

IMPACT SHEET: Sustainable Plastic Recycling in Mongolia (SPRIM)

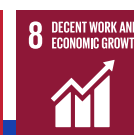
Advancing Sustainable Plastic Waste Management in Mongolia



*Transforming Waste Management Through Recycling
Innovation and Policy Advocacy*



SUSTAINABLE
PLASTIC
RECYCLING
IN MONGOLIA



PROJECT BACKGROUND

The Sustainable Plastic Recycling in Mongolia (SPRIM) project was implemented in Mongolia, targeting Ulaanbaatar, Bulgan Aimag, and Khishig-Undur Soum by Caritas Czech Republic in partnership with Ecosoum, Environment and Security Center of Mongolia, Mongolian Sustainable Development Bridge and T. G. Masaryk Water Research Institute. The project improved plastic waste recycling by establishing efficient collection, sorting, classification systems, and policy improvements. Additionally, it promoted awareness campaigns and introduced innovative waste management solutions to improve the sector's sustainability.

CHALLENGE

Mongolia faced significant challenges in plastic waste management, including a lack of proper sorting infrastructure, low public awareness, and limited engagement from waste producers. The absence of a structured recycling system resulted in high volumes of plastic waste accumulating in landfills and the environment. The project addressed these issues by promoting waste sorting, enhancing recycling infrastructure, and advocating for regulatory improvements.

PROJECT OBJECTIVES

The SPRIM project aimed to contribute to economic prosperity and poverty reduction, support the development of a green economy and transition towards a low-carbon, resource-efficient, and circular economy in Mongolia by promoting sustainable production and consumption patterns through the principles of the 3Rs in waste management.

The specific objectives included the following:

- To improve access to plastic waste for waste management facilities and MSMEs by enhancing public awareness and engagement in waste sorting/ recycling and developing an efficient management system.
- To introduce innovative technologies and equipment to support plastic waste processing.
- To develop partnerships between MSMEs, local authorities, and waste collectors.
- To scale up and replicate best practices in plastic waste management across Mongolia.



TARGET GROUPS

- MSMEs in the plastic recycling sector
- Local and municipal authorities (district, aimag, and soum administrations)
- Informal waste collectors and collection point operators
- Local communities, including households and schools
- Large waste producers, such as supermarkets, restaurants and beverage producers

PROJECT ACTIVITIES

Improving Waste Collection/Recycling Infrastructure and Promoting Policy Change

The project significantly enhanced waste collection, sorting, and recycling infrastructure in three locations. Field research identified key barriers to plastic waste management, informing the design of context-specific waste sorting schemes for Mongolia's urban, provincial, and rural areas. **Recycling facilities were upgraded** with compactors, shredders, scanners and extruders, increasing their processing efficiency. The **Re+ digital platform** was developed and launched, featuring mobile apps and an admin website to streamline plastic waste collection. **The waste management facility was designed and built in Khishig-Undur, Bulgan**, further setting a replicable best practice. The project established **two national standards** for plastic recycling, ensuring that Mongolia's recycling efforts align with international best practices. Furthermore, the project prepared **an amendment proposal to Waste Law** and supported studies and research advocating for Extended Producer Responsibility (EPR) regulations.

Strengthening Capacity and Raising Awareness

Capacity-building was central to the project, ensuring long-term sustainability. Training programs benefited **467 municipal officials, 30 CSOs, 23 plastic recycling MSMEs, and waste collectors**, equipping them with technical skills and knowledge in sustainable waste management. **Over 230 training sessions** engaged **47,000+ participants**, fostering active involvement in 3R initiatives. Through **seven Training of Trainers (ToT) programs, 272 trainers**—including teachers and community activists—were prepared to disseminate knowledge further. **A network of 30 CSOs** was established to promote sustainable consumption patterns, while awareness campaigns reached **2,000,000 people on social media**, encouraging household waste sorting. Study tours in the **Czech Republic and Germany** provided **30 engineers and managers from recycling factories** with hands-on experience in advanced recycling technologies. In collaboration with MSMEs and research institutions, **10 new plastic waste-based products** were analysed and tested. A total of **30+ technical research reports** were produced for the plastic recycling sector. Additionally, a **university-level course on "Plastic Recycling Technology"** was developed with academic institutions.

LESSONS LEARNED

One significant challenge was the lack of commitment from local authorities, which delayed the implementation of some activities. Additionally, inconsistent data on plastic waste recycling made tracking progress difficult. The project addressed these issues by strengthening relationships with stakeholders, collecting primary data from recycling companies, and refocusing activities at the community level to ensure greater participation.

Another challenge was the limited availability of recycling infrastructure and the reluctance of some stakeholders to adopt new waste management practices. The project overcame this by providing targeted training sessions and capacity-building programs to key stakeholders, including waste collectors and municipal administrators.

The project highlighted the importance of continuous public engagement and collaboration with policymakers to drive systemic change. A robust data collection mechanism is essential for monitoring progress and refining waste management strategies. Furthermore, integrating standardised recycling practices proved to be a crucial factor in improving waste sorting efficiency. The project demonstrated that sustained training and education efforts significantly enhance community participation in recycling initiatives. The experience also emphasised the need for clear legal and regulatory frameworks to support the growth of the plastic recycling sector.



PROJECT ACHIEVEMENT

The SPRIM project successfully improved plastic waste recycling through infrastructure development, public engagement, and policy advocacy.

Key achievements include:

- Launched the Re+ digital platform, increasing plastic waste collection and tracking efficiency.
- Implemented waste sorting systems in rural areas, established a waste management facility in Khishig-Undur and expanded beyond target areas, leading to replication in additional provinces.
- Developed and adopted two national standards (MNS ISO 15270:2024, MNS ISO 16869:2024) to enhance the quality and marketability of recycled plastic products.
- Over 47,000 individuals have increased their awareness of plastic waste management, resulting in behavioural change.
- Over 2,000,000 consumers were reached by campaigns, events and social media.
- 272 teachers and community activists were trained on waste management through ToT, and 36,000 people (including online activities) were reached.
- A total of 30+ technical research reports were produced for the plastic recycling sector, covering technology gap assessments, market research, financial constraints analysis, and policy recommendations.
- Established partnerships with MSMEs and policymakers, strengthening the foundation for sustainable plastic waste management.
- Provided advanced recycling equipment and training to waste management facilities, improving operational capacity.
- The technical proposals for 10 new plastic waste-based products were prepared by analysing and testing them at the research institution.
- A university-level course on “Plastic Recycling Technology” was developed and institutionalised into the environmental engineering program at a university.
- 10 recycling companies actively participating in the SPRIM project reported recycling 30,745 tons of plastic between 2020 and 2024





“ The SPRIM project has not only advanced plastic waste recycling in Mongolia but also established a strong foundation for sustainable waste management. The engagement of communities, MSMEs, and policymakers ensures that this transformation will continue beyond the project’s completion.

Sanchirgarav Batzorig Project Manager, Caritas Czech Republic in Mongolia



“Ulaanbaatar has over 400,000 households, and our community has seen a remarkable shift in waste sorting practices in 639 apartment residents. From just a few households participating initially, 80% of our residents are sorting waste regularly, diverting over 20 tons of plastic from landfills.”

Narantuya Sh., Director of the “Altain Baraa” AOA in the 15th khoroo of Ulaanbaatar



“TML Plastic Factory has the capacity to recycle 100% of Mongolia’s annual PET plastic waste. This year, we are preparing to produce raw materials for food-grade applications. To use recycled plastic domestically, we must comply with national standards. The standards developed and approved under the SPRIM project have been significant, enabling us to certify our testing methodology and technical requirements for food-grade recycled PET. Additionally, the RE+ digital platform, developed by the SPRIM project to optimise plastic waste collection and transportation, has become a key solution for streamlining collection efforts nationwide.”

Agiimaa Ch., CEO, TML Plastic Factory

Long-term project sustainability

By working closely with government agencies and local administrations, the project has helped lay the foundation for future regulatory enhancements to introduce the Extended Producer Responsibility mechanism. The established waste sorting systems and technological improvements serve as scalable models, with key stakeholders committed to maintaining and expanding these initiatives beyond the project’s duration. Moreover, the engagement of MSMEs and waste management facilities in Mongolia ensures that the improvements in recycling infrastructure will continue to evolve, supported by a growing market demand for recycled plastic products.

The project focused on CSO capacity building and Training of Trainers (ToT) to ensure the sustainability of advocacy efforts. Additionally, knowledge-sharing materials, including training guides and replication toolkits, were distributed to all 21 aimags in Mongolia.

Project contributions to Climate Change Mitigation and SDGs

The project directly contributed to [SDG 12](#) on responsible consumption and production by reducing plastic waste dumped at landfills and promoting recycling. It also supported climate change mitigation by reducing plastic waste decomposition and incineration emissions. The project laid the foundation for a circular economy approach in Mongolia’s waste management sector through behavioural change campaigns and policy interventions.

Beyond SDG 12, the SPRIM project contributed to:

SDG 3 (Good Health & Well-being): The project improved environmental and public health by reducing plastic pollution.

SDG 4 (Quality Education): Schools were actively engaged in waste sorting programs, fostering early environmental consciousness.

SDG 8 (Decent Work & Economic Growth): The project supported MSMEs by increasing access to recyclable plastics and market opportunities.

SDG 13 (Climate Action): The project contributed to lowering carbon emissions linked to waste decomposition through waste reduction.

Impacts at a Glance

Economic Impact	<p>17 new recycled plastic products were tested and produced:</p> <ul style="list-style-type: none"> • Recycled PVC window profile • Recycled wastewater pipeline • Recycled polyethylene stretch film • Recycled polyethylene shrink film • Recycled HDPE PP plastic cap • Recycled pole for electricity grid • Recycled PVC air ventilation pipe • rPET pellet • Recycled LDPE packaging for the textile industry • Recycled plastic supporter for armatures for concrete casting • Paving block made from recycled HDPE and PET • Plywood glue made from recycled plastic • Recycled plastic beams • Recycled plastic pole for fencing
Environmental Impact	<ul style="list-style-type: none"> • 30,745 tons of plastic waste collected and recycled during the project implementation period, reducing dependency on virgin plastic materials. • 10% reduction in waste water discharge. • Prevented thousands of tons of plastic from contaminating soil and water sources. • Reduced improper plastic waste disposal in landfills, particularly in rural areas. • Limited open burning of plastic waste through improved awareness on health hazard and sorting benefits.
Social Impact	<ul style="list-style-type: none"> • 47% increase in staff income at the 10 plastic recycling companies which actively participated in the project. • 195 new jobs created at the 10 plastic recycling companies actively participated in the project and the rural waste management facility in Khishig-Undur soum. • 67.5% decrease in work-related accidents at the 10 plastic recycling companies actively participated in the project. • Over 2,000 youth were directly engaged in the project through Climate Change and Youth Forum, empowering young leaders in sustainability, volunteering for annual cleanup days and earth day environmental actions and participating in training and awareness-raising activities.
Climate Benefits	<ul style="list-style-type: none"> • 15% reduction in energy use. • 10 KWh of solar energy integrated to a plastic recycling factory.
Green Finance	<ul style="list-style-type: none"> • 5 plastic recycling companies received green finance (green loan and green bond). • 50 MSMEs and investors engaged.
Target Group Engagement	<ul style="list-style-type: none"> • Engaged with over 47,000 MSMEs, state institutions, professional associations, CSOs, students, professors, universities and individuals through technical trainings, local and international study tours, seminars, B2B events, large scale public advocacy events, cleanup and recycling campaigns, business expos.
Policy Development	<ul style="list-style-type: none"> • Adoption of 2 national standards for plastic recycling and recycled plastic quality assurance. • 5 new policies, regulations or standards defined based on recommendation from project. • 12 events held, including meetings of working groups and formal consultations.
Europe-Asia Cooperation	<ul style="list-style-type: none"> • 2 experience-sharing workshops, 2 joint-publications, 1 seminar, participation of 9 MSMEs in Plastic Recycling World Expo in Europe and study tour in Germany, study tour to Czech Republic for 15 MSMEs.



FUNDING

EUR 1,993,334.94
(EU Contribution: 79.94%)



DURATION

May 2020 - December 2024



PARTNERS



Caritas Czech Republic



Ecosoum



Environment and Security Center of
Mongolia (ESCM)



Mongolian Sustainable Development
Bridge (MSDB)



T.G. Masaryk Water Research Institute



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