation of public and private partnerships (PPP) towards CE.
- (5) Facilitate collaborations between the financial sector, regulators, and other public and private institutions, to develop and assess new business models that are aligned with CE principles.

Strategic Priority 5: Efficient Use of Energy and Other Resources

Integral to CE is the cascading use of raw materials and the use of secondary resources in the production process, for longer life and to enable cleaner product cycles. Essential in all these processes is the sustainable use of energy, which underlies all economic activities, and the management of natural resources in the context of UN Decade for Ecosystem Restoration. Therefore, focusing on improving energy efficiency and the adoption of renewable sources of energy, shall be key to promoting CE. Moreover, enhancing sustainable practices and resource efficiency in the agriculture, fisheries, and forestry sectors, as well as promoting effective waste management, shall reinforce CE.

Proposed Initiatives under SP 5:

- (1) Strengthen coordination and collaboration amongst ASEAN sectoral bodies, institutions, governments, the private sector and the broader ASEAN community, in promoting the use of renewable energy and energy efficiency, including the development and deployment of new technologies and renewable energy sources, and implementation of energy efficiency and conservation measures, to harness related mineral resources.
- (2) Re-consider existing policies that discourage circularity in operations, and explore those which support CE.
- (3) Promote responsible business conduct, and greening of supply chains and production processes, which may include effective waste management.
- (4) Encourage companies to disclose carbon performance and to implement improvements that enhance resource efficiency, resilience, and sustainability in a cost effective way.
- (5) Drive the growth of circular low-carbon infrastructure and sustainable transport, to accelerate reduction of carbon emissions.
- (6) Enhance the role of primary sectors in resource management, by promoting sustainable and smart agriculture practices, including the use of technology.
- (7) Promote green jobs, and the re-skilling and upskilling of workers to adapt to new products and services, for circular production processes and business practices.

Part 6 Enablers

Moving from a linear extractive produce-use-discard model to a more circular approach will involve a paradigm shift and significant changes to existing business models. Trade and services play an essential role in supporting CE businesses along the value chain, including the product design stage through research and development or eco-design; the sourcing stage through the

collection and sorting of waste material and its transformation into secondary raw material; or the production stage through remanufacturing or refurbishing.

More traditional services such as installation, assembly, testing, or maintenance and management are also indispensable to the sales of goods and are usually commercialised as a package. Services even increasingly substitute the sale of goods themselves, with product ownership remaining with the supplier. Technological advances, including artificial intelligence, track and trace, or sensor technology, have largely enabled the development of such services ranging from sharing platforms, to pest control services using chemicals in agriculture, to lighting services under which clients pay for a specific level of brightness.

In ensuring the acceleration and scaling-up of CE transformation in ASEAN, the following enablers can be taken into consideration in reducing costs and increasing customer and market acceptance of more circular business models:

- (1) Policy framework and institutions: Guide AMS in pursuing appropriate and inclusive policy interventions to encourage CE in the region, encourage and direct private sector and consumers towards responsible production and consumption through circular business models and consumption patterns, and determine the right institutions involve in strategising and designing relevant regional CE initiatives.
- (2) Enhanced awareness and competences across sectors: Environmental awareness and legislation, the need for social responsibility, and strengthening of capacity regarding CE, are key to ensuring effective implementation of CE-related initiatives in the region. In addition, collaborative approaches which include cultural aspects, i.e. mindset and lifestyle creation, are also needed to work across disciplines and accelerate systemic transformation towards CE.
- (3) 4IR for creation of new economic value from circular economy: 4IR technologies, such as artificial intelligence, machine learning, the Internet of Things, Big Data, Blockchain, Track and Trace solutions and robotics, have proven to be effective in promoting circular business models in several industries, such as information and communication technology, mining and manufacturing, education, healthcare, and others, whilst, in future, 'carbon mapper systems' will be able to locate, quantify, and track methane and CO₂ point-source emissions from air and space to track greenhouse gases and emissions. Adapting a circular business model, supported by audited accountability, can also provide business opportunities and creation of voluntary carbon credits, further unlocking the potential of the CE, and, eventually, restore nature's cycles.
- (4) Partnership and collaboration: Engaging all relevant stakeholders, and the international community, in the shift from a 'customer-oriented' approach to the 'multi-stakeholder' perspective that is rooted in integration and in line with global processes. Circularity principles could bridge better sustainability-related initiatives undertaken by different pillars of the ASEAN Community; whilst partnership with ASEAN's external partners and multilateral institutions, such as in the areas of knowledge sharing and resource mobilisation, will help to ensure successful implementation of CE-related initiatives in the region. Furthermore, ASEAN can take an inclusive approach to policymaking by allowing and facilitating active participation from all relevant stakeholders, including the broader public.

Part 7 Implementation

The Framework may be utilised as basis for ASEAN's work in relevant sectors, with coordination support from SEOM, and as building block to ASEAN Post-2025 work. It can also contribute to the Complementarities Roadmap (2021-2025), and the corresponding 2030 Agenda for Sustainable Development and Paris Agreement for climate change. This Framework can also be used by the AEC Council to start conversation and explore collaboration with the ASCC on CE, including possible leveraging of existing initiatives.

Progress in the operationalisation of the Framework shall be reported periodically to the AEC Council, and can be reconsidered over time. A corresponding implementation plan and monitoring mechanism will be developed.

The application of this Framework shall exempt matters relating to national sovereignty, national security, public safety, and all government activities deemed suitable for exemption by an AMS. The Framework may be adjusted as necessary with the consent of all AMS.