ASEAN Circular Economy Business Alliance

Circular Economy: an Opportunity for Business in Thailand

SPOTLIGHT

Around Thailand, a growing number of businesses is prospering from innovation and collaboration in their processes and value chains that avoid waste and improve the efficiency and longevity of materials use. Leading textile companies, such as ID Knitting, Thai Sin Dee and Thai Wacoal have started to use recycled PET fibres, recovered from plastic bottles, in their fabrics and garments. SC Grand mechanically recycles fabric waste to new fabric for garments and home textiles, and moreloop facilitates the recovery of deadstock fabric for repurposing in designer fashion and other textile items. Fortune Parts Industries and Sun Wu Poly manufacture premium automotive parts and home decoration items using recycled polypropylene and polystyrene, respectively. Sivatel Bangkok Hotel has drastically cut down food waste, recovers the remaining food waste in a BSF insect farm, and eliminated single use plastics in its hotel operations. These and other initiatives are exemplary for the Circular Economy – and a call-to-action for businesses and other organizations in Thailand and elsewhere in Southeast Asia and beyond.

CIRCULAR ECONOMY

The Circular Economy (CE) is positioned as the opposite of the current linear economy, which is based on taking materials from nature, making and using these in products, and discarding these products after their useful life. This linear extraction and use of materials is unsustainable, as it – globally - causes 60% of climate emissions, contributes up to 90% of loss of nature on land, and 40% of particulate matter pollution.[1] Materials use continues to increase rapidly – the Global Materials Flow Database estimates that the total per capita material consumption of the Thai economy grew by nearly 50 percent over the past 25 years while the per capita material footprint of Thailand increased by over 70 percent over the same period.[2] Plastics use and pollution vividly illustrate the shortfalls of the linear economy; however, they are only a part of the bigger problem of the wasteful use of all materials.

1 International Resource Panel (2024), Bend the Trend: Global Resources Outlook 2024, see: https://wedocs.unep.org/bitstream/handle/20.500.11822/44901/Global-Resource-Outlook_2024.pdf?sequence=3&isAllowed=y

2 International Resource Panel (2025), Global Materials Flow Database, https://www.resourcepanel.org/global-material-flows-database

The CE concept has diverse roots, which has given rise to divergent definitions, each highlighting different elements, such as nature's principles, circularity practices, circular business models, and sustainable materials resource management. In operational terms, CE envisions **circular value chains**, that bring the net use of virgin materials as well as the net disposal of waste as close as possible to zero (see Figure 1). This invokes the application of three material resource management strategies in all circular value chain stages, respectively: repeatedly recovering and reusing end-of-life materials (**resource circularity**); using materials more efficiently and longer (**resource efficiency**); and switching to renewable materials and energy (**resource substitution**). CE starts with developing circular products and value chains, then fosters materials efficiency and longevity of use of materials in all value chain stages, and ends with recovering and recycling the end-of-life materials that could not – yet - be avoided.

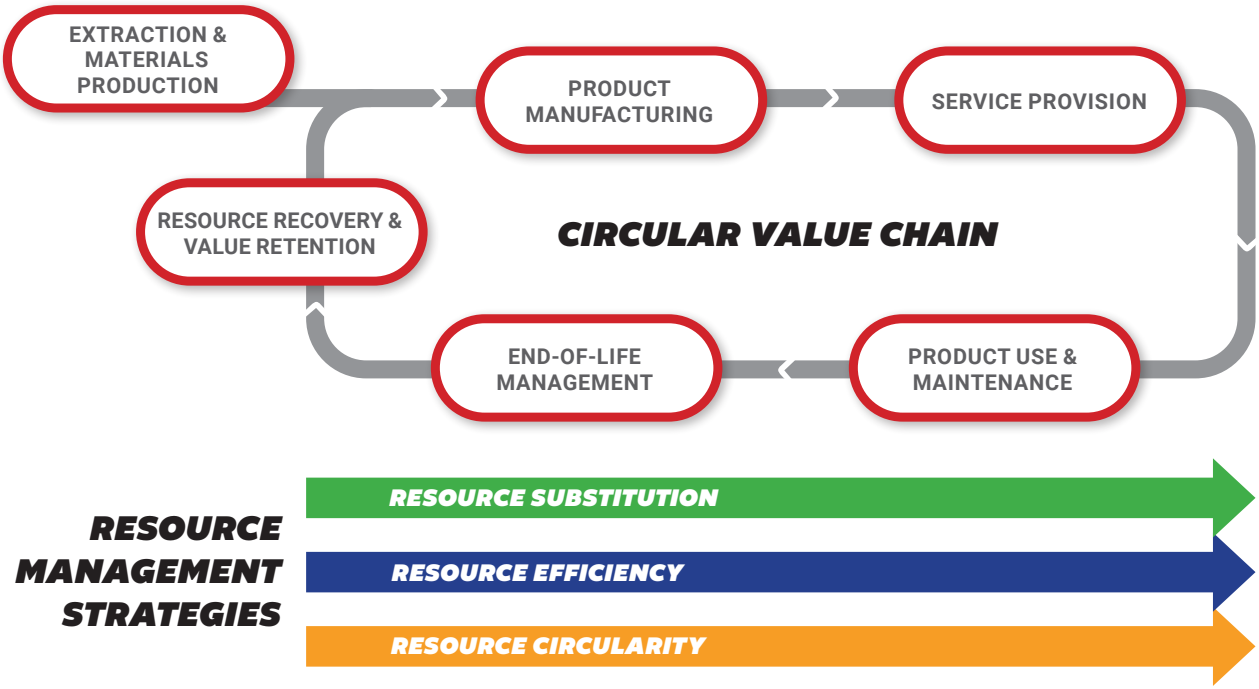

Figure 1: Circular Economy: circular value chains driven by resource management strategies[3]

POLICY PRIORITY

CE is a regional and national priority in Southeast Asia and other regions.[4] The Association of South-East Asian Nations (ASEAN) adopted its CE Framework in 2021 in support of ASEAN's regional economic integration. Seven ASEAN Member States have adopted further specific CE national roadmaps and/or action plans: Cambodia, Indonesia, Lao PDR, Malaysia, Singapore, Thailand, and Vietnam. Even though not specifically targeting CE, policy and plans for Sustainable Consumption and Production (SCP), waste management and energy and resource efficiency in the region further enable the core strategies of resource circularity, efficiency and substitution.

Thailand has developed its own CE model, namely the Bio-Circular-Green (BCG) Economy[5], an expansion from the country's well-established Sufficiency Economy Philosophy. Specifically, the BCG Economy is aimed to use science and technology to benefit from the country's biological and cultural endowments. The BCG model is well aligned with the three resource management strategies in the CE, respectively resource substitution (Bio-Economy); resource circularity (Circular Economy); and resource efficiency (Green-Economy). Moreover, the Thailand Sustainable Consumption and Production Roadmap 2017-2037[6] prioritized amongst others resource efficiency in productive and service sectors, eco-labelling and green public procurement, and promotion of eco-industrial parks – all supportive for the circularity transition of the

3 Van Berkel, R (2025), Circular Economy: An Introduction and Overview, https://www.aceba.co/site/assets/files/1430/ce_background_note_final.pdf
4 https://circulareconomy.earth/
5 https://www.bcg.in.th/eng/background/
6 https://www.switch-asia.eu/site/assets/files/2170/th_scp_roadmap.pdf

country. Furthermore, the Roadmap on Plastic Waste Management 2018-2030[7] foresees bans on selected single use and other problematic plastics and the introduction of Extended Producer Responsibility. It also set the target of achieving 100% plastics reuse by 2027.

BUSINESS OPPORTUNITY

CE provides a responsible business opportunity. Firstly, using materials, energy, and water more efficiently and longer reduces business costs. Secondly, circular products and services can unlock access to new markets or consolidate and grow current markets. Thirdly, as countries and societies gradually transition to circularity, businesses need to get prepared with alternatives particularly for single-use products, fast-moving consumer goods, and other products and services that are genuinely problematic from a circularity perspective.

A growing number of businesses are already benefitting from CE. The ASEAN Circular Economy Business Alliance (ACEBA)[8], with support from the EU SWITCH-Asia Policy Support Component[9], documented this far sixteen business cases from Thailand, as summarised in below table. Comparable sets of CE relevant business cases are already available for Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines and Vietnam – and are regularly being expanded.[10]

Table 1: CE business cases in Thailand

Title	Company	Circular Economy practices
Agriculture, food & beverage		
Domestic premium mineral water in refillable bottles	Sai Yok Springs	Production of premium mineral water and distribution in refillable glass bottles to hospitality sector to curb emissions from intercontinental shipping of premium mineral water and to eliminate the use of single use plastic bottles. Bottling plant uses 100% renewable power (solar and hydro).
Automotive		
Electric vehicles for public transport	Absolute Assembly	Design, development and local manufacturing of electric vehicles (primarily buses) and charging infrastructure (partially with renewables trough grid) that are custom designed for the public transport requirements in Bangkok, using the parent company's proprietary rapid charging battery technology.
Design and manufacturing of recycled plastic automotive parts	Fortune Parts	(Re)design of plastic automotive parts for production from recycled plastics and with lower material use, deploying advanced energy and material efficient technology, and achieving zero waste to landfill. Repurposing unused moulds for reuse by other parts' manufacturers. Use of solar and bio-energy in production.
Building and construction		
Resource efficiency through prefabrication	Advance Prefab	Efficient factory-level production of prefabricated construction elements and sandwich wall panels, using lower carbon hydraulic cement and with reuse of excess concrete for secondary products (e.g. pavers, large plant pots, etc.).

7 https://www.pcd.go.th/wp-content/uploads/2021/10/pcdnew-2021-10-19_08-59-54_995414.pdf
8 ACEBA website: https://www.aceba.co/aceba/
9 SWITCH-Asia (2023), ASEAN Circular Economy Business Alliance (ACEBA): Mobilising Business Action for Circular Economy in ASEAN. https://www.switch-asia.eu/our-work/multi-country/asean-circular-economy-pact-acep-mobilizing-business-action-for-circular-economy/
10 ACEBA Business Cases: https://www.aceba.co/aceba/business-case/

Title	Company	Circular Economy practices
Hospitality		
Service design and waste recovery in sustainable-boutique hotel	Sivatel Bangkok Hotel	Comprehensive food waste reduction programme in back-of-the-house and food service areas, onsite Black Soldier Fly insect farming and composting with reuse in onsite garden and by food suppliers. Local and organic sourcing of food items. Single use plastics eliminated. Improved operations management for energy and water conservation.
Textile and garments		
Knitting novel fabrics for a circular fashion transition	ID Knitting	Use of third party recycled PET fibre for knitting, reuse of on-site yarn waste, energy efficiency and reduced yarn wastage with advanced technology, and production of CoolMode fabrics (comfortable to wear in tropical climate, with reduced air conditioning).
Repurposing unwanted fabric into textile products	moreloop	Recovering unwanted, unused new fabric that is accumulated as deadstock in textile and garment factories for repurposing into garments and decorative textile items, in house or by third parties, including fashion start-ups.
Driving mattress recycling through a circular economy product subscription platform	norn-norn	Product as a Service business model for making high quality mattresses affordable and guaranteeing comprehensive recycling at the end of the mattress life.
Turning fabric waste into new fabric and garments	SC Grand	Recovery and mechanical recycling of textile waste (pre-consumer offcuts, uniforms, post-consumer garments) into fabric and garments (workwear, T-shirts etc.). Operation of roof top solar plant for power generation for use in manufacturing.
Using recycled PET for fabric production	Thai Sin Dee	Substitution of virgin PET fibres with recycled PET fibres for the production of recycled yarns and fabrics for use in the textile and garment industry.
Towards fashion circularity through material Substitution	Thai Wacoal	Redesign of bra-products to include recycled PET and recycled nylon fabric and natural rubber foam, reduce material diversity, extend product's useful lifetime, and offer a repair service and end-of-life management. Rooftop solar for onsite power generation.
Resource recovery		
Decentralised food waste recovery through insect farming	BetterFly	Community based food and organic waste collection and waste conversion through Black Soldier Fly insect farming to produce a high protein animal feed and a nutrient rich fertilizer substitute.
Circular economy in skin care products	Pinmisa	Development and manufacturing of skin care products using hyaluronic acid extracted from fish bone waste.
Segregated recyclables collection for materials recovery	Recycoex	Service provider for collection, aggregation and pre-processing of recyclable waste materials from waste generators and collectors (e.g. schools, hotels, universities), including for PET bottles, aluminum cans, UHT cartons, gypsum board and cooking oil, and onward trade to recyclers.
Composite materials from agricultural waste and recycled plastics	Rewastec	Production of high-quality plastic pellets and filaments from a mixture of recyclable plastic waste and select agro-residues (including rice straw, coffee grounds, bamboo leaves) for use in niche industrial applications.

Title	Company	Circular Economy practices
Recycling foam and plastic waste into home decoration products	Sun Wu Poly	Recycling of EPS plastic foam waste into high density PS material and its subsequent use for the production of home decoration products (cornices, frames, etc.) using advanced zero waste technology and designs. Rooftop solar power generation for use in manufacturing.

GUIDING PRINCIPLES FOR BUSINESS

CE presents an ambitious agenda to bring the use of natural resources back within planetary boundaries. This is contingent on developing circular products, services, and processes by businesses and other organizations. To facilitate business leadership and action, ACEBA developed five guiding principles for business and CE, upon extensive engagement with the business sector in Thailand, Cambodia, Indonesia, Lao, Malaysia and Philippines, during 2023-25. These guiding principles position CE as responsible business, conducted with an environmental lens, through innovations that improve material and resource use, and contribute to socio-economic progress.

Figure 2: Guiding principles for business action on Circular Economy[11]

11 ACEBA (2025), Framework for Business Action for the Circular Economy in Southeast Asia, https://www.aceba.co/resource/framework-for-business-action-for-the-circular-economy-in-southeast-asia/

ACEBA: ASEAN CIRCULAR ECONOMY BUSINESS ALLIANCE

ACEBA was launched in July 2024 as an ASEAN-centric, business-led CE initiative, with the endorsement of the ASEAN Business Advisory Council (ASEAN BAC), the ASEAN Secretariat, and the European Union Delegation to ASEAN. ACEBA is an initiative of ARAIBA Sdn Bhd[12], a purpose-driven, not-for-profit business organisation that works to promote and facilitate responsible and inclusive business practices in ASEAN. The activities of ACEBA are further supported by a Technical Advisory under the SWITCH-Asia Policy Support Component.

ACEBA brings together companies and other business organisations that pledge to lead by example. These participating companies agree to (1) promote CE in their business networks and advocacy; (2) consider and adopt appropriate CE solutions in their products and operations; and (3) share CE achievements and experiences. ARAIBA, in partnership with national and regional business organizations, supports participating companies with accessing appropriate CE knowledge and tools and relevant CE solutions, and promoting their achievements through knowledge sharing and networking activities. Thailand Environment Institute (TEI) is acting as the ACEBA country lead for Thailand.

ACEBA encourages CE leadership by enterprises—from large corporates to MSMEs, start-ups, and social enterprises—and business associations in ASEAN Member States. Specifically, ACEBA:

- Provides visibility and voice to participating companies;
- Documents and showcases CE business practices and solutions;
- Facilitates peer-learning and sharing among participating companies and other leading businesses; and
- Promotes operational CE tools and metrics appropriate to ASEAN businesses.

ACEBA invites businesses and other organizations in Thailand from all sectors to participate, as CE is applicable across business sectors. In its knowledge sharing and networking, ACEBA is though prioritizing eight sectors that are of key economic importance in the region, have large participation of MSMEs, and have demonstrated good CE potential.

Figure 3: Identified priority sectors of ACEBA[13]

12 ARAIBA website: https://www.araiba.org/araiba/
13 ACEBA (2025), Framework for Business Action for the Circular Economy in Southeast Asia, https://www.aceba.co/resource/framework-for-business-action-for-the-circular-economy-in-southeast-asia/

BUSINESS LEADING THE CHANGE

The future of irreversible climate change, loss of nature, and pollution is already with us. There is no pause button as their negative impacts on livelihoods, society, economy and business are on the rise. Ignoring these signs is a risky business affair. We all need innovative, circular, and low carbon solutions, and business is in the driving seat to provide these. Getting more circular does not have to put firms out of business, as there is good potential for cost savings, new products and markets, and new competencies.

Get involved and started—one responsible step at a time business can lead the change towards a sustainable future and livable planet.

Join the Alliance

Contribute a Business Case

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Other Inquiries

SCAN TO EXPLORE

ACEBA is an initiative of ARAIBA

ACEBA Country Lead in Thailand

ACEBA is supported by the technical advisory of the EU SWITCH-Asia Policy Support Component

ASEAN Circular Economy Business Alliance

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