Greening MSMEs and Circular Economy in Southeast Asia

POLICY BRIEF

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The document was presented to the ASEAN Co-ordinating Committee on Micro, Small and Medium Enterprises during the Public-Private Policy Dialogue on 24 May 2023 in Bangkok. The document benefited from further comments from the ASEAN Secretariat and private sector stakeholders in the region as well as the colleagues including Eija Kiiskine, Frithjof Laubinger, Bum Cheul Park from the OECD Environment Directorate. The document benefited from the financial support from the German Government through GIZ (Germany) and the Government of Ireland.

Rationale

The document is developed for the policy makers and representatives of the private sector to better understand the circular economy (CE) concept and how it affects micro, small and medium enterprises (MSMEs). It aims to contribute to achieving the outcomes of the Work Programme to Support the Implementation of the Framework for Circular Economy for the ASEAN Economic Community, through:

1. Increased number of ASEAN experts with enhanced knowledge, skills and understanding of CE projects

2. Heightened awareness and deepened understanding of CE across the private sector, regulators, and policy makers in ASEAN on the impact of CE on ASEAN's trade and future growth.

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Circular Economy

Circular Economy (CE) is about closing materials loops, slowing material throughput and narrowing materials loops through improved resource efficiency.[1] It also creates an opportunity to add value to waste. [2] This model is an alternative to the waste-prone ***Take-Make-Use-Dispose*** model, which contributes to exacerbated pressures on the environment, threatening ecosystems as well as human health. The CE model also links up through its circular consumption model to the Sustainable Development Goals (SDGs) of the United Nations, particularly SDG 12 of responsible consumption and production pattern[3].

Recent years have seen an increased need to implement green pathways and circularity towards low carbon and nature-positive future. CE practices contribute to putting the economy on a sustainable growth path, which aligns perfectly with the COVID-19 post-pandemic green recovery agenda needed for Southeast Asia. The Economic Research Institute for ASEAN and East Asia (ERIA) found that adopting circular principles across Asia could lead to economic growth of USD 324 billion and create 1.5 million jobs by 2025. The CE practices could contribute to hasten recovery from COVID-19 and rebuild ASEAN in a resilient way. [4]

Research shows that CE and climate policies are mutually supportive[5]. The transition to a CE can also contribute to solving climate change issues and can provide environmental benefits. The CE reduces the demand for raw materials and new products and thereby can help optimize materials use, including reductions in GHG emissions and pollution[6].

The ASEAN as a region is particularly vulnerable to climate change and pollution derived from the production and use of material resources. Addressing CE and putting it high on the political agenda can help also address climate change issues. The 2021 Global Climate Risk Index indicated that Thailand and the Philippines were among countries most impacted by natural occurrences between 2000-2019.[7] Brunei Darussalam, the Philippines, and Cambodia were also ranked in the top 15 of countries with the highest worldwide disaster risk.[8]

1. McCarthy, A., R. Dellink and R. Bibas (2018), "The Macroeconomics of the Circular Economy Transition: A Critical Review of Modelling Approaches", OECD Environment Working Papers, No. 130, OECD Publishing, Paris, https://doi.org/10.1787/af983f9a-en.
2. The Circular Economy in Cities and Regions. OECD, 2020.
3. The 2030 Agenda for Sustainable Development. UN, 2015.
4. Industry 4.0 Empowering ASEAN for the Circular Economy. Economic Research Institute for ASEAN and East Asia, 2018.
5. Bibas, R., J. Chateau and E. Lanzi (2021), "Policy scenarios for a transition to a more resource efficient and circular economy", OECD Environment Working Papers, No. 169, OECD Publishing, Paris, https://doi.org/10.1787/c1f3c8d0-en.
6. OECD (2019), Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences, OECD Publishing, Paris, https://doi.org/10.1787/9789264307452-en.
7. Global Risk Climate Risk Index 2021. Erkstein, David, Vera Kunzel and Laura Schafer. Germanwatch, 2021.
8. World Risk Report 2021.Aleksandrova, Mariya, et.al.. Balask, Bündnis Entwicklung Hilft, 2021.

Circular Economy in Southeast Asia

The awareness of the CE concept has risen significantly across ASEAN over the last several years. The Association of Southeast Asian Nations (ASEAN) identified CE as one of the sustainable solutions for solving post COVID-19 impact and economic decline. The region has the ambition to accelerate their transition towards a low-carbon region.[9]

One of its key instruments is the **Framework for Circular Economy for the ASEAN Economic Community.** ASEAN established the framework to address the pressing issue of sustainability, and to provide guidance on the region's journey towards sustainable development. The Framework focuses on 3 areas: resilient economy, resource efficiency, and sustainable growth. ASEAN also defined 5 main priorities for the region's CE through standard harmonization and mutual recognition, trade openness, role of innovation, sustainable finance, efficient use of energy.[10] Through the Work Programme of the Framework, ACCMSME is expected to lead initiatives on capacity building platform for ASEAN MSMEs to transition to the Circular Economy.

Another important action to promote CE in Southeast Asia was the creation of the **ASEAN Circular Economy Stakeholder Platform,** in partnership with the European Union (EU). It promotes knowledge-sharing and dialogue among policy makers, business community, and civil society in ASEAN on CE practices.[11]

The recent McKinsey report makes a reference to the important shift in the consumer demand for circular goods and greener services. It also highlights drivers such as regulation, technological progress, infrastructure, supply-side activity, and the macroeconomic environment that will drive growth in demand for circular consumer goods.[12] Consumer demand for products that are "good for the environment and society" is increasing in the Asia-Pacific, with 51% of consumers listing environmental, social, and governance (ESG) criteria as an important purchasing element for brands/products.[13] This is further confirmed by the young population consumer patterns in ASEAN with the rising importance of sustainability when choosing brands and products.[14] These developments indicate a growing market for sustainable products and highlights the opportunities applying CE can provide to MSMEs in ASEAN.

The business community plays an important role in promoting the CE. While it creates an environmental footprint on one side, it must also play a major role in finding solutions, because industrial pollution from companies can cause high aggregated impact of environmental footprint. MSMEs are no exception,

Framework for Circular Economy for the ASEAN Economic Community

Resilience against climate change and resource constraints to minimise long term costs and risks

Optimal use of resources to boost industries' competitiveness for a strong regional ecosystem

Sustainable investment that goes in hand with sustainability towards increased circular investment

9. Advancing ASEAN's Circular Economy Agenda Advocacy Paper. EU-ASEAN Business Advisory Council, 2020.
10. Framework for Circular Economy for the ASEAN Economic Community. ASEAN, 2021.
11. https://ce.acsdsd.org/about/
12. https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/playing-offense-on-circularity-can-net-european-consumer-goods-companies-500-billion-euros
13. Unpacking Asia-Pacific Consumers' New Love Affair with Sustainability
14. UOB Study: More young consumers in ASEAN to spend on sustainable products to ensure a better future for their children





although emissions produced by individual MSMEs can be small relative to those of large enterprises, their collective environmental impact is substantial. For example, MSMEs account for 64% of total industrial pollution in Europe and 53% of total industrial carbon emissions in China.[15] Businesses including MSMEs can play a role by taking concrete steps by adjusting their business models and by adjusting their operations. As demand for circular consumer goods picks up, circular business models can create a valuable link between business logic and sustainability.

Circular business models serve to reduce the extraction and use of natural resources and the generation of industrial and consumer wastes. They represent the key activities required to transition to a more resource efficient and CE. Examples of circular business models could include targeting waste as a source of value (*resource recovery*); bringing about circular supply models (*circular supply models*); making better use of products that mainly sit idle (*sharing*); offering their products are a service (*product as service*); and extending the use-phase of a product (*lifespan extension*)[16].

CE can create an opportunity for MSMEs

The business sector in Southeast Asia has a major role to play addressing climate change and also to promote CE transition. At UNFCCC COP 26, the Glasgow Financial Alliance for Net Zero estimated that the private sector could provide 70 % of the finance needed to put the world on a path to net zero emissions by 2050.[17] The mentioned potential impact not only highlights the significance of financial infusion from the business sector on CE transition, but also shines light to potential relationship between CE and sustainability in the private sector.

CE Good Practice

- **Thailand: Thailand sustainability bond**. The Government Housing Bank of Thailand issued the sustainability bonds (approximately $244 million) to finance green and social projects.
- **Ireland: MyWaste.ie information platform.** National online platform to inform public society of waste consumption.
- **Malaysia: Green Technology Financing Scheme (GTFS).** Governmental soft loan scheme introduced, with a fund size of RM 2 billion, aimed at the issuance of Sustainable and Responsible Investment (SRI).

15. No Net Zero without SMEs: Exploring the key issues for Greening SMEs and Green Entrepreneurship. OECD, 2021.
16 . OECD (2019), *Business Models for the Circular Economy: Opportunities and Challenges for Policy*, OECD Publishing, Paris. https://doi.org/10.1787/g2g9dd62-en.
17. Net Zero Financing Roadmaps – Key Messages. Glasgow Financial Alliance for Net Zero, 2021.

For bigger companies, good practices of CE can lead **to long term cost-effectiveness, resource-efficiency and improved competitiveness.** CE products and service will lower the cost for big business as circular products are designed to be used and reused. This process enables big companies to lower the use of primary material in their production, leading to their resilience against price fluctuations and sustainable waste management.[18] Companies applying CE practices are also more attractive for investment. Foreign direct investments are also turning to support green practices, which could help improve economic value-adding from industries and enhance the integration of ASEAN businesses back into the global supply chains.[19] CE practices can also push companies to innovate, advance their business modele and provide a pathway towards broader value in innovation and improved social and environmental impact.

The adoptation of CE practices can also boost the potential of MSMEs in a multifaceted ways. By incorporating CE and green practices, MSMEs can serve better the consumer landscape that is becoming more climate-conscious and in favor of responsibly-produced products.[20] Regarding environmental impact, it is estimated that more than 80% of a product's environmental impact are determined during the design phase.[21]

Thus, it is important that policy makers support the adoption by MSMEs of early CE practices to lower their overall environmental footprint.[22] CE will enable business to take ownership of its impact through transitioning its model of products to service, leading to heightened level of innovation and long-term lifespan of its product in the circularity.[23] The production of eco-innovation are also pioneered by MSMEs as smaller firms could be source of innovations, further encouraging bigger companies to boost their own productivity as a whole.[24]

CE practices can enhance innovation by research and application of new business models. They can also support the creation new industries for ASEAN, such as renewable energy and sustainable agriculture. This momentum can aid MSMEs in ASEAN to enter new markets. The increased attention to CE of MSMEs can also attract new investors and sources of fundings for the region. The boosted attention from external actors and elevated capability will enable MSMEs in ASEAN to gain certification to further improve their products sustainably and open access into the global value chain for future MSMEs in the region[25]. Quantitative evidence suggests that CE policies such as Extended Producer Responsibility (EPR) systems and encourage innovation in plastics, a material key to the CE transition—more

18. 8 ways the circular economy will transform how business is done. World Economic Forum, 2023.
19. Implementing a green recovery in Southeast Asia. ADB, 2022.
20. Ibid.
21. https://joint-research-centre.ec.europa.eu/scientific-activities-z/sustainable-product-policy_en#:~:text=It%20is%20estimated%20that%20over,throughout%20their%20entire%20life%20cycle.
22. Circular economy: definition, importance, and benefits. European Parliament, 2023.
23. https://aposto.com/i/what-does-the-private-sector-make-of-circular-economy
24. No Net Zero without SMEs: Exploring the key issues for Greening SMEs and Green Entrepreneurship. OECD, 2021.
25. Facilitating the green transition for ASEAN SMEs: A toolkit for policymakers. OECD, 2021.

ambitious policies such as these are needed to direct technological change towards closing material loops and reduce leakage to the environment.[26]

Digitalisation can also play a role in helping private sector to develop new business models and overcome barriers to scaling up circular economy and help improve design and implementation of relevant circular economy policies. Indeed, the information flows generated by digital technologies, such as artificial intelligence (AI), could help collect, and to create knowledge about material composition of products, and enable optimisation of asset sharing, reduced transaction costs and simplified prototyping. Digitalisation can also help companies adopt new, circular business models. The application of digital technologies could help policy makers as it holds the potential to significantly improve efficiency and effectiveness of circular economy policies, by enabling innovative policy design, monitoring and evaluation, as well as enforcement.[27]

The increasing consumer awareness and willingness to pay for green and sustainable products provides new opportunities for MSMEs to increase revenue and reach new customers. The demand for green products and services, as well as the increased public scrutiny on sustainability practices of businesses and legal obligations could be seen as an opportunity for MSMEs to increase profitability and expand.

Adopting CE principles allows MSMEs not only improve their internal processes, make better products, but also in turn, attract the growing market of climate-conscious customers.[28]

Circular economy label or information scheme (CELIS) is the group of labels, certifications, standards of information schemes that aligns with CE's objective of increasing material efficiency, slower material loops, and material loop closing. CELIS can be roughly divided into 2 types: consumer-oriented labels (i.e., B2C and G2C) and information schemes and certificates flow between businesses (B2B).

Standards for CELIS can be a key enabler for a harmonised and efficient information flow across value chains. By standardizing information and criterions, consumers and businesses in Southeast Asia can achieve coherency and long-term cost reduction. Eco-labelling can also help reflect market environmental credential and green performance of products for each company.

26. OECD (2022), *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options,* OECD Publishing, Paris, https://doi.org/10.1787/de747aef-en.
27. Barteková, E. and P. Börkey (2022), "Digitalisation for the transition to a resource efficient and circular economy", *OECD Environment Working Papers, No. 192*, OECD Publishing, Paris.
28. How Sustainability and Profitability and can go Hand in Hand for Businesses.

Challenges on the way forward

Despite increased awareness over the importance of CE practices, MSMEs in Southeast Asia still face a myriad of hurdles: Access to finance, cumbersome regulations, and access to information have been identified among the most common challenges MSMEs face in the region while aiming to become greener.[29] This could also include slow bureaucratic processes that may discourage from implementing changes. The most common challenges identifies included:

FINANCIAL HURDLE

- **Restricted access to loans** due to challenges in providing a collateral and preference of the banks to work with larger companies.
- **Short-term financial sustainability** for MSMEs.
- **Lack of dedicated financial facilities** aimed at promotion of greening and CE solutions.[30]
- **Limited number of financial opportunities towards CE-oriented companies**, leading to less CE practices among the business community.[31]
- **Excessive required conditions** in the financial process for MSMEs.

AWARENESS AND KNOWLEDGE HURDLE

- **Low awareness of CE practices** in companies and citizens.
- **Low awareness of CE benefits,** such as its economic and cost-saving advantages.
- **Lack of CE knowledge** for MSMEs, such as know-hows about marketing, CE business model, finance, eco-packaging, and green innovation.
- **High-capacity gap and tools between large enterprises and MSMEs**, such as insufficient funding for internal skill-training centre and training personnel.

Plastics and circularity

The interest of circularity and plastic in Southeast Asia emerged from the potential utilization of CE as a mean to achieve sustainable plastic management, as well as a desire to tackle the ongoing challenge of marine plastic pollution in the region. The CE approach to plastics covers many specific focuses, such as, product design, manufacturing processes, plastics pollution, marine plastic leakage, waste collection system, and level of recycling of plastics. Innovation along the entire plastics value chain will be critical to reduce the environmental impacts of plastics – the types of innovation include innovation for plastics prevention and recycling; innovation for converting or disposing of waste; and innovations in biobased feedstock.

Plastics have become a key part of all economic sectors and global economy. As many companies and SMEs use plastics in their products and service, the practice of plastics recycling will benefit these actors through lower cost and sustainable resource circularity. By reducing primary plastic use and adopting a CE – oriented business models, companies and MSMEs will be able to attract customers and maintain a value saving supply chain.

29. Ibid
30. 2022 Updated G20/OECD High level Principles on SME Financing. OECD, 2022.
31. Financing SMEs for sustainability: Drivers, Constraints and Policies. OECD, 2022.

Policy options

The policy makers have a whole range of options to impact circularity of MSMEs. The document highlights the possible options through the prism of four areas: **green awareness, green resources, green knowledge, and green regulations**. These recommendations integrate the findings of the consultation with the private sector as well as the Public-Private Policy dialogue held during the ASEAN Coordination Committee on MSMEs (ACCMSME) on 24 May 2023 in Bangkok, Thailand.

GREEN AWARENESS

- Adopt national platform, targeted communication campaigns, and incentives to raise awareness and innovation potential on the circular economy sector.
- Establish an inter-ministerial body on circularity and CE practices to streamline awareness on CE principles and practices.
- Raise awareness on CE practices and the importance of waste separation among the citizens and companies, including through promotion of long-term economic and financial benefits.
- Share more information on the types of circular business models available and provide information on their financial feasibilities.
- Monitor green washing practices and ensure avoiding spreading harmful misinformation.
- Raise awareness on the financial benefits of CE practices and applicable business models for MSMEs.

RESOURCES FOR GREENING

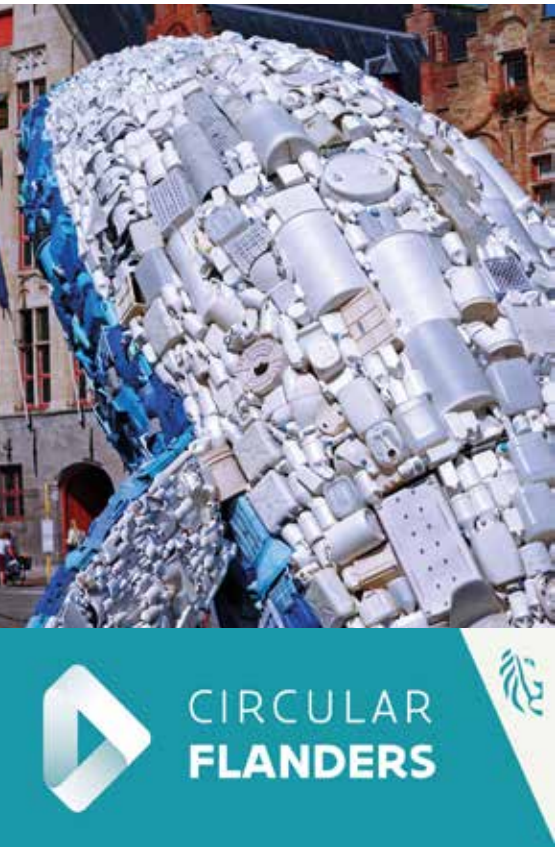
- Establish a funding framework for CE initiatives in the business sector throughout the lifecycle of the product development process.
- Develop policies to encourage investments into innovative technologies but avoid disproportionate compliance costs for MSMEs.
- Support scaling-up small CE initiatives, by setting up dedicated local funding and mentoring/ capacity building support measures.
- Support financial institutions in improving their competence on circular economy finance that can support and facilitate MSMEs in receiving targeted and suitable funding.

GREEN KNOWLEDGE AND INNOVATION

- Increase platform and stakeholder coordination mechanisms between stakeholders and MSMEs to promote collaboration on CE and sustainable development.
- Link larger companies with MSMEs to help promote circularity as larger companies often have more resources and knowledge on how to address circularity.
- Conduct knowledge sharing and capacity building activities between larger companies and MSMEs to ensure better processes and practices.
- Extend capacity building programmes for businesses to adapt waste management at business level, such as sectoral waste management training and toolkits for workers and businesses (especially MSMEs) in line with the CE principles.
- Enhance the business-industry-academia partnerships to promote innovation around circularity and its application in the industries.
- Develop programmes and initiatives enhancing applied innovation in the area of greening, circularity and sustainability, especially involving the MSMEs as much as possible.
- Work together with the industry associations and research organisations to help conducting material flow assessments, vulnerability assessments, sustainability reporting that could be used by MSMEs.

GREEN REGULATIONS

- Create green standards and indicators to establish a benchmark for private companies to strive to.
- Implement policies to strengthen markets for secondary (recycled) materials, namely through Extended Producer Responsibility (EPR) schemes and setting recycled content standards.
- Harmonise national standards with the international good practices.
- Apply as much as possible the regulatory impact analysis when integrating new regulations or standards. This could specifically analyse the impact on MSMEs and could help when defining a timeline for their application.



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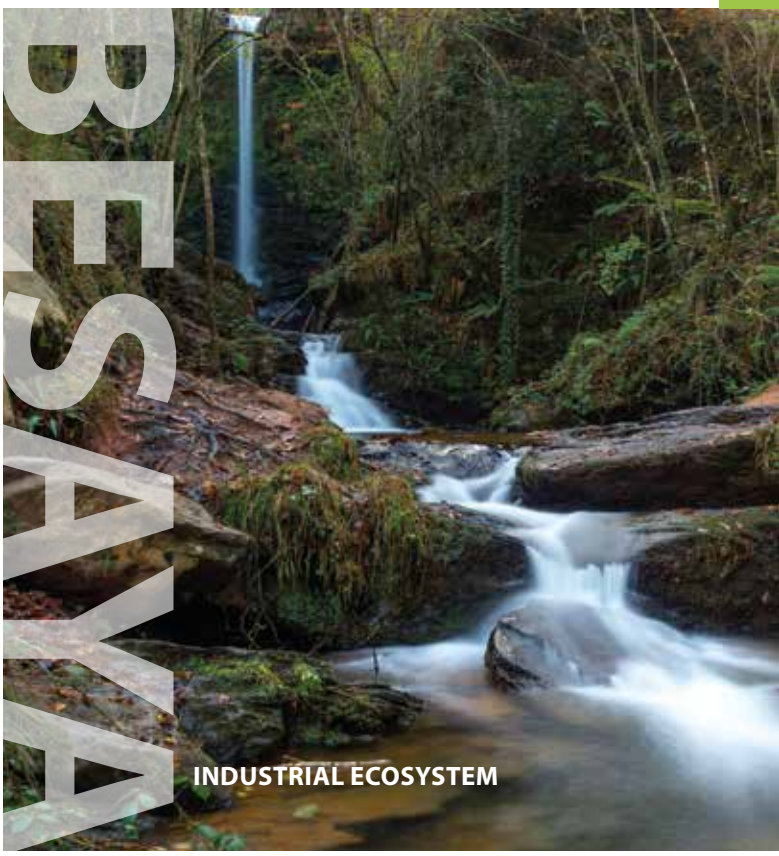
Examples of good policy initiatives:

BELGIUM: The Flanders' Materials Programme: The Flanders Public Waste, Materials & Soil Agency (OVAM) developed a programme to encourage sustainable materials management by proposing models on sustainable consumption and waste reduction in the Flanders region of Belgium. The programme harmonises partnerships and expertise sharing between the government, civil society, industrial, and groups of experts to promote long-term visions and implement actions to transition towards CE. The actions span across the field of circular economy from raising public awareness that progresses towards smart collaboration and investment to improved regulations and management of plastics and metals. Additionally, the Policy Research Centre Sustainable Materials Management (SuMMA) was also formed to bring experts and academics from universities and institutions across Belgium to conduct interdisciplinary research on various policy and economic challenges, cooperation, and bridge-building for stakeholders to improve their knowledge on conducting CE.
https://vlaanderen-circulair.be/en

FINLAND: Arctic Industry and Circular Economy Cluster: The project created the interregional cluster of networks focuses on sustainable industrial refining and resources utilisation. The cluster connects industry companies, SMEs, universities, research institutions, and government authorities to promote cooperation and exchange of expertise to generate the best methods of practice and policy for best use of CE activities in Lapland. The Lapland region aims to become the leading Arctic region in the sustainable utilisation of natural resources. The models implemented could then be used to further cooperation internationally, including partnering with various active EU projects while presenting themselves as the examples to generate growth and opportunities for SMEs on a wider scale.
https://elmoenf.eu/arctic-industry-and-circular-economy-cluster/

SERBIA: Center for Excellence for Circular Economy and Climate Change: An independent institution that focuses on partnership development and the initiation of activities supporting the implementation of CE, reduction of short-lived climate pollutants



(SLCPs) and innovative pollution reduction models, as well as offering education, trainings, expert services, and assistance for professionals in the field of waste management. The Center is a collaboration of multiple environmental agencies throughout different regions with the aim of providing a new generation of waste management professionals with fundamental skills required to support the transition to sustainable waste management. https://centercecc.org/

FINLAND: Kiertotalouskeskus – Circular Economy Centre: As one of the CE initiatives in Lapland, the Centre provides expertise and consultancy for Finnish companies that seek to grow using the business models of circular economy. The Centre has conducted projects with public and private entities in search of the best approaches to implement business growth that also contribute towards transitioning to CE, bioeconomy, and sustainable growth.
https://www.digipolis.fi/en/circulareconomycentre

SPAIN: Besaya Industrial Ecosystem promoting industrial symbiosis for MSMEs: The University of Cantabria developed a CE-based project in the region of Besaya, Spain by grouping companies in the industrial areas to prioritise the material flow and waste generation that can be reutilised internally.[32] The project strengthened the cooperation in the areas to sufficiently manage all the waste that were produced, in which the bidding and/or demanding companies of waste resources, storage space, and shared management of waste were detected, ultimately leading to the synergies of waste substitution and mutuality. The result presented a promising outlook of a sustainable waste management. Various elements in the waste could be used as valuable products by more than 40% of companies that generated them, which could give rise to a new market for certain types of wastes. Multiple opportunities for common storage, transportation, treatment, and collective waste management were also detected in the areas.

32 Journal of Cleaner Production (2014), Industrial symbiosis opportunities for small and medium sized enterprises: Preliminary study in the Besaya Region (Cantabria, Northern Spain), doi.org/10.1016/j.jclepro.2014.10.046.

ASEAN's rapid development has contributed to increasing levels of waste, high use of plastic in the region and abundance of generated waste. The challenge ahead is the management of plastic waste, such as labelling of recyclable plastics, capacity to process waste, and the cross-boundary transit of post-consumer material. By adopting sustainable practices, partnering with larger companies, participating in industry networks, and leveraging technology and developing new business models, micro, small and medium enterprises (MSMEs) working on reducing plastic use in ASEAN can become more competitive and better integrated into global value chains. However, MSMEs will likely need support of the relevant MSME-support agencies across ASEAN to tackle issue of access to finance, access to knowledge and expertise. Environmental labels can also help consumers make sound and environmentally friendly decision in choosing products and services; they can also help companies become more competitive and reach new markets. Creating awareness around these two areas among policy makers will foster a competitive and stimulating circular market for SMES, in terms of regulations and incentives.

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