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Recycling: Global Connections Boost the International Recycling Industry

Brigitte Weber
Editor-in-Chief

According to the Bureau of International Recycling (BIR), the association's World Recycling Conventions facilitate global connections for driving forward the international recycling industry. Of course, this also applied to the recent BIR convention in Sweden. This event in Gothenburg was attended by 1,750 participants from 57 countries and more than 800 companies as well as 69 expert speakers and discussion participants.

In her opening address, BIR's President Susie Burrage OBE confirmed "strong progress" for the world body across many of its areas of activity. In particular, she pointed to the organization's strengthened advocacy push at the international level, which would ensure "the voice of the recycling industry is heard in key policy discussions". The attendance in Basel Convention COP-17, the UN PACE II Working Group and the ongoing negotiations towards a Global Plastics Treaty would reflect the objective that recycling is recognized as essential to environmental protection, climate mitigation and fair global trade, Susie Burrage was cited. Furthermore, BIR intends to strengthen its communications outreach so that its messages can be more widely and deeply understood. "The Environmental Benefits of Recycling study, nearing completion with KPMG, will hammer home the message that 'recycled materials are not an alternative – they are a necessity'," the international association gave account. The study would provide the recycling industry "with a robust, fact-based foundation to demonstrate our environmental value and to counter misinformation with confidence". Additionally, the BIR Academy video series, which is designed to share practical knowledge, would promote best practices and support education across the global recycling industry.

What is more, the increasing number of companies and national federations choosing to join BIR is seen as a sign of industry unity and trust in its work. "Companies of all sizes, in very different economic and regulatory environments, still see real value in a strong, independent international federation," Susie Burrage was quoted. "It is also encouraging to see the growing presence of members from Asia and the Middle East, reflecting a broader shift: recycling is increasingly recognized as strategic for industrial resilience and resource security."

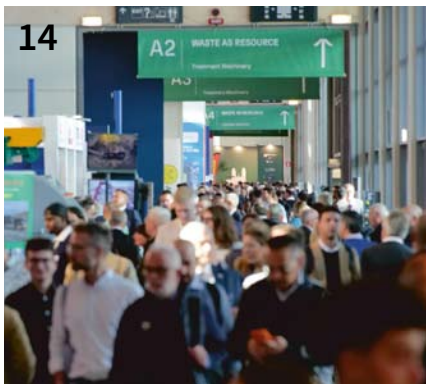
It is hardly surprising that recycling is gaining ground internationally: China aims at more circular economy, as the 15th Five-Year Plan (2026-2030) outlines – inter alia – the country's targets regarding its green transformation, meaning circular economy and decarbonization (page 16). And Zambia is aiming at green growth; the African country is progressing towards a circular economy as part of its corresponding strategy (page 22). In contrast, Cyprus's waste management needs support and political will is required (page 19).

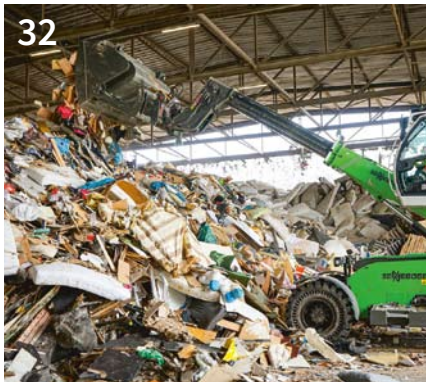
Trade shows expand their global reach, too. For the 2026 edition, Ecomondo (3 to 6 November this year) is further strengthening its international profile, intending to attract an increasing number of buyers, delegations, and industry associations from all continents (page 14).

We hope you get a lot of new and useful information from reading this current magazine.

Yours
Brigitte Weber (weber@msvgmbh.eu)

Cover Photo: MSV, AI-generated





“AI WON’T SAVE THE PLANET, BUT IT MIGHT FINALLY FIX OUR TRASH PROBLEM”

Everyone wants to talk about AI saving the planet. Fewer people want to talk about garbage. That is a mistake because waste management is one of the most broken, least digitized, and highest-impact systems on Earth. Unlike climate modeling or carbon markets, this is an area where AI can deliver immediate, measurable results without waiting for new regulations, new consumer behavior, or heroic assumptions.

According to the World Bank, globally, cities spend over 252 billion US-Dollar annually on solid waste management, a figure projected to rise to 375 billion US-Dollar by 2050 as urbanization accelerates. However, most waste systems still rely on manual sorting, static routes, and contracts written decades ago. We have digitized banking, logistics, and marketing, but we still manage trash like it is 1985.

Let’s start with recycling’s uncomfortable truth: most recycling systems are optimized for compliance, not recovery.

The OECD estimates contamination rates in recycling streams often exceed 25–40 percent, making large volumes economically unrecoverable. In projects I have advised on, AI visual recognition trained on local waste streams (rather than generic datasets) improved material identification accuracy by 20–30 percent within months. No resident education campaigns. No behavior change. Just better intelligence.

However, as I have learned, resistance to these improvements was not technical. It was contractual. Most recycling operators are not paid for precision. They are paid for throughput. While AI improves sorting, it also

Neil Sahota

exposes incentive misalignment leaders have quietly accepted for years.

From static collection routes to intelligent waste systems

Next, we have the challenges with routing, a major hidden cost. Consider, waste collection is one of the largest fuel and labor expenses for municipalities. However, most routes are fixed, not responsive. McKinsey has shown that AI route optimization in municipal services can reduce operating costs by 15–25 percent. In one city engagement I supported, dynamic routing reduced collection mileage by 18 percent in under a year. No new trucks. No layoffs. Just fewer bad decisions repeated every week. Then, we have the dark (or illicit) economy no one tracks. Illegal dumping and misreported waste flows represent billions in lost revenue globally. AI anomaly detection (correlating disposal data, satellite imagery, and construction activity) has already uncovered large-scale abuse in regions where enforcement teams were understaffed and overwhelmed.

What we learned is that this is not about surveillance. It needs to be about pattern recognition. So, why do leaders hesitate? In part, waste is treated as an operational necessity, not a strategic system. That’s the blind spot. (Think about it. Do you wonder what happens when you trash something like an old remote control?)

Thankfully, AI thrives in environments with fragmented data, labor shortages, and aging infrastructure… exactly the conditions waste management lives in every day.

So, here is the opportunity. The first movers will just reduce costs, but more importantly, they will redefine standards, influence regulation, and quietly shape the circular economy while others are still issuing press releases.

AI will not make waste glamorous. But it can finally make it intelligent.

■ by Neil Sahota

Neil Sahota is an IBM Master Inventor, United Nations (UN) AI Advisor, AI Strategist, and the author of two books: Own the A.I. Revolution and AI Activation Code. With 20+ years of business experience, he works with organizations to create next-generation solutions powered by emerging technology. His work experience spans multiple industries, including legal services, healthcare, life sciences, retail, travel and transportation, energy and utilities, automotive, telecommunications, and sports.

AI won’t make waste glamorous. But it can finally make it intelligent.

Photo: Neil Sahota

NEW REPORT ON PLASTICS RECYCLING

According to a recent report, published by the Progressive Policy Institute (PPI) – a non-profit organization that serves as a public policy think tank in the USA – advanced recycling could increase plastic recycling. Expanding the activities at existing oil refineries and new standalone facilities nationwide could more than double the plastic recycling rates.

As reported, "The Waste Diversion Benefits of Expanding Advanced Recycling" outlines how traditional mechanical recycling is limited due to its inability to recycle "flexible plastics". Advanced recycling, which uses chemical processes like pyrolysis to break plastics down to the molecular level, can fill the gap and convert plastic waste into raw materials that can be used to make new products. "Scaling up advanced recycling efforts will lead to significant environmental and economic benefits," the author Stuart Malec, PPI's Vice President of Public Affairs, was quoted. "Increasing the amount of plastic waste that can be successfully recycled will not only benefit the planet, but will also

collectively save communities across the country millions of dollars in their waste disposal budgets."

Key findings from the report include:

- Short-term deployment of advanced recycling could raise the nationwide plastic recycling rate from nine to 19 percent while potentially reaching 23 percent in the long-term.
- Local municipalities could save between 229.7 million and 327.5 million US-Dollar per year in avoided landfill tipping fees, defined as charges per ton to dispose of waste.
- States with historically low recycling rates can use existing oil refineries to implement advanced recycling technology, raising their landfill diversion rates.

While advanced recycling can curb dangerous environmental effects and benefit local economies, Malec argues that there needs to be a regulatory framework that strengthens economic incentives to collect plastic waste. "Clear policy is essential for this innovative technology to achieve its full potential in waste diversion and economic impact," he is convinced. "Without a clear policy framework, more and more plastic waste will continue ending up in landfills instead of being reused in the economy."

■ The report is available at 🌐 progressivepolicy.org/the-waste-diversion-benefits-of-expanding-advanced-recycling/.

🌐 progressivepolicy.org

Photo: Progressive Policy Institute

A PLAYBOOK FOR CLIMATE INVESTMENT IN ASIA

In the "Asia 2030 Climate Playbook", the Asia Investor Group on Climate Change (AIGCC) and the globally active independent investment management firm Invesco explain, "how Asian asset owners can deliver 2030 targets and scale climate investment". Circular economy, deforestation, climate solutions, biodiversity/nature and the transition to non-fossil energy are – inter alia – important issues for climate action. "Strong long-term performance, material emissions reductions, and increased allocation to climate solutions can be achieved in parallel and can be actionable. This is the evidence from leading global and Asian asset owners (AOs). Climate risks are increasingly considered financially material, while climate-aligned opportunities are expanding across markets," the authors of this playbook wrote. Asian asset owners would play a critical role in shaping regional and global climate outcomes, with portfolios that span listed markets, private equity, infrastructure, real assets, and domestic investment ecosystems. As underlined, the "Asia 2030 Climate Playbook" aims to support asset owners – alongside broader stakeholders such as policymakers, NGOs, and market participants – by outlining how one can capitalize on climate strategies and opportunities.

The publication can be downloaded at 🌐 aigcc.net/wp-content/uploads/2026/03/AIGCC-Asia-2030-Climate-Playbook_compressed.pdf and 🌐 invesco.com/apac/en/institutional/insights/esg/asia-2030-playbook-how-asian-asset-owners-could-deliver-targets-and-capture-climate-opportunities.html.

150 TONS OF RECYCLED HIGH IMPACT POLYSTYRENE (HIPS) FOR PRODUCTS

As reported by Belgium based company Close the Loop (ClozD-loop BV), it has delivered more than 150 tons of recycled HIPS resin from Toshiba toner cartridges to ETRIA's Dieppe factory in France since 2018. According to the information, the French manufacturer, founded as joint venture by Ricoh Company Ltd. and Toshiba Tec Corporation, is "Europe's only facility capable of high-tech reuse of these plastics". The recycling line in Malle, Belgium, was developed with Toshiba Tec in 2013.

closetheloopeu.com

HOURGLASS INTERNATIONAL LAUNCHES RENUCYCLE

The goal is to keep disposable personal protective equipment (PPE) out of landfills. The waste management program is available through distributors in USA and Canada as "a streamlined, eco-friendly alternative to landfill disposal for gloves, masks, gowns, and more". RenuCycle provides purpose-built collection containers. Businesses order their collection containers through a partnered distributor, fill them with used PPE, and send them back for recycling. However, PPE contaminated with acidic, toxic, caustic, or infectious chemicals (e.g., sulfuric acid, mercury, sodium hydroxide, E. coli) are not accepted.

renucycle.com

NEW BRAND IDENTITY

Terex Ecotec, a global leader in wood processing, biomass and recycling equipment, has launched a new brand identity at IFAT 2026: Ecotec.

This would mark "a new chapter in the brand's evolution after more than a decade of growth". Ecotec had developed "one of the most robust and diverse product portfolios in the industry". The range spans material handlers, shredders, trommels, screens, metal separators and conveyors, enabling customers to process a wide variety of waste streams and applications using proven, purpose-built equipment. "Continued investment over time has strengthened the portfolio, reinforcing Ecotec's position as a comprehensive solutions provider."

terex.com/ecotec/

PIRELLI NORTH AMERICA LAUNCHED CLOSED-LOOP TIRE RECYCLING INITIATIVE

The project, in collaboration with Bolder Industries and located in Rome (Georgia), has been recognized with the Tire Recycling Foundation's Value Chain Collaboration Award. As reported, the initiative focuses on the recovery of scrap tires generated during the manufacturing process in North America. "These materials are collected and processed by Bolder Industries using pyrolysis technology to produce ISCC PLUS-certified BolderBlack recovered carbon black (rCB), which Pirelli then reuses in the North America production of new tires."

The project will be part of a broader Pirelli plan "that will also involve additional facilities, with the objective of creating industrial ecosystems capable of valorizing waste by producing recovered materials to be reintegrated into tire manufacturing across the Group's production network." In this particular case, BolderBlack is to partially replace virgin carbon black in production, contributing to a more efficient use of resources.

pirelli.com

RE&UP PARTNERS WITH MADEWELL AND ISKO ON TEXTILE-TO-TEXTILE DENIM CAPSULE

According to RE&UP Recycling Technologies, the Netherlands-based firm is accelerating the shift toward a closed-loop textile economy through the mentioned strategic collaboration with American denim brand Madewell and global fabric manufacturer ISKO.

By transforming approximately 20,000 pairs of post-consumer jeans into high-quality recycled feedstock for a textile-to-textile recycled denim capsule, the circular tech company would be demonstrating the commercial readiness of circular systems for the denim sector. RE&UP's recycling technology would allow pre-loved garments to be deconstructed and re-engineered into Next-Gen Cotton and Polyester fibers that meet the durability and aesthetic requirements of the premium denim market.

As underlined, the challenge of post-consumer denim lies in its complexity and varied mechanical history. RE&UP's proprietary process would solve this by providing a feedstock-agnostic capacity, capable of handling diverse polycotton blends and turning them into a "raw canvas" for new production. The resulting fibers were provided to ISKO, where they were engineered into Global Recycled Standard (GRS) certified fabrics that maintain the stretch, strength, and comfort required by modern consumers.

Madewell was established in 2006 and is known for its premium denim and commitment to responsibly sourced materials and sustainable practices. "As the first brand to offer year-round denim recycling through Cotton's Blue Jeans Go Green program, Madewell has operated its denim trade-in initiative for more than a decade, giving worn denim a new life and collecting and recycling over two million pairs of jeans," the information said.

The collection was launched on April 8, 2026 and will be available to shop on Madewell.com.

- reandup.com
- iskodenim.com
- madewell.com/de/womens/labels-we-love/reup-isko/

CLEAN EARTH OFFERS NOW SOLAR PANEL RECYCLING IN TEXAS

In April this year, Clean Earth, a division of Enviri Corporation and a leading provider of environmental and regulated waste management services, has announced the launch of full solar panel recycling services at its Lancaster facility in Texas following approval from the Texas Commission on Environmental Quality. As reported, the permit would authorize the site to receive and recycle solar panels alongside its enhanced electronic waste recycling operations. "At full capacity, the Lancaster facility can process approximately 600,000 solar panels per year, equivalent to 20 million pounds of material from sources including damaged panels at delivery, construction waste during installation, balance-of-system waste, and end-of-life panels at decommissioning," the information said. "Clean Earth applies material assessment, waste profiling, and regulatory insight to determine the most responsible and compliant outcome for each panel and component, providing recycling and reuse options based on material composition and applicable regulatory requirements." Headquartered in King of Prussia, Pennsylvania, Clean Earth operates a network of 93 locations across the United States.

- cleanearthinc.com
- enviri.com

Photo: MSV, AI-generated

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WIND REPOWERING PROJECT IN SPAIN WITH WASTE RECOVERY

Norway-based company Statkraft, Europe's largest renewable energy producer, has completed the first phase of the Montes de Cierzo wind repowering project in Navarra. It replaced 44 old turbines with ten new ones, increasing the capacity to produce clean energy while reducing visual impacts and achieving almost full recycling and reuse of the old components.

"I am truly proud of this project. Not only does it deliver clean, affordable energy to industry and consumers at a time when Europe really needs it, it also reduces the impact on local communities and the environment through innovative and thorough focus on design and recycling," Executive Vice President for Statkraft in Europe, Barbara Flesche, was quoted. She made the announcement at the WindEurope Annual Meeting in Madrid, where Statkraft is a sustainability partner.

As reported by the Norwegian company, through repowering, the installed capacity of the Montes de Cierzo wind farm will increase by 50 percent from 60 to 90 MW, and energy production is estimated to double to 300 GWh/year. Batteries will be added for energy storage with an installed capacity of 14.26 MW and storage capacity of 28.51 MWh. A two-hour charge and discharge duration would be added to ensure more stable supply and mitigate price volatility.

Photo: Statkraft AS

Old turbines being dismantled in the Montes de Cierzo wind farm

Statkraft stated that the Montes de Cierzo project successfully demonstrates how communities can benefit from co-investment initiatives. This project had become the largest citizen co-investment initiative linked to a renewable energy project in Spain. More than 250 people, mainly residents of the Navarra region where the project is located, had invested five million Euro in the project. "This is part of the government's initiative to foster local commitment to the energy transition and generate positive impacts for surrounding communities."

Facts about the project:

The 60 MW Montes de Cierzo wind farm in Tudela, Navarra, was built in 2000. Statkraft has carried out the dismantling works of the first phase of the Montes de Cierzo wind power plant through its contractor Lezama Demolisiones, successfully reusing or recycling close to all of the waste generated:

- More than 1,900 tons of steel
- Almost three tons of aluminum
- Almost four tons of copper
- 300 tons of fiberglass
- 24 tons of PVC cables
- 14 tons of oils
- Gearboxes
- Anemometers and various components
- Equipment and components weighing more than 100 tons will be able to continue operating.

The wind farm is expected to be fully repowered and commissioned by 2027. The second phase of the project involves replacing the remaining 41 turbines with 4 new machines and adding 14.26 MW of battery storage capacity.

statkraft.com

INTERNATIONAL COOPERATION COMPLETED A RECYCLING LOOP FOR POLYESTER TEXTILES

Three partners – Axens, IFPEN and JEPLAN – were successful to produce the base monomer of a 100 percent recycled polyester. For this purpose, several tens of tons of post-consumer, polyester-rich, European textile wastes, sorted and prepared in France, have been processed in the companies' semi-industrial demonstration unit, located in Japan. As underlined, this step would pave the way for circular polyester loops regarding the textile industry, in particular sportswear, home furnishings and the luxury sector.

According to Axens, IFPEN and JEPLAN, the companies used their Rewind PET technology. The test was carried out in their semi-industrial unit (capacity 1,000 ton/year) operated by JEPLAN in Japan. Several tens of tons of the base monomer of polyester, BHET, have been produced and will be converted into polyester yarns, fabrics and garments.

A new step towards closed textile loop

"This industrial textile-to-textile recycling test of several tons of post-consumer PET is one of the first of its kind under representative industrial conditions," the press release said. "It paves the way for large-scale industrial chemical recycling of textile polyester, offering textile stakeholders a building block that can be integrated into a global strategy across the entire value chain committed to reduction, reuse, and textile recycling." This process could be installed at industrial sites around the world that produce polyester for the textile industry, thereby enabling the substitution of fossil-based raw materials with their recycled equivalents. "The technology, already proven and commercialized for recycling all PET packaging, including food-contact applications, is now validated for textile use under an exclusive license granted by IFPEN/JEPLAN to Axens worldwide to any industrial player wishing to develop local or regional textile-to-textile loops."

- axens.net
- ifpenergiesnouvelles.com
- jeplan.co.jp

PFAS REMOVAL IS POSSIBLE

In May this year, Australian company EPOC Enviro's "Surface-Active Foam Fractionation" (SAFF) technology has commenced a full-scale remediation trial of PFAS (per- and polyfluoroalkyl substances) at an Australian wastewater treatment facility. As reported, the "bench-scale testing demonstrated exceptional PFAS removal across both the liquid and solids phases of sewage wastewaters. The results, which show >97 percent removal of Σ PFAS (30) and ≥99 percent removal of C6 chemistries for the aqueous phase, and >80 percent removal Σ PFAS (30) from the biosolids phase, are regarded as globally significant and underpin the decision to advance SAFF to full-scale evaluation." The trial would be evaluating the ability of the used technology to deliver reliable, scalable PFAS removal under real-world conditions, with the system remediating PFAS from several interception points at the sewage treatment plant (STP) to enhance data. Trial results will be released in the coming months. On the back of this trial, EPOC Enviro and its distribution partners are beginning to undertake further full-scale sewage treatment operations in both the USA and Europe.

Photo: EPOC Enviro

SAFF technology resolves a global blind spot in PFAS pollution control at wastewater treatment facilities

epocenviro.com/applications/sewage/

A TECHNOLOGY AWARD FOR DESCYCLE

At IFAT Munich 2026, DEScycle has won the "Knorr-Bremse AG Circular Technology Award", Europe's largest award for circular technology innovation, in collaboration with CIRCULAR REPUBLIC (an implementation platform for the circular economy).

Selected from 50+ companies alongside some of the most advanced industrial technology startups in Europe, DEScycle was recognized in the Critical Raw Material Recovery category for its ionometallurgy platform recovering metals from waste. "This recognition reinforces what is becoming increasingly clear across industry and capital markets. Critical raw material supply is now a strategic infrastructure challenge. Electrification, AI, defence, and the energy transition are accelerating demand for copper, gold, silver and critical metals, while existing smelting infrastructure remains centralized, capital-intensive, slow to scale, and geopolitically concentrated," the UK-based company commented. As emphasized by DEScycle, the firm is a deep tech company that aims to transform the metals industry. "We create innovative metal recovery & recycling methods using eco-friendly Deep Eutectic Solvents (DES)," the technology is explained. "These non-toxic, non-water-based salts allow for low-temperature, low-energy operations; resulting in low-carbon, low-impact metals." DEScycle's goal would be to end the reliance upon high-energy pollutive smelters, toxic chemicals and strong acids in the metals industry.

descycle.com
circular-republic.org

Photo: Knorr-Bremse AG

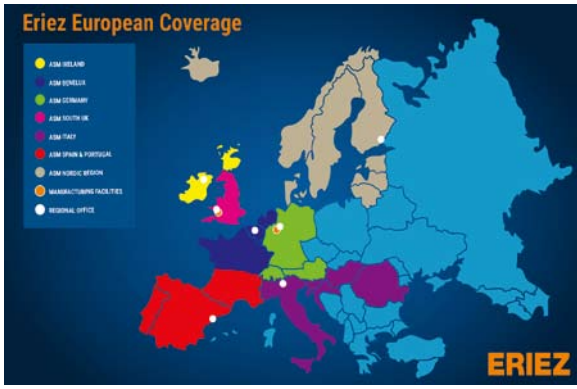
ERIEZ EXPANDS EUROPEAN MARKET PRESENCE

Eriez, a global leader in separation technologies, has expanded its European sales network as part of a broader regional growth initiative to strengthen customer support and accelerate responsiveness across key industrial markets.

As underscored, this enhanced structure would enable Eriez-Europe to deliver deeper technical expertise and more direct engagement with customers. These local insights in the mining, aggregates, recycling, food, packaging, and other process sectors were essential to achieving consistent performance and reliability, the company explained.

“Europe encompasses a wide range of industries, regulatory frameworks, and operating conditions. Expanding our in-region sales presence ensures customers have immediate access to knowledgeable Eriez professionals who combine local insight with the company’s global engineering resource,” Lloyd Williams, Sales Director of Eriez-Europe, was quoted.

According to Eriez, this regional framework would reflect its strategy of integrating global innovation with localized expertise. By this means, the company would enhance its ability to collaborate closely with customers from project concept through execution. “This growth initiative is about strengthening relationships as much as expanding reach,” John Klinge, Regional Director – EMEA Operations & Strategy, is convinced.



Picture: Eriez

“With experienced sales managers positioned across Europe, we’re better equipped to anticipate customer needs, respond swiftly, and deliver technologies that advance efficiency and performance.”

eriez.com

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RENEWABLE CARBON

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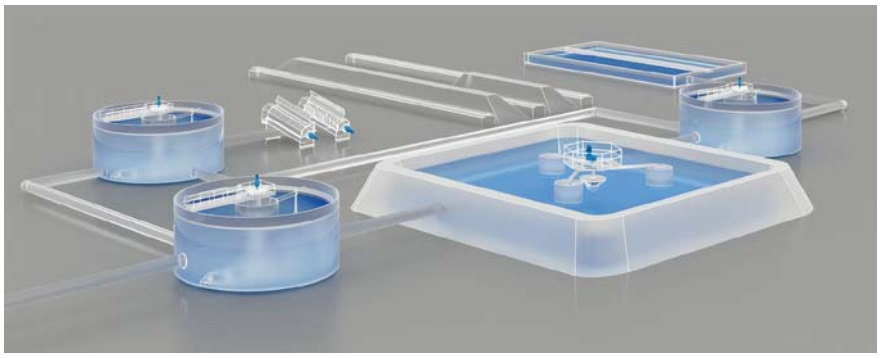
From Waste to Value:

BONFIGLIOLI AT IFAT 2026

Bonfiglioli, a family-run Italian company with a global presence, conceives, designs and produces custom solutions for collecting, downsizing and sorting waste materials with the aim of maximizing recycling efficiency. In Munich, the company presented its complete solutions for recycling processing, biogas generation and wastewater treatment.



Drive technologies for the biogas value chain

The Italian company supplies solutions for plants that produce biogas from both municipal solid waste (MSW) and agri-food or agricultural waste. For MSW processing, the entire chain is covered: from the digestate pre-treatment with shredders and depackagers to biomass feeders, and finally agitators for anaerobic digesters and solid-liquid separators. The solution showcased at IFAT for anaerobic digesters integrated three core components: a 300 Series planetary gearbox, an EVOX BXN Series asynchronous induction 3-phase motor – a modular electric motor with built-in DC brake – and the AxiaAgile smart inverter. The latter features a variable "cut position" for smaller particles and the energy-saving functions to ensure reliable system operation.

The 300 Series remains a flagship product due to its extraordinary versatility. This compact series combines high torque capabilities and high shock load resistance with simplified maintenance and ATEX certification, which is essential for operating in potentially explosive atmospheres.

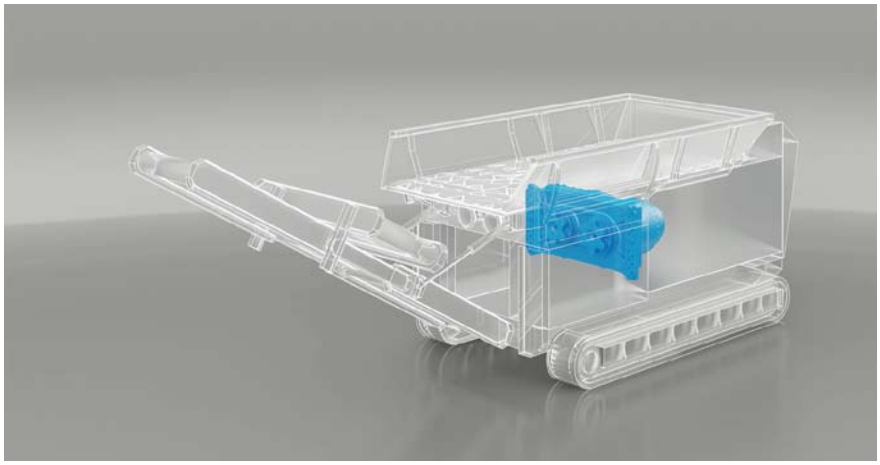
Powering primary shredding

In recycling, primary shredding is critical for preparing material for downstream sorting or secondary shredding. Bonfiglioli offers the R3 Series double planetary gearbox. As emphasized, it is the ideal choice for all severe-duty applications where shock loads and impacts are frequent. "This series is highly flexible, offering a wide range of mounting options, gear layout, output shafts, and motor interfaces. Depending on the required torque and machine layout, the gearbox can be equipped with 1, 2, or 4hydraulic motor adapters." These were also available in electric versions. The company also provides customized electric track drives for shredder mobility.

Solutions for wastewater treatment

Bonfiglioli's energy-saving solutions for filters, mixers, and aerators focus on precise speed control and high durability. The solution showcased for aerators featured the HDP Series helical parallel geared motor, applied to the rotating system which generates fluid movement. "Thanks to its robustness and high overhung load capacity, it withstands radial loads and thrives in aggressive atmospheres. Key strengths include its space-effective U-shape arrangement and transmissible torque up to 210,000 Nm," the manufacturer assured. For screw conveyors, the solution displayed at IFAT combined the F Series shaft-mounted geared motor with the AxiaAgile smart inverter and the asynchronous three phase motor of the BX Series. "This setup, featuring optional IP56 protection, tropicalization, and anti-condensation heaters, is specifically designed for harsh environmental conditions."

bonfiglioli.com/international/



Pictures: Bonfiglioli

New European Packaging and Packaging Waste Regulation:

DIGITAL TOOL FOR DECLARATIONS OF CONFORMITY

The companies PACKLIANCE GmbH and cyclos-HTP GmbH (CHI) will jointly launch a digital tool for preparing the declaration of conformity required under Article 39 PPWR. As reported, the solution enables companies to organize relevant packaging data in a structured manner and use it to generate both the technical documentation and the declaration of conformity in line with PPWR requirements. The go-live is scheduled for July 2026.

"With the 12 August 2026 deadline approaching, the pressure on producers of packaged products and packaging is increasing significantly," the information said. "From that date, among other obligations, companies will be required to carry out a conformity assessment procedure pursuant to Article 38 PPWR and to issue the corresponding declaration of conformity in accordance with Article 39 PPWR. This requires a complete, robust and audit-proof data basis – ranging from master packaging data and material and component information through to the relevant supporting evidence." As underlined, the new tool would help companies implement these requirements efficiently. "It provides a structured workflow for data capture, validation and regulatory assessment, while enabling the automated generation of the required documents." According to the press release, companies of all sizes can use the software independently. "It has been designed to help structure packaging portfolios in a sustainable, organized and audit-ready manner, enabling businesses to meet declaration of conformity requirements in a future-proof way." The multilingual application (German/English) would also provide a basis for use beyond Europe.

Where required, PACKLIANCE is pleased to support customers with

- preparatory data structuring for use of the tool
- automated integration into existing infrastructure, such as ERP systems
- acting as the authorised representative for the producer in Germany.

■ Companies can register with immediate effect to receive a non-binding offer. Registration / initial contact: packliance.eu/en/packliancetool-powered-by-chi

ECOMONDO 2026 EXPANDS ITS GLOBAL REACH

From 3 to 6 November, the 29th edition of Ecomondo, the Italian Exhibition Group's (IEG) international event on the green, blue, and circular economy, is scheduled to take place at Rimini Expo Centre.

As European policies driving the ecological transition continue to gain momentum, Ecomondo confirms its role as the leading ecosystem where industry, institutions, the research community, and policymakers come together to address the major industrial and environmental transformations reshaping global markets. The event provides a strategic platform for companies to foster dialogue, build partnerships, and unlock new business opportunities. It also serves as a catalyst for start-ups, scale-ups, and SMEs operating in the circular economy, supporting their growth and accelerating innovation.

International reach: A growing sustainability platform

For the 2026 edition, Ecomondo is further strengthening its international profile, with the aim of attracting an increasing number of buyers, delegations, and industry associations from all continents, in collaboration with the MAECI – Ministry of Foreign Affairs and International Cooperation – and ICE – the Italian Trade Agency.

With the involvement of new European and international institutional partners, including the European Commission, as well as leading continental agencies and key stakeholders such as the OECD and FAO, Ecomondo's conference program – curated by its international Technical and Scientific Committee – will feature additional summits, conferences, and conventions held in English. Strong focus will be placed on key European regulatory dossiers, with high-level insights into the Circular Economy Act, Bioeconomy Strategy, Biotech Act II, the Pact for the Mediterranean, the RESourceEU Action Plan, and the Critical Raw Materials Act, as well as new provisions on Extended Producer Responsibility (EPR).

Other key themes at Ecomondo 2026, with a continued focus on international cooperation and strengthening partnerships with the Mediterranean and Africa, will include healthy and circular cities, artificial intelligence and new digital technologies to support the ecological transition, as well as the bioeconomy and bioenergy – two sectors that form one of the pillars of the transition to low-emission, highly circular production systems.

During the first two days of the event, the States General of the Green Economy will return. This event is organised by the Foundation for Sustainable Development in collaboration with the Ministry of the Environment and Energy Security (MASE) and promoted by the National Green Economy Council, with a second plenary session held entirely in English. The presence of a growing number of vertical communities, united by the shared goal of accelerating the ecological transition, confirms Ecomondo's role as an increasingly cross-cutting global platform.

A new layout dedicates an entire hall to the textile supply chain

One of the key new features of the 29th edition of Ecomondo is a dedicated exhibition sector for textiles, which will take up an entire hall. It will act as an international hub for the full supply chain at a crucial moment in the rollout of new European regulations on sustainability in the sector.

The Waste as a Resource exhibition area is also expanding, while the Water Cycle & Blue Economy sector will be reorganised into the Blue Economy and Trenchless Districts, focusing on wastewater recovery and reuse, trenchless (No-Dig) technologies, and advanced solutions for pumps, valves, and control systems supporting smart network monitoring and sustainable water resource management.

The following sectors have been confirmed: Sites & Soil Restoration, Earth Observation and Environmental Monitoring, Bio-energy & Agriculture, and Circular & Regenerative Bio-Economy as well as the Circular & Healthy City and Paper District, and the Innovation District, dedicated to start-ups, innovations, and sustainable expertise.

ecomondo.com

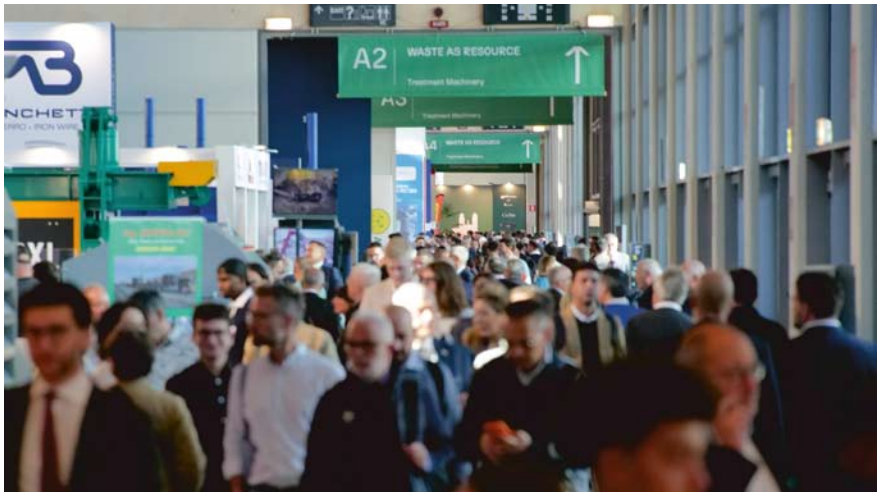


Photo: Italian Exhibition Group (IEG)

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CHINA AIMS AT MORE CIRCULAR ECONOMY

In China, the National People's Congress approved the 15th Five-Year Plan (2026-2030) in March. It outlines – inter alia – the country's targets regarding its green transformation, meaning circular economy and decarbonization.

Regarding circular economy and urban municipal waste, which accumulated to 260 million tons nationwide in 2024, the People's Republic of China plans to realize "zero-waste" cities like Hangzhou. In January this year, the Chinese state news agency Xinhua informed that the city – with an annual economic output exceeding two trillion yuan (about 287 billion US-Dollar) and a population of more than 12.6 million – has been selected as one of the "20 Cities Towards Zero Waste" by the United Nations Secretary-General's Advisory Board on Zero Waste in 2026. The board noted that the city stands out for its strong commitment to zero-waste and its contributions to advancing inclusive, sustainable, and innovative waste management solutions.

"In Hangzhou, waste now carries a 'digital passport'. Huge Recycle, a company in Yuhang District handling household waste recovery and recycling, operates a smart recycling network. Data from every stage – from collection at homes, sorting and processing, to delivery to downstream partners – is fed in real time into the company's intelligent management platform," Xinhua gave account. "Residents are encouraged to place used cartons, bottles and other recyclables into dedicated collection bags and schedule a pickup online. Collectors from the company arrive promptly, scan the items and upload the data, allowing residents to instantly earn redeemable eco-points that can be exchanged for goods."

According to the information, the low participation in the beginning has been overcome by a simple and rewarding system. Since its launch, the system has handled over 21 million pickups in Yuhang district, collecting nearly 600,000 tons of household waste. "At Hangzhou's urban management bureau, a digital platform maps the city's entire waste system, covering 10,806 collection points, 1,785 sanitation vehicles, 10 incineration plants and 14 organic waste treatment facilities." The model would now spread beyond

Photo: MSV, AI-generated

Hangzhou. “In Shanghai’s Xuhui District, a live digital map tracks hundreds of disposal sites, monitoring sorted waste volumes and recycling rates.”

Furthermore, several major cities were now processing household waste using smart solutions, Professor Yan Jianhua at the College of Energy Engineering, Zhejiang University, was quoted. With landfills no longer in use, some cities would transform old sites to improve the environment and recover valuable resources.

Rapid development

Like many fast growing metropolitan areas around the world, Hangzhou had to cope with huge volumes of waste and insufficient processing capacities. According to Xinhua, in 2013, the city generated more than three million tons of household waste. “If piled onto a standard football pitch, it would measure at least 400 meters in height, taller than a 140-story building.” In 2018, the situation improved with the launch of the eco-industrial park by Hangzhou Linjiang Environmental Energy Co., Ltd. By the end of 2020, the facility was able to process two million tons of household waste annually, generating over one billion kilowatt-hours of electricity and transforming the resulting slag into eco-friendly construction materials, the state news agency underlined.

Moreover, in the city’s Fuyang District, “a centuries-old mining site has been transformed into an eco-park where nine enterprises carry out industrial symbiosis. Steam from waste incineration heats a neighboring company, saving two million yuan in annual costs. Food waste, after oil and biogas extraction, is used to feed black soldier flies, producing high-protein animal feed. The park’s output value is projected to have hit 1.3 billion yuan in 2025.” As per Hangzhou’s Ecology and Environment Bureau, 71.8 percent of the city’s household waste is recycled and over 98 percent of general industrial solid waste has become useful.

Management Action Plan: Promoting the application of recycled materials

At the beginning of 2026, China’s State Council had issued its “Comprehensive Solid Waste Management Action Plan”, the Chinese website “Mysteel.net” informed. Its goal: accelerating the low-carbon transformation for domestic economic and social development. The objective is the annual comprehensive utilization of 4.5 billion tons of solid waste by 2030, and the annual recycling volume of 510 million tons of key renewable resources, along with an effective improvement in the overall standard of solid waste governance. For this purpose, the People’s Republic of China intends to “improve the management system for recycled materials and introduce more supportive policies to promote the development of the circular economy”. For example, China aims to achieve an annual recycling volume of over 300 million tons for steel scrap and 80 million tons for wastepaper, as well as more than 25 million tons of secondary nonferrous metals and 19.5 million tons of recycled plastics by 2030, the information said. By 2025, the country’s total steel scrap recycling volume had been around 255 million tons, while that of waste paper was 72.5 million tons.

“The country’s central government will further enhance the supply of renewable resources by promoting technological upgrades and building more processing and distribution centers, according to the action plan,” Anthea Shi wrote in January this year. “Meanwhile, to boost resource utilization, the government will encourage key industries such as automotive, electronics, batteries, and textiles manufacturing to use more recycled raw materials in their production processes, the plan mentioned.”

26th China International Fair for Investment & Trade

The 26th China International Fair for Investment & Trade (CIFIT) is scheduled to take place in Xiamen, China, from September 8th to 11th, 2026, hosted by the Ministry of Commerce. Themed around investment promotion, it will feature a multi-functional exhibition area and events covering policy releases, seminars and investment matchmaking, offering opportunities for participants to present their strengths, gain a better understanding of the Chinese market and connect with international partners.

As reported, the 25th CIFIT, held in 2025, attracted more than 1,100 official delegations and business groups from 138 countries, regions and international organizations. “Over 80,000 business participants attended the 25th CIFIT, and 1,154 investment projects were signed.”

www.chinafair.org.cn/CifitSystem/index/#/index

Environment and energy: implications for businesses

As reported by the company Dezan Shira & Associates (a pan-Asia, multi-disciplinary professional services firm that assists foreign investors throughout Asia) in the publication "China Briefing", the new Chinese Five-Year Plan would involve possible tightening of environmental standards for businesses and investors. However, it also means "the expansion of a range of new opportunities across both 'traditional' renewable supply chains and emerging carbon and energy technology".

As implications for businesses operating in the country, the plan for 2026 to 2030 could stand for challenges. "The planned introduction of product carbon footprint accounting rules, carbon emission limit standards, and a product carbon labeling certification system will create new tracking and disclosure obligations for manufacturers," the information said. As energy efficiency requirements are also set to tighten, firms in energy-intensive industries can therefore anticipate assessments that are more rigorous and benchmarking against set standards. "The expansion of the national ETS will be among the most consequential developments for carbon-intensive industries," the authors wrote. "The shift from an intensity-based system to one with absolute emissions caps, combined with a gradual increase in the share of paid allowances, will raise the cost of carbon for covered industries and bring more sectors into mandatory participation." By contrast, businesses that have invested in decarbonization and clean production would benefit competitively "as standards tighten and carbon costs rise across the economy". For foreign investors, there are opportunities, although Chinese companies already dominate some renewables sectors, such as wind and solar manufacturing, making entry for foreign companies difficult. "However, the scale of investment needed to transition China's economy off fossil fuels means there are still a wide range of opportunities across the value chain," Dezan Shira & Associates underlined. "The build-out of renewable energy infrastructure, zero-carbon industrial parks, and west-to-east transmission networks will drive sustained demand for specialist equipment, engineering services, and advanced materials, while in certain sectors, such as offshore wind and nuclear power, there is still demand for foreign expertise." The push to develop new energy storage, hydrogen energy, carbon capture, utilization, and storage (CCUS), and next-generation nuclear technologies under the plan's "future industries" agenda would present longer-term opportunities for foreign firms with capabilities in these areas, where China is actively seeking to accelerate innovation and international collaboration.

New catalogue

As emphasized by Dezan Shira & Associates, foreign investors in these areas are also actively encouraged under China's "Catalogue of Industries Encouraged for Foreign Investment", which includes a range of green and clean technology sectors. China's National Development and Reform Commission (NDRC) and the Ministry of Commerce (MOFCOM) officially released it. More information regarding investment in China is available at fdi.mofcom.gov.cn/EN/come.html.

mysteel.net, china-briefing.com

NEW: A DIESEL-DRIVEN SHREDDER VERSION

Austria-based manufacturer Lindner-Recyclingtech GmbH has added a diesel-driven version to its Merak 2800 mobile universal shredder series. As underlined, the drive concept of the Merak 2800 DT would combine "maximum mobility with proven Lindner quality, while reducing the infrastructure requirements at the job site". Previously, the Merak 2800 was available with an electric drive system, whereas now the diesel drive means it can operate independently of a mains power supply. "As a result, operators can use the shredder at remote or temporary job sites and move it more easily between different locations," Lindner-Recyclingtech highlighted the advantages. "At the same time, the infrastructure requirements are reduced. Because neither a transformer nor a separate diesel generator are needed, investment costs are also reduced, and the machine is ready for action as soon as it has been refuelled."

lindner.com

As per Lindner, the Merak 2800 DT is the first diesel-driven mobile single-shaft shredder in its class

Photo: Lindner-Recyclingtech

CYPRUS' WASTE MANAGEMENT: POLITICAL WILL WANTED

Photo: MSV, AI-generated

Municipal waste generation per capita in Cyprus slightly decreased between 2010 and 2022, says the European Environment Agency in its latest report of the country's waste management profile. However, the Cyprus Mail newspaper offered a contrasting viewpoint in August 2025, headlining: "Cyprus is a potpourri of environmental neglect."

The facts: According to numbers of the local Statistical Service, the total amount of municipal solid waste in Cyprus in 2023 reached 625,000 tons. "From the total amount of 496 thousand tonnes treated in 2023, 76,8 percent was disposed in landfills, 16,3 percent was used for recycling, 3,2 percent was used for energy recovery purposes and 3,7 percent was composted." From 2010 to 2023, landfilling officially dropped from 497,860 to 381,05 tons, while recycling rose from 65,530 to 81,120 tons, composting from zero to 18,510 tons and energy recovery from zero to 15,650 tons. A look at the recycling numbers shows: Except of treatment of paper, paperboard and cardbord (44,200 tons), the recycling degrees for plastic (8,310 tons), glass (8,360 tons), metal (12,070 tons), wool (2,000 tons) and textile (2,810 tons) were low.

No capacities

The Early Warning Report Cyprus of the EU Commission made it clear: "Cyprus has no waste incineration plants nor capacity for waste incineration", the report informed. "The residual municipal waste is treated at MBT plants" and – due to the lack of local recycling facilities – "outputs are landfilled or exported for recycling", while the exported amounts are included in the reported recycling data. At least Cyprus was considered to be at risk of missing the 2025 target of 55 percent for preparing for re-use and the recycling of municipal waste; it was also at risk of missing the 2025 target to recycle 65 percent of packaging waste, not to forget the gap between the 2035 target to landfill of ten percent.

On August 5, 2025, a new report occured which scrutinised the agriculture ministry. According to the Cyprus Mail website, the paper – meanwhile somewhere hidden at the ministry server and only available in Greece – "follows up on issues that emerged in previous audits". Nevertheless, the report enumerated the start of the Lakatamia Environmental Information Centre without an environmental impact study, illegal interventions in the Kryos and Amathos rivers, the illegal construction on a livestock unit within a

Natura 2000 zone, the illegally operation of a bio-sewerage plant in Kalopanayiotis and long-standing controversies over unauthorized activities and construction projects on the Akamas peninsula – one of the island's most ecologically valuable areas.

Landfills – not properly sealed off

The report also found out, that through a change in urban planning status a specific company in Kouklia was favoured. The audit at Ayia Thekla near Waterpark Ayia Napa identified "permit violations", "additions without approval to tourism developments" and building of holiday homes "without the relevant permits". Regarding the contentious landfills at Vati and Kotsiatis, the website of Cyprus Investigative Reporting Network (CIReN) presented more details: The waste activities at both localities had to be shut down at 2013, but had not been properly sealed off yet; the completions are now expected in 2026 and 2029. All in all CIReN judjed: "The Cypriot government has been in violation of the Directive on the Landfill of Waste (Directive 1999/31/EC) since the very first day of its accession to the European Union – a period of 21 years."

A green start

Not so the NGO Green-Dot. The group started up the first collecting system on the island in 2005 and was licensed in 2006. The group gathered separate paper, glass, certain metals and plastics at sorting plants where they managed some twelve tons of recycled waste per day. The waste was then baled and exported abroad for recycling. Looking back, the company resumed: "Prior to the launch of Green Dot in 2007, all waste was treated as rubbish and dumped in landfills. Cyprus was at the bottom of European Union's recycling table." And even in 2017, in a video-clip published by the AFP News Agency, Kyriakos Parpounas, Consultant for NGO Green-Dot, had to confess: "You can see that in the comparative tables Cyprus is one of those countries that has no legal and no financial tools that actually help the growth of recycling."

Today Green-Dot's EPR scheme covers both household and non-household sources for all packaging material categories. It collects and manages PMD (plastic packaging, metal packaging, beverage cartons), wood, paper and glass fractions. According to the company, relying on estimates outlined by the Statistical Service, solid waste produced in Cyprus in 2021 accounted to 570,000 tons, of which only 455,000 tons are managed: 354,30 tons finally disposed, 80,39 tons recycled, 6,87 tons composted and 13,93 tons recovered for energy, leaving 114,521 tons "unmanaged". Green Dot's primary responsibility lies within the management of recyclable packaging, says the company, serving eight municipalities and 62 communities: "PMD, packaging paper and non-packaging paper are separately collected door-to-door from 94 percent of the total population covered by the Green Dot system (630,000 inhabitants), whereas the remaining six percent (40,000) are serviced via bring points only, covering mainly schools, industrial areas or stores."

The two MBT-plants

For further use of waste, there are two mechanical-biological treatment plants. In 2018, the Koshi plant extracted 3,177 tons of paper and cardboard and 3,228 tons of plastics and sent it to other Member States; additionally 927 tons of paper and cardboard, 1,632 tons of metals, 697 tons of glass, and 236 tons of plastics were first pretreated in Cyprus and then exported outside the EU for further treatment. Correspondingly, the Pentakomo plant extracted 10,216 tons of paper and cardboard, 1,587 tons of ferrous metals, 847 tons of aluminum, 1,096 tons of glass, and 6,925 tons of plastics in 2019, which the Department of Environment declared as "exported for further treatment". (By the way: The Pentakomo plant, built by 46 million Euro of the European Union, was planned to recycle the waste collected locally and use some of it to make fuel, but not buyers for fuel could be found, reported online-newspaper Politico.)

Fifth highest for municipal waste

Anyway, the early warning assessment in 2023 by the European Environment Agency prospects a risk for not meeting the targets for aluminum, glass and plastics packaging as well as the municipal waste and the landfill waste targets. And the Cyprus News indicates that Cyprus ranks fifth highest in EU for municipal waste, with over 75 percent landfilled. On contrary, the Cyprus Recovery and Resilience Plan 2021-2026 aims to foster sustainable recovery and enhance the country's resilience and preparedness through targeted investments and reforms: Establishing a coordinating body between central and local government, creating a network of collection points and recycling hubs, supporting an integrated waste separation system and implementing a Pay-as-you-throw-scheme (planned in February 2026).

No shortage of plans

In parallel to the (revised) National Waste Generation Prevention Programme 2022-2028, a Municipal Waste Management Strategy 2022-2028 together with local Municipal Waste Prevention and Management Action Plans are foreseen. By the way: The naming of the initiatives is confusing. The 2012 Management Plan for Household and

Similar Type of Waste was changed into the 2015-2021 Municipal Waste Management Plan. At the same time, a summary description of the Municipal Waste Management Plan entitled "Municipal Waste Management Strategy" was prepared for the period 2015-2021. It must not be forgotten, that Cyprus already adopted a National Action Plan for the Circular Economy 2021-2027, financed among many others by 13.3 million Euro for a "Plan to boost investment in a circular economy by business" for "a comprehensive proposal for the implementation of investment proposals", 25 million Euro for the "techno-economic support of local authorities for the establishment of a separate collection system for municipal solid waste" and – among several smaller projects like the program for the prevention, separate collection and recovery of municipal waste for the mountainous areas of Cyprus (Budget 1.4 million Euro) – 6.4 million Euro for the "Solid Waste Reduction Programme for the Coastal Hotel and Related Tourism Infrastructure".

Tourism and waste

Besides the forthcoming problems concerning the implementation of these plans there is another difficulty: the tourism. In 2016, more than three million people visited the island. AFP reported in a video clip that a five-star hotel in Ayane is trying to promote sustainable tourism: Since 2003, guests have been asked to sort their rubbish and cut the level of landfill per guest by half. But the rising number of tourists makes this increasingly difficult and reached its peak in 2025: 4.53 million. Panicos Michael, Hotel Manager in Ayia Napa, commented already in 2016: "I think that this will be a big challenge for the island and for them (the tourists) in general to cope with the increased amount of waste". Meanwhile, several projects are currently implemented by the Cyprus Sustainable Tourism Initiative in the tourism sector, for example, the "Keep our Sand and Sea Plastic Free initiative". (In a study conducted by IUCN in 2020, it was estimated that Cyprus' contribution to marine plastic leakage was around 760 tons.)

Investments are needed

There might be the idea that investing in the Cyprus waste sector could be highly attractive due to mandatory EU compliance targets. And that high landfill rates are driving urgent government investment. One should be warned. Not only does the aforementioned report show that good investment does not necessarily end in good results. Although Investment banker Smergers lists 493 "Waste Management Investors" in Cyprus (whatever their task is): The investment must be precise. The European Environment Agency advises among others: "Targeted public policies with clear long-term objectives for investment planning and innovation are ... needed." And the Friedrich Ebert Stiftung gives the hint that "key measures, such as the implementation of the 'Pay-As-You-Throw' Scheme, the expansion of waste separation infrastructure, and enhanced public engagement, are vital for reducing waste and increasing recycling rates. Additionally, investments in modern waste treatment facilities and capacity-building initiatives will further strengthen these efforts."

One comment: In 2016, in a video-clip by Euronews, Natasa Ioannou from Friends of the Earth – Cyprus, walking through waste diverted as far as the horizon, not only felt "anger and disappointment" about "something going wrong", but she also assumed a "lack of political will". Political will today seems to be more necessary than ever.

DIGITAL OPERATOR ASSISTANT FOR TANA SHREDDERS

Finnish engineering firm Tana Oy has launched Tana Wingman, a digital operator assistant for TANA shredders. According to the manufacturer of recycling machinery, the new digital operator is designed to improve visibility, safety, and operational efficiency, because the system would help operators monitor the shredding process and respond more quickly to changing conditions during loading and feeding. "Developed as an option for TANA Hammerhead and TANA Shark shredders, Tana Wingman combines live visual monitoring with essential machine data in an intuitive tablet-based interface used at the loading machine," the provider highlighted the benefits. "By giving operators immediate access to key information without leaving the operating area, the system supports faster decision-making, smoother material flow, and safer day-to-day operation. Designed for on-site use, Tana Wingman operates without cloud services or an internet connection, keeping data securely on site." As reported, Tana Wingman is available for all D series TANA Hammerhead and TANA Shark shredders. "The system can be installed as a retrofit kit for existing machines or factory-installed on new machines during production. It connects locally via Wi-Fi between the machine and the tablet, requires no dedicated proprietary tablet hardware, and runs through the Tana Wingman app on a commercially available Android tablet. The app is available via Google Play Store." For more information, customers can contact their local authorized Tana distributor.

tana.fi

ZAMBIA'S CLAIMED DESTINATION: GREEN GROWTH

The Republic of Zambia is progressing towards a circular economy as part of its National Green Growth Strategy.

In April this year, the country's government signed a Host Country Agreement (HCA) with the Global Green Growth Institute (GGGI), an intergovernmental organization founded at the United Nations Conference in 2012 on Sustainable Development and based in Seoul, South Korea. As reported, the agreement reaffirms the parties' shared commitment to advancing climate action and inclusive green growth in Zambia. It would formalize GGGI's legal status in Zambia and strengthen the institutional framework for collaboration, supporting Zambia's government to deliver its climate and green growth priorities, including implementation of its Nationally Determined Contributions (NDCs). GGGI Zambia is hosted by the Ministry of Green Economy and Environment.

The Zambian government and GGGI have been working in close collaboration for years. The Global Green Growth Institute has worked with government counterparts across multiple ministries and agencies to support initiatives including the National Green Growth Index, the National Green Growth Strategy, carbon markets under Article 6, operationalization of an integrated Monitoring, Reporting and Verification (iMRV) system, capacity building, and the establishment of a Climate Finance Unit.

The National Green Growth Strategy 2024-2030 was launched in April 2024. According to international organization NDC Partnership, it is a landmark initiative aimed at transitioning the nation towards a green economy by fostering low-carbon, resource-efficient, resilient and socially inclusive growth. "The National Green Growth Strategy is a comprehensive framework designed to align Zambia's development pathways with principles of sustainability and inclusivity, centering on four pillars: (1) resilient and climate-compatible growth, (2) enhanced resource efficiency, (3) enhanced natural capital and (4) improved inclusivity. Additionally, it provides a roadmap for achieving Zambia's Vision 2030 and the Eighth National Development Plan (8NDP) objectives, while reaffirming Zambia's commitment to the Paris Agreement, the Sustainable Development Goals and the Convention on Biological Diversity," the information said.

Photo: MSV, AI-generated

Regarding the Eighth National Development Plan 2022 – 2026, Zambia's government announced to take measures for the circular economy by promoting integrated environmental management. The measures would include – inter alia – "the promotion of sustainable consumption and production, including recycling, reducing resource use and reusing of resources in line with the circular economy principles and norms". Furthermore, the government intended to enhance compliance monitoring of industries, enforce effective management of hazardous chemicals and other waste as well as improve environmental quality monitoring and tracking.

The waste situation

According to American estimations, the about 21 million Zambians generated approximately 2.6 million tons of municipal solid waste in 2025. About 12.6 percent of this amount was recycled. The authors of the Zambia Circular Economy Study 2024 stated that the country would generate approximately 3.9 million tons of waste annually, of which only 45 percent is formally collected. These figures were obtained from Lusaka City Council, 2024 and MFA Finland, Zambia Circular Economy Market Study, 2023. According to an assessment in 2022 regarding the circular economy in Zambia, most of the waste collected ends in a landfill – open dumpsites controlled by local authorities. As explained, this is because the country only has one engineered landfill located in Lusaka. Households and collectors do not separate the waste collected by local governments and private organizations. Informal waste pickers would segregate the valuable components of the waste. Organic waste makes up the majority of residential waste, accounting for 51 percent on average. Plastic is the second most common waste source (percentage portion: 14 percent), while metal (nine percent), paper (six percent) and glass (four percent) has a lower volume, the information said.

Global Green Growth Institute

The Global Green Growth Institute – GGGI is a treaty-based international, inter-governmental organization, headquartered in Seoul (South Korea). It is dedicated to supporting and promoting strong, inclusive and sustainable economic growth in developing countries and emerging economies.

Since its establishment as an international organization at the RIO+20 Conference in 2012, GGGI's membership has grown from 18 founding signatories to over 50 Members and 29 Partner States at the end of 2025. GGGI draws upon the lessons learnt from this cross-regional pool of green growth experiences to pursue the transformative green growth agenda alongside its Members and Partners.

gggi.org

Opportunities in the circular economy

The authors of the Zambia Circular Economy Study 2024 identified business opportunities in five value chains, which could add 4.23 billion US-Dollar to Zambia's economy.

- Municipal solid waste: Although the current recycling rates are low at around six percent, there is growing recognition of the potential to enhance recycling and waste valorization activities, the authors wrote. They estimated an improvement could be worth 340 million US-Dollar annually. This would include waste separation at source, optimized collection logistics, and establishing Materials Recovery Facilities (MRFs) to support recycling and waste-to-energy initiatives.

NDC Partnership

The NDC Partnership is a global coalition, bringing together more than 260 members, including more than 140 countries, developed and developing, and more than 120 institutions to deliver on ambitious, transformational climate action that helps achieve the Paris Agreement and drive sustainable development.

Governments identify their NDC implementation priorities and the type of support needed to translate them into actionable policies and programs. Based on these requests, the membership offers a tailored package of expertise, technical assistance and funding. This collaborative response provides developing countries with efficient access to a wide range of resources to adapt to and mitigate climate change and foster more equitable and sustainable development.

ndcpartnership.org

- Biofertilizer: In Zambia, only 25-30 percent of the required fertilizers is produced in the country. Locally produced biofertilizer could fill the market gap. The authors estimated that circular business opportunities could be worth about 1.76 billion US-Dollar.
- Biogas: Renewable energy in the form of biogas could be worth 53 million US-Dollar annually.
- Mining: As the ninth-largest copper producer globally, Zambia could generate 1.25 billion US-Dollar by expanding the value chain through circular economy practices like reprocessing and repurposing as well as e-waste recycling, to name a few examples.
- Textiles: Zambia generates an estimated volume of 149,000 tons of textile waste annually, the authors of the study stated. This available textile waste and second-hand clothing would offer an opportunity for textile-to-textile recycling, worth a potential 94.5 million US-Dollar per year. "Local organic cotton production and local spinning offer further business opportunities as global demand for organic cotton is constantly increasing."

Investments

For investors, the Zambia Development Agency (ZDA) is the proper address. It is a statutory body under the Ministry of Commerce, Trade and Industry (MCTI). ZDA draws its mandate from the Investment, Trade and Business Development (ITBD) Act No. 18 of 2022 to foster economic growth and development by promoting trade, business development and investment in the Republic of Zambia through an efficient, effective and coordinated private sector led economic development strategy.

zda.org.zm

ASIA AND THE CLIMATE TRANSITION

According to a new report, published by the Asia Investor Group on Climate Change (AIGCC), institutional investors in Asia are defying the perceived global retreat on climate commitments and are progressing their climate action.

As per AIGCC, 240 of the largest investors across Asia (including 202 headquartered there), collectively managing 123 trillion US-Dollar, reported progress on overall climate action and policy advocacy. These investors in the region have stepped up their engagement on financially material climate issues with policy makers, rising 18 percentage points (pp) in a single year, "with Asia Investor Group on Climate Change's (AIGCC) member investors reporting a threefold increase". Policymakers would confirm that AIGCC's policy engagement activities, including submissions to consultations, have helped shape policy objectives.

According to the information, investors active in Asia have improved across 28 climate metrics, compared to the previous year. They are quickly growing their expertise on climate finance, AIGCC said. The progress is particularly evident in three key areas:

- Investors are directly engaging with policymakers on climate-related policies. 25 percent of investors now advocate for clearer, more consistent and investable frameworks (an 18 pp increase from 2024). AIGCC members, report a threefold increase in their policy engagement efforts from 19 to 58 percent over the past two years.
- Investors are increasing their investments in climate solutions or transition finance: now 30 percent of investors (11 pp increase). This metric for asset owners, including pension and sovereign wealth funds, is improving year on year, defying any perception that, globally, climate has taken a backseat on investors' agenda. For example, a greater proportion of asset owners (35 percent, up 11 pp) now have increased investments in climate solutions, as compared to asset managers (26 percent, up 12 pp).
- Investors continue climate stewardship as they take on active ownership over investee companies, using tools such as engagement and proxy voting (now 26 percent of investors, four pp increase). Investors are also beginning to take on a whole-of-system approach to their stewardship, for example engaging across a sector and addressing barriers in the value chain or at the policy-level that cannot be addressed by single company engagements alone.

Source: AIGCC

These findings come from AIGCC's seventh annual State of Investor Climate Transition in Asia report, released in May this year. It can be downloaded at aigcc.net/wp-content/uploads/2026/04/AIGCC-Climate-Transition-Report_May2026.pdf.

GLOBAL RECOVERED PAPER MARKET TO GROW

As per Indian market research company Fortune Business Insights, the global recovered paper market size was valued at 62.14 billion US-Dollar in 2025. In the coming years, it is projected to grow from 64.55 billion US-Dollar in 2026 to 87.60 billion US-Dollar by 2034. This means a CAGR (compound annual growth rate) of 3.89 percent.

As reported, according to a study published by the Bureau of International Recycling, around 420 million tons of paper and cardboard are produced worldwide every year, with well over half of the raw material coming from recovered sources. Some 50-60 percent of recovered paper comes from industry and business, the remaining recovered fiber from households. The market is a globalized industry, with significant volumes of recovered paper being traded internationally. “Countries with high paper consumption often import recovered paper to meet their recycling needs, while countries with advanced recycling infrastructure export recovered paper to international markets.”

Photo: MSV

Main regions

The recovered paper market has been studied across North America, Europe, Asia Pacific, Latin America, and the Middle East and Africa, Fortune Business Insights gave account. As the leading region of the global market, Asia was identified. Countries such as China, Japan, and India represent a rapidly growing market for recovered packaging. An expanding middle class with changing consumption patterns, influencing the demand for sustainable and recovered packaging solutions, accompanies this growth.

“North America is the second dominating region in the market,” the company stated. In this region, well-developed waste management would drive the recovered packaging market and recycling infrastructure, including advanced sorting and processing facilities. “The Latin American region is experiencing economic development driven by a rising interest in recovered packaging solutions as consumers and businesses seek alternatives to traditional packaging materials.”

The European market is the third-leading regional market place and is expected to attain substantial growth over the forthcoming years. “Given the heightened concern over plastic pollution, European nations are placing a strong emphasis on recycling.”

The Middle East and African recovered packaging industry is estimated to attain a moderate growth rate during the forecast period due to businesses incorporating recovered packaging as part of their corporate social responsibility initiatives.

fortunebusinessinsights.com/recovered-paper-market-110205

THE WIND BLADE RECYCLING MARKET IN UPDRAFT

According to ResearchAndMarkets.com – a leading source for international market research reports and market data – wind blade recycling presents opportunities. The increased decommissioning of wind turbines, regulatory pressures, and sustainability goals drives this development. Key growth areas would include thermal recycling methods, carbon fiber recovery, and applications in construction and automotive sectors, especially in Asian markets. As reported, the global wind blade recycling market size is estimated to grow from 1.31 billion US-Dollar in 2026 to 6.89 billion US-Dollar by 2035, at a CAGR (compound annual growth rate) of 18.09 percent.

Wind blade recycling involves managing and repurposing wind turbine blades once they have reached the end of their useful life. The aim of this recycling process is to reduce environmental effects by preventing landfill disposal and reclaiming valuable materials for reuse in different industries. Innovations in technology have bolstered the concept of wind blade recycling through methods like mechanical, thermal, or chemical recycling. Given that wind turbine blades are constructed from composite materials, they hold significant value for various end-use sectors. “Asia captures the majority share of the market,” ResearchAndMarkets.com stated. “This can be attributed to the increasing use of wind energy. As the top producer of wind energy, both China and India are crucial in driving market growth with their increasing quantities of decommissioned wind turbine blades.”

Photo: MSV

Moreover, the growing governmental regulations regarding wind blade disposal were a critical factor influencing the market outlook. “Therefore, with essential driving forces, anticipated trends in renewable energy and recycling, such as breakthroughs in chemical recycling and repurposing strategies, the wind blade recycling market is expected to experience significant growth during the forecast period.”

researchandmarkets.com

THE RUBBER COMPOUND MARKET

According to a report provided by SNS Insider, the rubber compound market was valued at 50.74 billion US-Dollar in 2025 and is expected to reach 76.07 billion US-Dollar by 2035. Factors such as rising demand for rubbers having high durability and resistance to chemical and temperature effects would drive the expansion of this market, the information said. “Companies are spending a lot on development of compound formulas for use in electric vehicles, robotics, renewable energy systems, and medical uses. The incorporation of recycling rubber, using environmentally friendly components in compounding processes, and green methods to produce rubber compounds contribute towards shaping of the global rubber compound market.”

The market in Europe was valued at 11.62 billion US-Dollar in 2025 and is projected to reach 17.56 billion US-Dollar by 2035, expanding at a CAGR (compound annual growth rate) of 4.20 percent during the forecast period, “driven by strong automotive demand and rising focus on sustainable rubber compound development”. In the USA, the rubber compound market is expected to grow from 9.78 billion US-Dollar in 2025 to 14.56 billion US-Dollar by 2035, at a CAGR of 4.07 percent.

snsinsider.com/sample-request/10191

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CONSULTING SERVICES IN AUSTRALIA

According to internationally active management consulting firm IMARC Group, the Australia environmental consulting services market size reached 751.9 million US-Dollar in 2025. Looking forward, the market would be expected to reach 1,186.3 million US-Dollar by 2034, exhibiting a compound annual growth rate (CAGR) of 5.04 percent during 2026-2034.

Stringent environmental regulations and policies, rising public and corporate awareness of sustainability, growth in infrastructure and urban development projects, and mandatory climate-related financial disclosure requirements are some of the key factors driving market growth throughout the forecast period. The market encompasses diverse services, medium technologies, and verticals tailored to Australia's evolving environmental management landscape.

The spectrum covers the demand regarding investment assessment and auditing, permitting and compliance, project and information management, monitoring and testing, and other services across water management and waste management mediums, serving energy and utilities, chemical and petroleum, manufacturing and process industry, transportation and construction industries, and other verticals spanning the country. This applies to Australia Capital Territory & New South Wales, Victoria & Tasmania, Queensland, Northern Territory & Southern Australia, and Western Australia.

imarcgroup.com/request?type=report&id=24735&flag=E

GLOBAL WASTE DERIVED BIOGAS MARKET TO EXPAND

According to the market research and consulting agency SNS Insider, the global waste derived biogas market size was valued at 80.99 billion US-Dollar in 2025 and is expected to reach 182.72 billion US-Dollar by 2035, growing at a CAGR of 8.52 percent from 2026-2035. "Governments and businesses are searching for renewable energy sources like biogas due to the growing global emphasis on sustainability and lowering carbon footprints," SNS Insider wrote. "By converting organic waste from agriculture, municipal solid trash, and sewage into energy, biogas from waste lessens dependency on fossil fuels. Investment in biogas plants is also encouraged by grants, incentives, and the soft policy drive for renewable energy infrastructure. Biogas is used by industrial actors for fuel, thermal, and electrical purposes, creating a steady and ongoing demand. Technological advancements in anaerobic digestion and biogas upgrading result in increased energy efficiency, making biogas a viable and eco-friendly alternative for a variety of industrial processes worldwide."

snsinsider.com/sample-request/9791

Plastic Films:

MULTIPLE RECYCLING WITH STABLE PERFORMANCE

Polyolefin films are used in countless packaging applications. However, every recycling cycle leaves traces in the material and influences processing, stability and quality. The key question is therefore: Under what conditions can recycled materials be used reliably? In the "MultiRec" project, German Fraunhofer Institute for Process Engineering and Packaging IVV investigates – in tandem with the Fraunhofer IGCV, the University of Hasselt and the Technical University of Wroclaw – polyethylene-based sealing, stretch and shrink films over up to 15 recycling cycles. "We produce new films from recycled material and evaluate web tension, friction and sealability, among other things," Fraunhofer IVV gave account. "The results show: Polymer type and layer structure determine the extent to which properties change. In addition, additives are demonstrably lost, which can impair further processing – making targeted post-additivation necessary." At the same time, recyclate could be used stably in multilayer films if it is embedded in a middle layer. "This gives companies a clear orientation for recycling-friendly, resource-efficient packaging solutions and for meeting the PPWR recyclate quotas." Companies wanting to use the results early on and be part of the project support committee, should contact Fraunhofer IVV.

www.ivv.fraunhofer.de/en/

BIR World Recycling Convention & Exhibition 2026:

ONLY FREE TRADE OFFERS IDEAL CONDITIONS FOR THE RECYCLING MARKETS

During the meeting of the International Trade Council (ITC) at the BIR World Recycling Convention & Exhibition in Gothenburg (Sweden) industry experts emphasized once more that trade restrictions would obstruct the international recycling environment.

As reported by the Bureau of International Recycling, Robin Wiener, President of the Recycled Materials Association (ReMA) in the USA, pointed out that the USA would produce a surplus of recycled materials across all the commodities and so having global market access were "critical". ITC Chairman Emmanuel Katrakis, Director of Public Regulatory Affairs at Galloo in France/Belgium, supported this view and stressed that supply and demand is not always concentrated in the same country; "to bridge that gap, we need to have access to local and global markets."

Copper supply in the USA

To illustrate the importance of global recycling markets ReMA had conducted a study that confirms the available US end-of-life recycled copper supply significantly exceeds domestic consumption. "In 2025, it was a three and a half times ratio," she was quoted. "And the other good news is that the tonnage of US end-of-life copper recovered is expected to continue to increase into the future and will certainly exceed supply for at least the next 15 years." Meanwhile, a similar ReMA study into recycled aluminum would reveal a supply that is four and a half times current demand needs. Although a substantial amount of investment is being made in the USA on the industrial consumer side, ReMA's research would confirm that the available domestic recycled supply would continue to exceed this increasing demand into the future, according to Robin Wiener.

International copper market

As reported by BIR, guest speaker Fernando Acosta, Director of Economics and Environment at the International Copper Study Group, placed recycling in the wider context of total copper supply while emphasizing its environmental and economic importance. The copper recycling rate stood at 33 percent in 2024, with concentrates typically accounting for more than half of global supply while recycled material usually represents about one third, the delegates learned.

"Higher recycling rates are not necessarily associated with higher income levels because what is relevant is the presence or the existence of a developed market," he was quoted. Looking to the future, Fernando Acosta expects countries to continue to strengthen their supply chains as they invest more in smelting and refining capacity "in order to process more complex scrap domestically". Assuming the world will be able to meet net-zero targets by the middle of the current century, which in the case of copper translates into supply being able to meet an expected demand of about 50 million tons, he anticipated that the market for recycled copper could have a value of about 1.7 to 2 trillion US-Dollar during this period. "So it seems that recycling, in the case of copper, is not only relevant from an environmental perspective but it's also an interesting business opportunity," he was cited.

However, Fernando Acosta joined his fellow guest speakers in sounding a note of caution about market distortion and uncertainty, BIR noted. Larger trend analysis by the OECD had shown that trade restrictions have been increasing over time. "The problem is that these policies can have unintended or unexpected consequences." In particular, these could act against "the need to have clear and predictable policies in the long term to attract investment".

bir.org

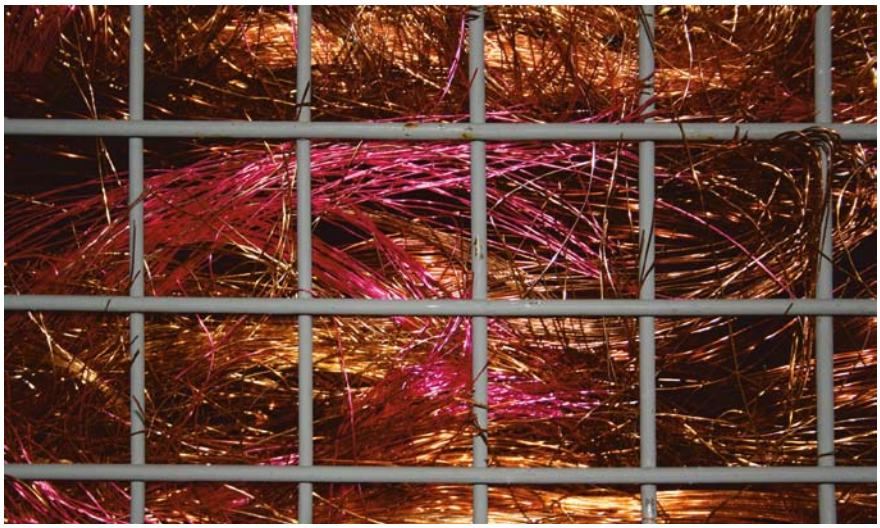

Photo: O. Kürth

Hornification:

IMPLICATIONS FROM PAPER MANUFACTURING TO RECYCLING

Swedish Karlstat University informs about new insights into hornification regarding paper production.

When paper dries and is subsequently rewetted, its properties change permanently. This phenomenon is known as hornification. According to the university, new research shows that the process is more complex than previously assumed, and that temperature, humidity, and fiber type all play decisive roles.

Hornification means that fibers in paper products lose some of their ability to absorb water. This has major implications for everything from paper manufacturing to recycling, where controlling the material's strength and durability is crucial. "Fundamentally, hornification is more about removing water than adding heat, and this means that we can actually control the material's properties and avoid unnecessary strength losses," Björn Sjöstrand, Associate Professor of Chemical Engineering and project leader for the research project, was quoted.

As reported, one of the most surprising findings is that hornification does not increase steadily with temperature. Instead, there is a distinct "dip zone" around drying at 40–60 °C, where structural changes in the fibers are minimal and the material is at its strongest. "This pattern has now been confirmed in several different pulp types, lending weight to earlier isolated observations reported in previous studies." The study would also clarify something that has previously been uncertain: it is primarily the removal of water, not the heat itself, which drives hornification. "When the effect of high temperature was separated from the drying process, the results showed that heat alone has almost no influence on the fiber structure. This provides a clearer picture of what actually happens within the material."

Photo: Karlstat University

Björn Sjöstrands, Associate Professor of Chemical Engineering

The results further show that hardwood pulp is affected more than softwood pulp. The reason is that hardwood fibers have a more complex structure and swell more in water before drying, which leads to greater collapse and stronger hornification during drying compared with softwood fibers.

Furthermore, the researchers have identified a linear relationship between the loss of material strength and the degree of hornification. "This means that microscopic structural changes can now be directly linked to paper strength – something that previously lacked a clear quantitative basis. Taken together, the study strengthens the theory that hornification is primarily governed by hydrogen bonding between fibers, while also showing how the interaction between temperature, moisture loss, and fiber type determines how the process develops." By gaining deeper insight into what happens at the fiber level, the industry can optimize processes and reduce quality losses during reuse, the researchers at Karlstat University are convinced.

■ Read the full study: diva-portal.org/smash/get/diva2:2033815/FULLTEXT01.pdf

RECOVERY OF CRITICAL RAW MATERIALS FROM PERMANENT MAGNETS

The demand for rare earth elements like neodymium has significantly increased. Neodymium, for example, is utilized in data centers and in permanent magnets for electric vehicles and wind turbines.

China dominates the primary production of rare earth metals, which has increased geopolitical risks related to these raw materials. This situation combined with rapidly growing demand and low recycling rates, has encouraged researchers to develop new recovery solutions from secondary sources, for example, from discarded permanent magnets and magnetic waste. Currently, only one percent of the rare earth elements used in the

European Union is recycled. The low recycling rate can be partly explained by the fact that current recycling methods are not economically viable. The need for new methods is therefore clear, according to Assistant Professor Jani Moilanen from the University of Jyväskylä, who led the research together with Professor of Chemical Circular Economy Ari Väisänen from the same university.

The recently developed process was designed to be as simple as possible and to be based on benign chemicals. The researchers used the same organic methanesulfonic acid in dissolving and recovering steps, which minimized the use of different acids in the recovery process. In addition, the process required only two other low-risk aqueous solutions to recover other raw materials, such as cobalt, from the permanent magnet, the information said.

As underlined by the university, the developed process proved to be extremely effective. Over 96 percent of the rare earth elements in the permanent magnets were recovered, and the purity of this fraction was over 99 percent. In addition to the process development, the 3D-printed filters used in solid-phase extraction were also studied using various methods.
The Technology Industry 100th Anniversary Foundation, the Jane and Aatos Erkko Foundation, and the Academy of Finland funded the research.

jyu.fi

PROJECT TO TRANSFORM RECYCLED NYLON FISHING NETS

The companies UBE and ZIKNES, the University of Valencia, and the AIMPLAS Plastics Technology Centre are collaborating on the project REDES4VALUE. The objective is to close the life cycle of polyamides and reduce marine pollution through innovative, industry-ready solutions. Collaboration with the Sea2See brand has ensured access to fishing nets recovered in Ghana since 2019 and has been key to structuring the project's circular value chain from the waste source.

According to the consortium, the abandonment of fishing nets in seas and oceans is one of the most persistent environmental problems. In response to this situation, the REDES-4VALUE project would work to recover and recycle disused fishing nets, transforming them into new sustainable, high value-added products such as recycled nylon, films for packaging and agricultural covers, automotive components, and large-format parts produced by additive manufacturing. "These developments are achieved through innovative mechanical and chemical recycling processes, combined with reactive extrusion technologies," AIMPLAS underlined.

Although many nets are made of polyethylene or polypropylene, this project would focus on polyamide nets, a material with great potential for chemical recycling. Its molecular structure allows the recovery of monomers such as caprolactam, enabling the production of new polyamides with properties virtually identical to those of virgin materials. "We are achieving optimized conditions for depolymerizing fishing nets and recovering monomers with purities above 95 percent in some laboratory-scale streams, and over 80 percent at pilot scale. This will allow us to repolymerize and obtain new polyamides with quality equivalent to virgin material," Nairim Torrealba, a researcher in chemical recycling at AIMPLAS, was quoted.

Photo: AIMPLAS

As reported, recycled polyamides are intended for sectors such as packaging, agriculture, automotive and 3D printing. Companies such as UBE are already analyzing their commercialization and ZIKNES is adapting its equipment to validate large-format parts. Initial applications would include packaging films, agricultural covers, automotive components and large-scale 3D demonstrators.

But there are some tough areas. One of the main challenges of the project is treating highly degraded nets with a high presence of impurities. According to AIMPLAS, the results are still very promising. The project would be advancing in processes such as hydrothermal depolymerization, ionic liquid-assisted solvolysis and reactive extrusion, as well as comprehensive life cycle and feasibility assessments.

As per Torrealba, the goal is to consolidate a chemical recycling line that can be applied to complex waste and "demonstrate that it is a real and necessary solution".

aimplas.net/technologies/recycling/

The Industrial Telehandler Allrounder:

360 G IN OPERATION AT REMONDIS

The Sennebogen 360 G has been playing a central role in the daily waste processing operations at Remondis in Erftstadt since spring 2025. The powerful telehandler is being tested to support the entire process – from pushing delivered household and bulky waste onto the conveyor belt and feeding it into the bag opener to loading secondary fuels (SBS). Its excellent visibility, power, and ease of operation ensure smooth operation on the com-pany premises. The 360 G combines wheel loader technology with a telescopic boom that can move loads of up to six tons and reach a maximum lifting height of 8.5 meters. A special feature is the hydraulically rai-sed Multicab. It lifts the driver up to eye level at 4.25 meters and, with its 360° all-round view, enables safe working – even when maneuvering between trucks, containers, and piles of material.

The elevating multicab of the 360 G offers the driver a 360° panoramic view

Push material aside and maximize storage space

After delivery, mixed waste – including bulky waste and household waste with organic content – is first pushed aside using the telescopic loader. This allows the available storage space to be used optimally. The high pushing force of the 360 G makes it possible to move even large quantities quickly and keep the site clearly structured.

After the delivered household and bulky waste has been pushed aside, the 360 G is first used in household waste processing, where it feeds material into the internal bag opener. In the secondary fuel (SBS) area, the telehandler then loads the processed materials onto trucks. The material is additionally compressed with the bucket to maximize the load volume and reduce the number of transport trips. The telescopic arm of the 360 G plays a crucial role here, as its reach extends deep into the trucks and allows the material to be compacted in a targeted manner. In this way, the telehandler reliably supports all logistical processes from processing to transport.

Comfort cabin for concentrated work

Another advantage is the standard Multicab comfort cab. It protects the driver from noise and vibrations, while ergonomically arranged, vibration-damping controls and air conditioning ensure a pleasant working environment throughout the day. The raised cab position provides a clear view, peace and quiet, and safety – even in busy work areas.

As one of the leading service providers in waste management, Remondis operates in Erftstadt with modern facilities and clearly structured processes. Its services range from traditional waste collection and bulky waste disposal to the recovery of recyclable materials. The use of the Sennebogen 360 G shows how important efficient machine solutions are for a functioning cycle.

The telescopic arm of the Sennebogen 360 G reaches deep into the truck to load secondary fuels efficiently and evenly

sennebogen.com

Photos: Sennebogen

ASSISTANT TO IDENTIFY AND ORDER MAINTENANCE AND SPARE PARTS

The new mobile app Parts Assistant provides Liebherr customers with AI-supported parts recognition – free of charge.

As underlined by the provider, the core of the app is an AI-based parts identification function. “Users can identify components via photo recognition or by text search in more than 100 languages, by scanning the QR code, by entering an item number or a combination of all. This functionality allows immediate identification even when nameplates become damaged or unreadable through time,” Liebherr assured. “Additionally, results can be cross-checked using the official Liebherr parts catalogue, giving increased reassurance of the correct parts. Developed with direct input from operational users, the application supports all maintenance parts requirements quickly and easily to ensure rapid and optimum ordering.” The second main function would focus on timely ordering of maintenance parts. The app would help users by listing the actual operating hours of the machines and the respective service kits for the next regular maintenance interval. “By selecting a forthcoming maintenance, the app displays a list of required parts, service materials and fluids – and all in the optimized quantity. This list can be adapted based on operational needs and then be placed as an order with a simple click,” Liebherr gave account.

With the app Part Assistant, parts can be identified with a picture directly on the machine

Photo: Liebherr

The internationally active company has developed the application for deep foundation, duty cycle and crawler cranes (up to 400 tons), as well as its range of mobile harbor, ship and offshore cranes. This cross-sector approach would underline the firm’s broader strategy of applying digital solutions consistently across its wide product portfolio. “With Parts Assistant, Liebherr positions digital service tools as a practical benchmark rather than a showcase – aimed at measurable efficiency gains and forward-looking maintenance processes in global construction,” the company emphasized. “Parts Assistant is available globally via App Store (iOS) and Google Play (android) and can be used free of charge by customers with a valid MyLiebherr business account.”

liebherr.com

VIBRATION ANALYSIS SYSTEM FOR SCREENING EQUIPMENT

Internationally active manufacturer Terex has launched TRAC, a vibration analysis system developed to provide clearer insight into the performance, condition and long-term integrity of screening equipment. The engineering firm stated the technology is now available across screening equipment within Terex Materials Processing (MP) brands, including: Powerscreen, Finlay, EvoQuip, MDS, Terex Washing Systems, Terex MPS (Cedarapids, Simplicity), MAGNATM and Terex Ecotec. The portable, multi-sensor system focuses on how screens behave in real operating conditions. “Using synchronized measurements taken from multiple points on the screen box, TRAC delivers fast, repeatable insight into screen motion, balance, resonance and bearing condition, helping potential issues be identified before they affect performance, uptime or structural integrity,” the provider informed. The system would present complex vibration behavior in a clear, visual format, translating data into actionable insight. “It supports commissioning verification, troubleshooting and ongoing condition assessment, enabling more informed maintenance decisions throughout the life of the machine.”

Photo: Terex

terex.com

THE FUTURE OF WASTE COLLECTION IS IOT

At IFAT in Munich, Innovation4waste – a Partitalia brand – presented its IoT ecosystem, developed to identify, monitor, and optimize every stage of waste collection.

In an international landscape shaped by the climate crisis and supply chain vulnerabilities, technological innovation in waste management acts as a strategic lever to ensure higher-performance processes and a tangible reduction in emissions. In response to these global challenges, Partitalia's new brand will present its exclusive IoT ecosystem, comprising access control systems, RFID readers, fill-level sensors, and asset trackers, all integrated into the cloud. "By ensuring total traceability and continuous control of platforms and devices, this infrastructure allows for the digitalization of the waste collection process, providing the necessary tools to make data-driven decisions and optimize operational efficiency," the company underlined. "To support the transition towards more sustainable waste management, the starting point is the accurate tracking of waste," Marco Bavastrelli, Export Sales Manager at Innovation-4Waste was quoted. "The goal of our IoT solutions is to digitalize the waste collection process, providing greater visibility and operational control without disrupting existing workflows."

IoT solutions for smart access control

ID-Access is a smart access control system designed to monitor and manage waste disposal, suitable for street bins, and recycling centers. "This ultra-resistant, low-energy smart lock restricts access exclusively to authorized users, providing an accessible and secure experience through various certified identification methods: RFID/NFC badges, barcodes, QR codes, Web Apps, or WhatsApp." Utilizing a bidirectional communication protocol based on 4G and NB-IoT connectivity, the system would enable remote access management and transmit certified data to the cloud, ensuring high security standards. As reported, the solution is completed by an advanced platform that offers 360-degree visibility of every user's disposal activity, alongside the capability to configure opening systems remotely.

ID-Access

IoT Solutions for PAYT systems

There are also IoT solutions for Pay-As-You-Throw systems, encouraging the proper sorting of waste. These include Discovery Mobile, the first wearable RFID reader (available in LF and UHF frequencies) that certifies collection without disrupting operations, and BlackIP, a vehicular UHF RFID antenna with a configurable reading distance of up to eight meters, which simplifies automated door-to-door tracking. BlackIP transmits real-time data on readings, timestamps, and anomalies to the cloud via Keasyboard, a keypad equipped with 4G/NB-IoT connectivity. "Featuring GPS technology and an IP67 rating for operation in harsh environmental conditions, these PAYT IoT solutions ensure reliable data collection and transmission, alongside full remote configurability," Innovation4Waste gave account.

IoT Solutions for asset monitoring

Finally, IoT solutions for asset monitoring were exhibited at IFAT 2026. "SmartLevel Matrix is an optical sensor featuring Time of Flight (ToF) technology, designed for ultra-precise fill-level detection in bins to optimize waste collection operations," the company informed. "The tracking of assets, such as compactor containers and roll-off containers, is managed by Asset Track-ID. Equipped with an accelerometer, the device monitors movements or stops in unauthorized geographic areas – customizable via the platform – in real time, preventing loss and theft. Thanks to 4G/NB-IoT technology, GPS, and a long-life battery (lasting over eight years) these solutions ensure constant, uninterrupted visibility, reducing operational costs and service disruptions."

innovation4waste.com

Photo: Innovation4Waste

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TANA EXPANDS ITS WASTE PRE-SHREDDING PORTFOLIO

Tana Oy is expanding its waste processing solutions with the launch of the Multi Waste Buckets MWB17 and MWB23. As emphasized, these machines "bring pre-shredding directly to the loading stage, combining shredding and bag opening in one step without a separate shredder". By reducing bulky or unsorted materials into smaller pieces, they would improve the feed to downstream sorting, screening, recycling, and energy recovery supporting safer, smoother, and more efficient operations.

Compared with a stand-alone pre-shredder, the Tana Multi Waste Buckets can deliver clear operating cost savings by reducing the number of machines on site and eliminating the need to power, maintain, and feed a separate shredder, the manufacturer explained the advantages. "With pre-shredding integrated into the loader attachment, customers typically benefit from lower fuel and service consumption, fewer wear parts to manage, and less unplanned downtime while also cutting internal material movements and handling steps that add cost and complexity."

Designed to integrate seamlessly into existing operations, the MWB would feature plug-and-play installation with no additional drain line and fast setup on a wide range of wheel loaders and material handlers. "This lets operators pre-shred exactly where needed and reduces extra material handling."

Furthermore, pre-shredding at the loading stage can increase throughput, improve material recovery, and reduce wear on secondary processing equipment while enhancing safety by limiting manual handling. The buckets produce a consistent particle size of approximately 300–400 millimeters and process up to 90 cubic meters per hour to optimize feed for downstream processes.

As reported, the two models share the same proven design and performance, with the only difference being bucket size to match different wheel loader classes and capacity requirements. MWB17 is suited for 10-15-ton loaders, while MWB23 targets 13-20-ton machines.

tana.fi

Photo: Tana Oy

RENEWABLE MATERIALS CONFERENCE 2026

September, 22 – 24, 2026, Siegburg

The Renewable Materials Conference (RMC), organised by the nova-Institute, will once again be the outstanding international meeting place for innovators, companies and brands, investors and policymakers to come together to develop and shape the future renewable carbon economy. As in previous years, the conference organiser nova-Institute expects 400-500 participants from around the world.

The RMC is the leading global event on the renewable carbon economy, showcasing the latest progress in and prospects of bioeconomy, CCU and Recycling for the defossilisation of chemicals and materials. Accordingly, this year's focus topic is "Defossilisation through innovation". During the conference, the winner of the innovation award "Renewable Material of the Year 2026" will be elected by the audience.

renewable-materials.eu

GLOBAL GREEN EVENT

October, 14 – 17, 2026, Casablanca (Morocco)

The Global Green Event, originally known as Pollutec Maroc, is an international trade fair specializing in equipment, technologies, and services in the field of environmental protection. As underlined by the organizers, this exhibition has established itself as Africa's leading event for professionals in sustainable development, ecology, the environment, and energy. "A true platform for meetings and exchanges, it brings together public and private decision-makers, as well as the sector's main economic players, to create strong synergies and open up new prospects on the continent." Moreover, the Global Green Event aligns fully with Morocco's National Sustainable Development Strategy (SNDD), which aims to build a green and inclusive economy by 2030.

globalgreen.ma

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Topics: E-Waste, Battery & Car Recycling, Organic Waste & Waste-to-Energy, Recycling of Lithium & Critical Raw Materials, Refrigerator & Cooling Equipment Recycling, Modular Recycling Plants & Mobile Units, ECOMONDO-/STEP (by Pollutec)-Edition

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