BECOMING A BIG OCEAN SUSTAINABLE STATE


Waste to energy plant.

TOGETHER sustainable, sustainably together should be the leitmotiv towards implementing the recently enunciated 'Waste to Wealth' agenda and adapting the Mauritius Circular Economy Action Plan. In doing so, one should assess the practicality and path in developing and implementing "*Circularity – Made in Mauritius*" or even an extended "*Circularity – Made in Indian Ocean*" akin to the tried and tested best practices under "*Circularity – Made in Germany*", a country ranked third in the 2024, Environmental Performance Index.

GERMANY – NATIONAL CIRCULAR ECONOMY STRATEGY (NCES)

Germany has long been recognised as a global leader in industrial efficiency and manufacturing excellence. Its supply chain and procurement feature a robust infrastructure, an advanced logistics network and a commitment to innovation. The country has dedicated its efforts over the past three decades to strengthening its leadership in waste management and recycling. Now, end 2024, Europe's powerhouse adopted a comprehensive National Circular Economy Strategy (NCES) that brings under one umbrella the country's goals and measures on the path to a holistic circular economy with the "*Circularity Made in Germany*" seal. The implementation of the NCES includes the following: establishment of a circular economy platform involving all stakeholders; the development of a Roadmap 2030 to concretize the goals and measures formulated in the NCES; and the establishment of a monitoring and evaluation system as well as resolutions on financing.

The initiative offers numerous opportunities for companies to adjust their business models and make production processes more sustainable. At the same time, the NCES provides for a tightening of the regulatory framework, forcing companies to act in order to ensure compliance with new rules. By adapting to the new requirements and taking advantage of public funding programs, companies can not only increase their competitiveness but also make an important contribution to environmental protection and sustainability. Increasingly, awareness of climate change and resource depletion are forcing governments and businesses to rethink traditional supply chain models. Thus, the NCES emerges as a timely and transformative initiative that addresses these challenges, setting a benchmark for others. By prioritising resource efficiency, environmental protection and economic resilience, the NCES aims at not only securing Germany's supply chain competitiveness but also influencing global standards in procurement and sustainability.

CRITICAL DRIVERS

The NCES represents a transformative shift from traditional linear economic practices towards a comprehensive circular model that prioritises resource efficiency, environmental protection and economic resilience. It has been developed with extensive stakeholder input and aligned with the European Union (EU) Circular Economy Action Plan, emphasizing a systemic redesign of material flows and focusing on optimising every phase of a product's life cycle. This approach is designed to minimise waste, reduce reliance on imported raw materials and foster innovation across key industries whereby the NCES aims at reversing this by encouraging product designs that extend lifespans and improve repairability, promoting resource-efficient production processes and enhancing recycling infrastructure to maximise the use of secondary materials.

STRATEGIC OBJECTIVES

The NCES is intended to help make Germany climate-neutral, more competitive and economically more resilient by 2045. It is also intended to help achieve the goals of the German sustainability strategy for the protection of natural resources. Circular economy is not only seen as a key building block for achieving climate and environmental policy goals, but also offers potential for economic growth, employment and competitiveness. The NCES also takes into account European requirements and initiatives, such as the EU Circular Economy Package of 2018 or the EU Circular Economy Action Plan (CEAP) of 2020. However, the NCES is intended to go one step further and make Germany a pioneer in the circular economy. The aim is to set new standards for the further development of the EU-wide framework in the spirit of "*Circularity Made in Germany*".

BUILDING BLOCKS

The NCES aims to significantly reduce the consumption of primary raw materials in the country by 2045. To this end, the NCES is pursuing three overarching goals:

- Increasing the use of secondary raw materials, whereby (at least) the EU target of doubling the share of secondary raw materials in the total amount of raw materials used by 2030 is to be achieved.
- Promoting raw material supply security and raw material sovereignty, with the aim of covering at least 25% of the demand for strategic raw materials through recycling.
- Avoiding waste with the aim of reducing the per capita volume of municipal waste (compared to 2020) by 10% by 2030 and by 20% by 2040.

MEASURES & SOLUTIONS

The NCES comprises a wide-ranging package of measures covering the entire product life cycle: from product design, material selection and the use of recyclates to production, use life, reparability and recycling. Economic and market-oriented instruments are used to create targeted incentives to promote closed material cycles in production and consumption.

Statutory amendments and new regulations, such as the amendment of the Electrical and Electronic Equipment Act, the Commercial Waste Ordinance and the Waste Wood Ordinance, the planned new EU Packaging Ordinance and a new Waste End-of-Life Ordinance at national level, are intended to further develop and strengthen the instruments of circular economy legislation. Technological innovations and investments are promoted in order to drive forward the circular economy. This includes funding programs for research and development as well as measures for the use of digital technologies and biotechnology. Digital technologies are considered a key success factor for the circular economy. They increase transparency, improve control and enable new business models such as platforms and product-as-a-service approaches. Measures to promote repairs, strengthen eco-labels and reduce the environmental impact of online retail are to be introduced. The strategy also focuses on strengthening circular consumption patterns through approaches such as "*reduce, refuse, rethink*". Another focus is on the development of norms and standards to improve the credibility and transparency of labels and products as part of the "*Circular Economy*" standardization roadmap.

The NCES aims to significantly increase the use of recyclates in key material flows and product groups. This is to be achieved through EU-wide recyclate usage quotas and the improvement of sorting and recycling capacities. In addition, the European Emissions Trading System (ETS) should explicitly take account of closed-loop management in order to create incentives to use CO2 in an economically sensible way. Finally, public procurement should be used as an instrument to consistently support the circular economy. By 2030, all legal requirements should be consistently geared towards circular procurement.

PRIVATE SECTOR – OPPORTUNITIES AND CHALLENGES

The transformation towards a comprehensive circular economy opens up a wide range of opportunities for companies to exploit their potential and position themselves for the future both for local and international markets. Companies should review and adapt their business models and operations to reap the benefits of the circular economy. Digital solutions should be critically analysed to assess whether they can contribute to the development of resource-efficient and circular products that meet modern sustainability requirements. Finally, partnerships with international players can be considered to make the most of opportunities through global material flows and expanded recycling opportunities. Funding programs offer additional support and can be used to finance the transition to circular production processes.

Against this background, companies should consider the following measures:

- Investing in digital solutions to develop resource-saving and circular products.
- Review of waste management processes and introduction of reliable solutions.
- Use of support programs to make production processes more circular.
- In the manufacturing industry: adapting product designs to increase recyclability and durability.
- Designing products to be repairable and reusable.
- Optimization of recycling processes and investment in new technologies.
- Entering into partnerships with international players in order to benefit from global material flows and recycling opportunities.

Companies, through their respective industry associations, should establish sustainable approaches and strategic partnerships at an early stage in order to successfully implement the transformation towards sustainable value creation and the circular economy.

TYPICAL CIRCULARITY PROGRAMS

Globally, the role of sustainability is shifting from an operational agenda to a strategic and political one that can unlock new sources of revenue. As stakeholders and communities begin to understand the potential of the circular economy, they are beginning to view waste as a resource to be monetized as opposed to an inconvenient expense. Based on solutions and expertise of German partners, below are some key drivers for any countrywide "Waste to Wealth" Program that could be espoused albeit under a central control and co-ordination mechanism to be put in place in Mauritius and extended at the regional cooperation level, on behalf of the IOC coordination and facilitation.

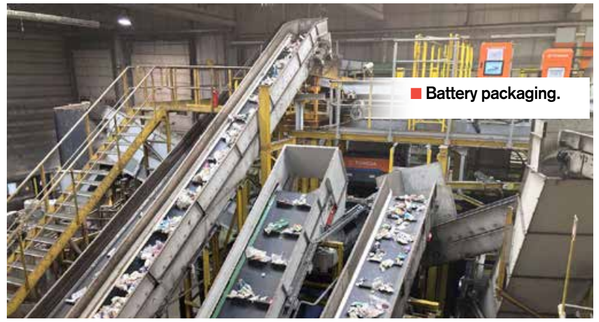
Maximizing resource value: Circularity emphasizes using resources more efficiently, which translates into significant cost savings over time. Rather than sourcing expensive raw materials, companies can reclaim, reuse or recycle what they already have.

Unlocking new revenue streams: By rethinking the lifecycle of their products, companies can generate entirely new revenue streams through product returns, refurbishing, remanufacturing or even leasing models.

Building brand loyalty: Consumers and investors alike are gravitating toward companies with a genuine commitment to sustainability. Embedding circularity into its business model enhances reputation and strengthens customer loyalty, which in turn drives profitability.

Recycling and material recovery: Companies can recover valuable materials like metals and plastics from end-of-life products, cutting costs and creating new revenue streams by reselling them.

Product take-back programs: Encouraging customers to return used products allows companies to refurbish, remanufacture or recycle them, extending their lifecycle and reducing waste while boosting customer loyalty.


Battery packaging.

Leasing and product-as-a-service models: Instead of selling, businesses lease products or offer them as a service, generating recurring revenue and maintaining control for easier reuse or refurbishment.

• **Upcycling and remanufacturing:** Waste materials can be transformed into higher-value products. Upcycling involves taking waste materials like scraps and transforming them into new, higher-value products. Remanufacturing, on the other hand, is the process of restoring used products to like-new conditions. This could apply to anything from electronics to heavy machinery. With the establishment of an Extended Producer Responsibility (EPR) framework and by designing products with modular components, companies can more easily replace or upgrade parts, reducing the need for raw materials and opening a new market for refurbished goods.

• **Optimizing packaging and logistics**: Reusable packaging systems lower material costs and reduce waste. Efficient reverse logistics for product returns create additional savings and revenue streams.

Nowadays, Extended Producer Responsibility (EPR) has gained momentum globally and is defined as an environmental policy approach in which producers are given financial and/or organizational responsibility for the treatment or disposal of post-consumer products. Thereby, this policy tool shifts the responsibility for waste management upstream in the product life cycle to the producers who are obliged to take responsibility for the entire end-of-life phase of their products, including collection, sorting, recycling, and adequate waste treatment. Experience has shown that EPR systems achieve their full potential when embedded in a mandatory legal framework that ensures a level playing field. Hence, regulation plays a critical role in standardizing obligations and incentivizing innovation within industry while ensuring transparent monitoring and enforcement mechanisms.

INDIAN OCEAN OUTREACH

In support of its mandate as Export Network for Circular Economy Solutions, RETech as an official strategic partner of Federal Ministry of Environment, Climate Action, Nature Conservation and Nuclear Safety is commissioned to support the internationalization of German GreenTech SMEs. This includes international consulting, networking, public relations and operational support with access to over 60 industrial and institutional members from the entire waste management and recycling sector value chain – ranging from collection, treatment, and marketing to consulting, planning, research, financing and education – backed by a strong national and international network. This broad network offers a unique opportunity to support the establishment and effective co-ordination of structured waste management systems worldwide and promote the adoption of German waste management and recycling technologies.

Against the above backdrop, a conference with workshop on "*Transforming Islands' Waste Management: Overcoming Challenges with Sustainable Solutions*" was held in Berlin last November with representatives from Mauritius, Indonesia, Denmark, Italy, Cyprus, Maldives as well as technical and institutional members of RETech. The outcome led amongst others to an extension of the German Environmental Ministry funding program against marine litter for SIDS. The project grant is currently under review and consideration for Mauritius and Madagascar for a project dubbed "Overcoming Islands (Marine) Litter Challenges by the Power of an Interregional Infrastructure" based on best practices on projects such as "*Tourism Marine Litter*"; *www.toumali.org* run in Morocco, Egypt and Tunisia by German partners from 2021-2025.

For the Indian Ocean project proposal led by RETech and planned for a four-year period, the implementation partners are University of Rostock, Hamburg University of Technology and Cyclos GmbH with the Indian Ocean Commission (Regional & Political), Mauritius Oceanography Institute under the Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries and TAS – Trans Africa Services; RETech Representative, Africa Working Group Circular Economy as local partners. Malagasy partners will be identified at the beginning of the project's implementation.

Such on the ground initiatives delivered by practitioners would support the African and Indian Ocean Islands Circular Economy Action Plan 2025-2030 and Innovative Financing Mechanism for the Blue and Circular Economy as finalized by the Indian Ocean Commission (IOC) and the UN Economic Commission for Africa (UN ECA) following a validation workshop held in Mauritius end January 2025. The proposal and deliverables are in line with the outcome of the UN Ocean Conference held mid-June in Nice that concluded with the political declaration "*Our Ocean, Our future: United for Urgent Action*" and attended by the heads of Government of Mauritius and Madagascar amongst others.

Thus, Circular Economy can become a powerful tool to drive the strategic transformation of Mauritius economic, industrial, environmental and energy landscape with trickle down to the GDP both in terms of savings and revenues.

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TAUX DE CHANGE

ACHAT À L'UNITÉ

DOLLAR (US)	46,66	▼
EURO	53,82	▲
LIVRE STERLING	62,40	▲
RAND	2,74	■
YEN (100)	32,60	▲
DOLLAR (AUS)	31,06	■
ROUPIE (INDE)	0,56	■