

CIRCULAR ECONOMY BUSINESS CASE STUDIES IN SOUTHEAST ASIA



ລາວຈະເລີນ ຮິໄຊຄຣິ່ງ

ທຸລະກິດໝູນວຽນ ເພື່ອສິ່ງແວດລ້ອມທີ່ຍືນຍົງ

Lao Chaleun Recycling

- Vientiane, Lao PDR
- Waste management & recycling
- www.facebook.com/Laochalunrecycling/
- Analysis period: 2024-2025

Materials Recovery from Urban and Rural Waste

Business Spotlight

Lao Chaleun Recycling (LCR), established in 2000, operates a community-based waste collection and materials recovery business that supports circular economy development in Laos. The company converts urban and rural waste, including plastics, paper, metals and glass into commercially recyclable materials and refuse-derived fuel (RDF) for international material recyclers and local industries. Each year, LCR diverts more than 10,000 metric tonnes of waste from landfill into materials recycling and energy recovery, improving resource circularity and operational efficiency. The company now operates in 54 cities, serves over 5,000 clients, generates diversified revenue streams, and creates jobs for disadvantaged groups. Looking ahead, LCR plans to scale their operations, adopt more advanced technologies, and expand into new domestic markets.

Keywords

Materials sorting, Recycling, Refuse-derived fuel (RDF)

Innovation

End-of-life waste management, Resource circularity



Analysis of Lao Chaleun Recycling (LCR)

Context and baseline

Laos generates an estimated 6,900 tonnes of household waste per day, with Vientiane Capital accounting for around 15% of the total.¹ However, only an estimated 40%–80% of waste in cities such as Vientiane and Luang Prabang is properly collected and transported to a designated landfill.² These collection gaps reflect widespread littering that contributes to air pollution, contaminates water sources, and poses serious public health risks. The problem is the most severe in low-income urban areas lacking adequate collection infrastructure.

LCR was established on a business model inspired by Wongpanit International (Thailand). The company works with ALBA Group Asia Limited, VietCycle Group, local entrepreneurs, and municipal collection crews to collect, sort and recover a wide range of recyclable materials, thereby minimising landfill disposal.

Innovation

LCR has built a holistic waste management and sorting system that covers the collection, sorting and recovery of recyclable materials from both urban and rural waste streams. Key innovations include community training programmes, partnership models that support small entrepreneurs and the use of proven waste-processing technology such as plastic pelletising, spiral shredding and RDF production units.

By recovering value from waste through collection and sorting, LCR enables both materials recycling and energy recovery. This approach has introduced scalable recovery practices and international collaboration, and now represents a new model for environmentally sound waste management in Laos. The company's innovation is rooted in co-creating solutions with waste collectors (as suppliers), service providers and local communities drawing on both domestic and international expertise. Waste that was once left unmanaged or unsafely landfilled or burnt is now recovered, creating significant economic value and advancing environmental sustainability alongside economic development.

Circular Economy impact

LCR contributes to the circular economy through the resource circularity strategy that recovers waste and puts it to productive use for material recycling and/or energy recovery rather than allowing it to be dumped in landfills.

In 2025, LCR's model significantly reduced landfill volumes by recovering 9,250 tonnes of commercially recyclable materials such as plastics, paper, metals and glass, and by producing 2,580 tonnes of RDF as an alternative fuel source, particularly for cement kilns. Demand for recoverable waste has driven the expansion of LCR's collection network, and their supply of recyclables and RDF to industry partners is delivering meaningful material and fuel savings. By transforming waste into commercially recoverable fractions for the production of recycled materials and alternative fuel, LCR is enabling resource circularity, improving waste collection and processing systems more broadly, and replacing fossil fuel use with RDF. The company's initiatives also benefit land use by reducing open dumping and littering in urban and rural areas and by lowering overall pollution levels. LCR's strategy supports circular economy objectives, maximising material recovery while minimising environmental harm.

Business and market impact

LCR's continued growth plus their expansion into new markets demonstrate that the business is commercially viable, operational cost savings are being delivered, and sales are increasing with diversified revenue streams. Serving more than 5,000 clients across 54 cities, the company benefits from their investments in waste-sorting technology and strategic partnerships that improve operational efficiency. The initiative has also created jobs for disadvantaged groups and small entrepreneurs working in waste collection and sorting, contributing directly to local economic development. Looking ahead, LCR plans to invest further into technology, continue expanding into new markets, and supports the development of waste management policy and best practice in Laos.

Stakeholders

A wide range of stakeholders play an important role in LCR's operations, including community members, waste pickers, local entrepreneurs and international partners. Community training and engagement initiatives are helping to build local support and ensure the long-term sustainability of the company. Partnerships with Wongpanit International, ALBA Group Asia Limited, and VietCycle Group are providing technical and industry expertise and have broadened LCR's market access. The company also generates employment for disadvantaged groups and supports livelihoods within the communities it works with, amplifying both social and environmental impact.

¹ <https://kpl.gov.la/en/detail.aspx?id=97107>

² <https://documents1.worldbank.org/curated/en/099325012222130931/pdf/P1710110b54c4f02f0971e0bbf37d361e13.pdf>

Implementation

LCR has overcome challenges such as limited infrastructure, funding constraints and low public awareness through strategic partnerships, technology upgrades and community education. Supportive government policy and access to international expertise have helped the company scale into new cities and markets. The replication of LCR's model is feasible in areas with strong community engagement and supportive policy frameworks, even though there are still challenges that remain. Securing investment, navigating regulations, and sustaining public cooperation are particularly important considerations. Scaling LCR's operations further across Laos holds significant potential for environmental, social and economic benefits.



Takeaways

LCR's experience confirms that materials recovery can turn urban and rural waste into valuable inputs for materials recycling and for producing alternative fuels for industrial operations. Key takeaways include the importance of community engagement, international partnerships and technology adoption in building a successful business that will enable the circular economy transition. LCR's steady expansion into more cities across Laos is demonstrating that the company's materials-sorting and RDF production model is both scalable and replicable.



Funded by
the European Union

Acknowledgements

This business case study was prepared for the ASEAN Circular Economy Business Alliance (ACEBA) within the framework of the Technical Advisory project: Mobilising Business Action for Circular Economy in the ASEAN countries under the EU SWITCH-Asia Policy Support Component for the sole purpose of documenting and analysing business experiences with circular economy. ACEBA is an ASEAN-centric and business-led initiative that fosters business leadership and action on circular economy in Southeast Asia. ACEBA is an initiative of ARAIBA Sdn Bhd, a not-for-profit business organization that promotes responsible and inclusive business, in collaboration with national business membership organizations and with technical advisory of the EU SWITCH-Asia Policy Support Component.

The business case was produced by Thongphet Phonsavat (national expert Lao PDR) and reviewed by Rene Van Berkel and Thomas Thomas (regional experts and ACEBA co-convenors) on the basis of information provided and validated by Lao Chaleun Recycling, Laos.

Disclaimer

The content of this publication is the joint responsibility of Lao Chaleun Recycling, Laos and the expert team. This publication does not constitute an endorsement of Lao Chaleun Recycling, Laos by the European Union nor any of the partners of the SWITCH-Asia Policy Support Component, nor necessarily reflect their views.



www.aceba.co



info@aceba.co



www.switch-asia.eu



EU SWITCH-Asia Programme
[@EUSWITCHAsia](https://www.facebook.com/EUSWITCHAsia)



SWITCH-Asia
[@SWITCHAsia](https://twitter.com/SWITCHAsia)



SWITCH-Asia Official
[@switch-asia-official](https://www.linkedin.com/company/switch-asia-official)