

SMART INSIGHTS

A Biannual Newsletter of Sustainable Microenterprise
and Resilient Transformation (SMART) Project

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Shabiha Akter Pinky, who makes electrical products in her enterprise in Dhaka, reduces energy costs and grows her business through RECP. Read the story on page 11



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EDITORIAL

As we present the fifth issue of *SMART Insights*, we reflect on a period of remarkable progress, collaboration, and growing impact across Bangladesh's microenterprise landscape. From January to June 2026, the SMART project continued to demonstrate that Resource-Efficient and Cleaner Production (RECP) is not only an environmental commitment but also a practical strategy for building stronger, more resilient enterprises.

During this period, the project has reached 58,209 micro-entrepreneurs with financial and technical support, while 53,282 entrepreneurs have enhanced their knowledge through training on climate resilience, cleaner production, and sustainable business practices. Behind these achievements, thousands of entrepreneurs are embracing innovation to improve productivity, reduce resource consumption, and strengthen their businesses.

This edition also celebrates important milestones. The successful World Bank Mid-Term Review confirmed that the project is progressing on track, while the World Bank South Asia Region Vice President Unit (SAR VPU) Team Award 2026 recognized SMART's innovation, partnership, and impact. These achievements belong equally to PKSf, our Partner Organizations, and the entrepreneurs whose commitment is driving meaningful change.

What continues to inspire us most is the ripple effect of transformation. From cleaner manufacturing and climate-smart agriculture to women-led enterprises and youth engagement, each success story encourages others to adopt sustainable practices and become part of Bangladesh's green transition. As we move into the next phase, our focus remains clear: expanding impact while maintaining the quality, collaboration, and people-centered approach that define the SMART project. Together, we are building microenterprises that are not only more competitive today but also more resilient for the future.

PROJECT PROGRESS >>

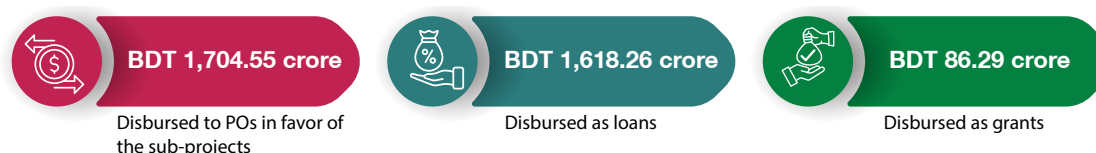
Since August 2023, PKSf has been implementing the Sustainable Microenterprise and Resilient Transformation (SMART) project to promote resilient green growth by helping microenterprises adopt climate-resilient and resource-efficient practices. Implemented with support from the Government of the People's Republic of Bangladesh and jointly financed by the World Bank and PKSf, the project delivers financial and technical services to an estimated 80,000 microenterprises across the agriculture, manufacturing and processing, and service sectors.

Nationwide coverage



The project is currently implementing 70 sub-projects in the field, spanning 54 districts across the country through 54 Partner Organizations (POs) of PKSf.

Financial disbursement to Partner Organizations (as of June 2026)



As of June 2026, disbursements under these sub-projects have reached BDT 1,618.26 crore (one thousand six hundred eighteen crore and twenty-six lakh taka) in loans and BDT 86.29 crore (eighty six crore and twenty-nine lakh taka) in grants to POs.

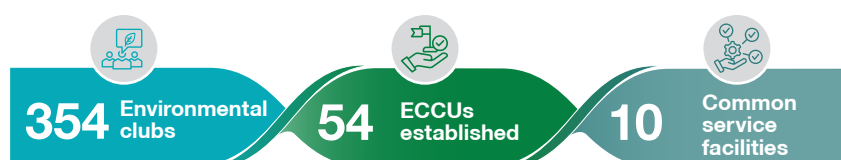
Reaching micro-entrepreneurs



Financial and technical assistance has now reached 58,209 micro-entrepreneurs, each of whom is independently implementing at least two Resource-Efficient and Cleaner Production (RECP) practices on their own initiative. Alongside this, 53,282 micro-entrepreneurs have received training on environmental vulnerability awareness, knowledge and management strategies, preparatory steps for adopting RECP practices, and branding and certification.

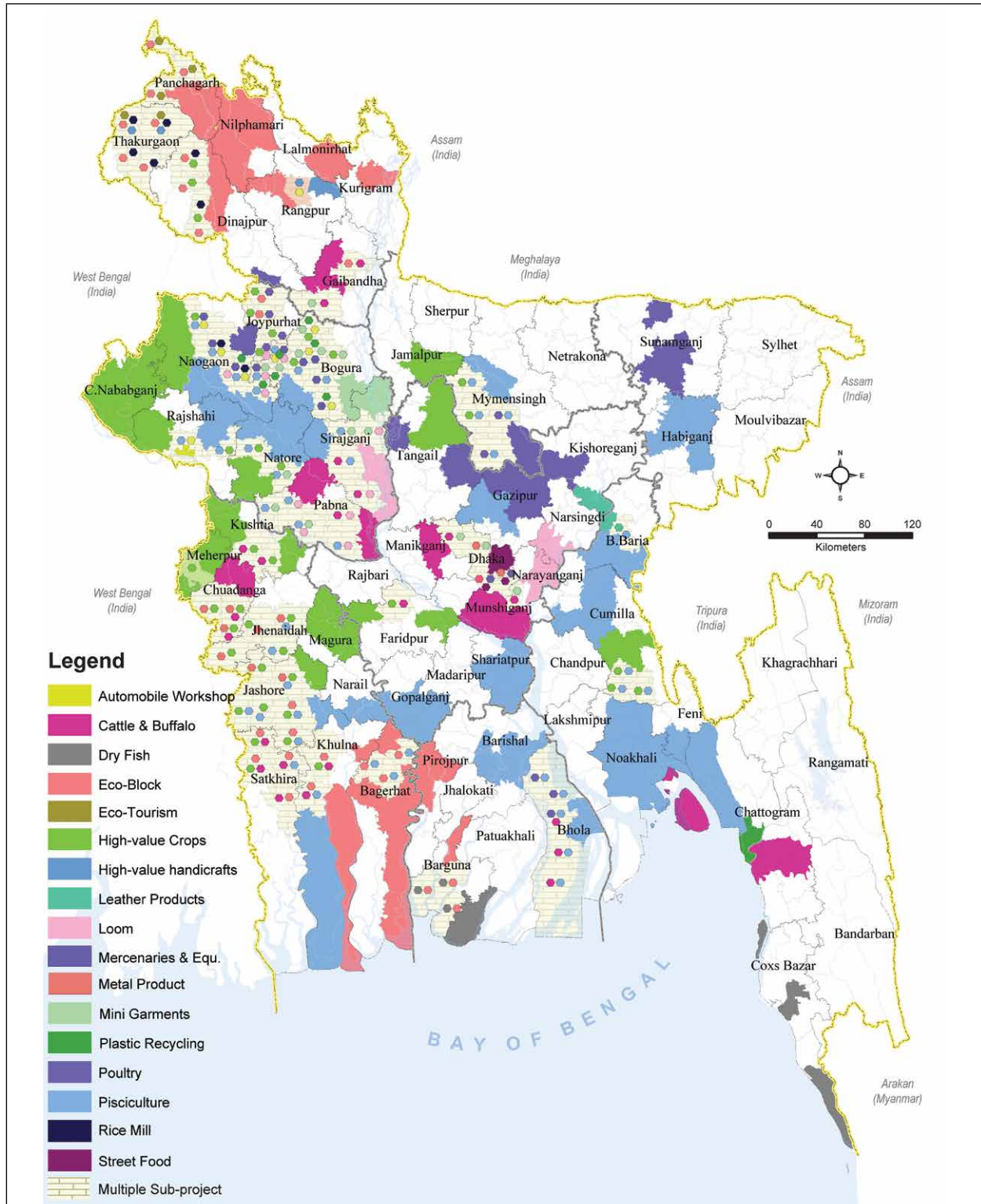
Building community platforms

To strengthen collective action, 354 business cluster-based environmental clubs have been established, creating common platforms that engage both communities and entrepreneurs within their business clusters. Environment and Climate Change Units (ECCUs) have also been set up in all 54 Partner Organizations with project support. Additionally, 10 Common Service facilities have been established to ensure micro-entrepreneurs can access essential services within their business clusters.



AREA COVERAGE OF SMART PROJECT (AS OF JUNE 2026)

A total of 70 sub-projects are being implemented under the SMART project across 54 districts of Bangladesh through 54 Partner Organizations of PKSF. The following map illustrates the project's nationwide footprint based on its sub-sectors.





SMART PROJECT WINS WORLD BANK SAR VPU TEAM AWARD

The SMART project has been recognized as one of the winners of the World Bank South Asia Region Vice President Unit (SAR VPU) Team Awards for 2026.

The award follows a highly competitive selection process across the South Asia Region, where 58 nominations were reviewed and 17 teams were selected based on exceptional performance, impactful results, innovation, and collaboration across the World Bank Group.

According to the World Bank SMART Task Team, this recognition reflects the significant achievements of the SMART project in supporting microenterprises across Bangladesh through resource efficiency,

clean energy adoption, employment generation, and innovative delivery mechanisms.

In a congratulatory message, the World Bank expressed its deep appreciation to the entire PKSf SMART team for its dedication, professionalism, and tireless efforts. The Task Team highlighted the strong collaboration among PKSf, Partner Organizations, and microenterprises as a key factor behind the project's success.

The World Bank also emphasized on the importance of maintaining implementation quality, including fiduciary, technical, environmental, and social performance, to ensure the achievement of the Project Development Objectives.

WORLD BANK COMPLETES MID-TERM REVIEW OF SMART PROJECT, FINDS PROGRESS ON TRACK

A World Bank mission has successfully concluded the Mid-Term Review (MTR) of SMART project, finding the initiative progressing well and delivering both financial and environmental benefits to micro-entrepreneurs.

The review mission, led by Keisuke Iyadomi, Task Team Leader (TTL) of the SMART project at the World Bank, was

conducted from 5 to 16 April 2026. During the mission, the delegation visited 13 sub-projects across the country and engaged directly with micro-entrepreneurs and other grassroots stakeholders. The team also held a series of meetings and discussion sessions to comprehensively assess progress across all components of the project.



The World Bank team visiting a machinery workshop in Bogura during the mid-term review mission.

Following field visits, formal review discussions were launched through a kick-off meeting on 12 April 2026, presided over by Md Mashiar Rahman, Deputy Managing Director of PKSf. In his opening remarks, he emphasized that PKSf is actively integrating the principles of the SMART project into its broader operations, noting that the project's objectives align closely with PKSf's strategic plan.

The World Bank delegation also held a view-exchange session with representatives of PKSf's Partner Organizations (POs) implementing the SMART project, with discussions

focusing on the POs' financial portfolios and the adoption of Resource-Efficient and Cleaner Production (RECP) practices.

On 19 April 2026, the mission held a check-out meeting with the Financial Institutions Division (FID) of the Ministry of Finance. Keisuke Iyadomi informed the FID that the project is right on track. He highlighted that the SMART project provides a platform enabling micro-entrepreneurs to benefit both financially and environmentally. Kamrul Hoque Maruf, Joint Secretary of the FID, echoed this sentiment, stating that the

project is poised to leave a sustainable impact on both the economy and the environment.

The mission's findings were further shared in a meeting with the Economic Relations Division (ERD) on 28 April 2026. Keisuke Iyadomi reported that micro-entrepreneurs adopting RECP practices are successfully reducing production costs and increasing profitability. Additional Secretary of the ERD, Mirana Mahrukh, who presided over the session, expressed satisfaction with the project's progress, noting that it was reassuring to learn there were no critical challenges facing the initiative.

SMART PROJECT MARKS INTERNATIONAL WOMEN'S DAY WITH PROCESSION, DISCUSSIONS ACROSS THE COUNTRY

SMART project implementing Partner Organizations of PKSf observed International Women's Day 2026 through a series of vibrant community events across project areas, highlighting women's rights, contributions to the economy, and persistent challenges. The celebrations on 8 March aligned with this year's global theme, "Rights. Justice. Action. For ALL Women and Girls".



Pabna Protishruti brought out a procession to celebrate the day.

Under the SMART project, sub-projects implemented by various PKSf partners organized colorful processions, rallies, discussion sessions, debate competitions, human chains, and quiz competitions for students in different parts of the country. Environment Clubs mobilized micro-entrepreneurs and local community members

to take an active part in the programs. Participants discussed the significance of Women's Day, women's pivotal role in society and the national economy, their entitlements, and the barriers they continue to face. In several locations, the Partner Organizations distributed tree saplings and books among quiz competition

winners to promote both knowledge and environmental awareness. The events served to spotlight the SMART project's deliberate focus on women's economic empowerment.

SMART's results framework sets a specific target that 65 percent of supported microenterprises adopting climate-resilient practices and achieving revenue growth should be female-owned. The project also aims for at least 30 percent women's representation in the management committees of non-revenue-generating common facilities to strengthen female leadership. Additionally, women-led microenterprises receive tailored training — based on

professional assessments — in financial literacy, green technologies, and marketing strategies for eco-friendly products. These targeted interventions reflect SMART's broader commitment to fostering gender-inclusive, climate-resilient microenterprise development across Bangladesh.

SMART PROJECT HOLDS 3RD QPR MEETING, RECOGNIZES TOP-PERFORMING POS

The SMART project organized its 3rd Quarterly Progress Review (QPR) meeting on 26 March 2026 to assess implementation progress and strengthen coordination with Partner Organizations. During the event, the project recognized three top-performing Partner Organizations for the first time for their stellar performance in implementing sub-project activities.

The review meetings were held from 2 to 8 March 2026, bringing together SMART project officials and 200 representatives from 51 Partner Organizations, implementing 66 sub-projects across the country.

The inaugural session was presided over by PKSF Deputy Managing Director Md Mashiar Rahman, who highlighted the project's distinctive approach of assessing the progress of individual microenterprises alongside overall development outcomes. He emphasized on the importance of adopting Resource-Efficient and Cleaner Production (RECP) practices and urged Partner Organizations to achieve their targets within the stipulated timeframe. In his opening remarks, Project Coordinator A K M Zahirul Haque underscored the project's long-term vision to promote green growth among microenterprises through sustainable, climate-resilient practices.

The SMART project recognized three top-performing Partner Organizations for their outstanding performance in implementing sub-project activities during the period from October 2025 to January 2026. Ghoshful, National Development Programme (NDP), and Paribar Unnayan Songstha received the 'Achievement Award' for their respective sub-sectors: High Value Crops, Loom, and Cattle and Buffalo.

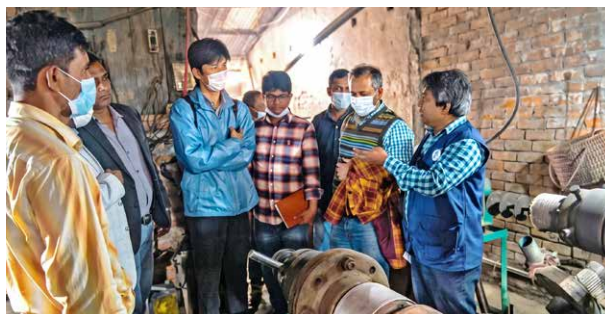
During the meetings, Partner Organizations presented progress updates on their respective sub-projects and discussed implementation challenges, lessons learned, and future action plans.



Representatives from NDP receiving the crest from Md Mashiar Rahman, Deputy Managing Director, PKSF.

WORLD BANK, PKSF DELEGATION VISITS PLASTIC RECYCLERS IN CHATTOGRAM

A joint delegation from the World Bank and PKSF conducted a field visit to Chattogram City Corporation on 15 January 2026 to review progress on the Plastic Recycling sub-project of Young Power in Social Action (YPSA), which is being implemented across 41 wards of the city.



World Bank's Task Team Leader Keisuke Iyadomi visiting a plastic recycling facility in Chattogram.

As part of the visit, the delegation met senior officials of Chattogram City Corporation, including Deputy Chief Conservancy Officer Pranab Kumar Sharma, to discuss coordination, technical guidance, and the Corporation's role in supporting implementation citywide.

Sharma described the project as a timely intervention for environmental protection and sustainable urban management, noting that strengthening the skills and capacity of plastic recyclers would bring positive change to the city's waste management system, and affirmed the Corporation's full cooperation going forward.

The delegation also toured the facilities of existing and prospective beneficiary recyclers to observe day-to-day operations, understand operational challenges, and assess growth potential. This was followed by a community consultation session with plastic recyclers at Mansur Market, Halishahar, aimed at understanding beneficiaries' future needs and development plans, with discussions centering on how businesses could expand profitably while adopting more environmentally responsible practices.

Members of the delegation expressed confidence that the sub-project will make a meaningful contribution to sustainable plastic waste management, improved livelihoods for recyclers, and broader environmental gains for Chattogram city.

TECHNOLOGIES FOR TRANSFORMATION >>

Resource Efficient and Cleaner Production (RECP) practices drive sustainable growth by optimizing resource use and reducing environmental waste. Under the Sustainable Microenterprise and Resilient Transformation (SMART) project, these technologies help micro-entrepreneurs boost efficiency, cut production costs, and increase profitability.



Solar irrigation cuts pumping costs and lowers reliance on diesel or grid power. This RECP practice reduces carbon emissions while ensuring uninterrupted supply of water.

Foggers cool cattle sheds using fine water mists instead of traditional hose bathing. This RECP practice reduces heat stress in cattle while cutting water usage.



Artificial LED lighting extends daylight hours to stimulate off-season fruit production. This energy-efficient RECP method helps farmers secure higher market prices.



Using modern denting machines speeds up vehicle body repair while improving precision. This modern technology reduces material waste and boosts business output.



Dust collectors capture airborne husk and dust particles directly during rice milling. This RECP solution cuts air emissions and protects worker health.



Solar aerators lower electricity costs and ensure continuous pond aeration during power outages. This RECP practice reduces carbon emissions and improves fish yields.

WORLD ENVIRONMENT DAY 2026 >>

The SMART project celebrated World Environment Day 2026 through a series of awareness and community engagement activities organized by Partner Organizations under the global theme, “Inspired by Nature for Climate for Our Future.” Across project areas, the celebrations brought together project beneficiaries, students, youth groups, Environment Club members, local communities, and government representatives

in awareness rallies, discussion sessions, tree plantation and sapling distribution campaigns, and community clean-up drives.

The events focused on inspiring collective action for environmental protection and climate resilience. Interactive discussions raised awareness about pollution, climate change, sustainable waste management, biodiversity conservation, and the importance

of protecting natural resources. Tree planting campaigns encouraged participants to contribute to increasing green cover, while clean-up initiatives mobilized communities to take ownership of cleaner and healthier surroundings. Through these diverse activities, the SMART project strengthened environmental awareness and fostered a sense of shared responsibility for building a more sustainable future.





THE SWITCH THAT CHANGED EVERYTHING IN PINKY'S WORKSHOP



Micro-entrepreneur Shabiha Akter Pinky in her workshop, which uses solar power to run her switch manufacturing business.

In a rented 550-square-foot workshop tucked into South Donia, Kadamtoli, the steady hum of machines making electric switches and socket connectors used to compete with something else: the anxiety of rising power bills and the disruption of frequent load-shedding. Today, that hum is powered increasingly by sunlight.

Shabiha Akter Pinky, 31, runs Aual Electric Product, a small manufacturing enterprise that employs six workers, two men and four women, producing switches and socket connectors for the local market. Like many micro-entrepreneurs in Bangladesh's metal products sub-sector, Pinky built her business the hard way, growing it into an operation with a total investment of BDT 25 lakh and dependable profits. But growth came with a cost: heavy dependence on grid electricity, mounting energy bills, and the vulnerability that comes with unpredictable power supply.

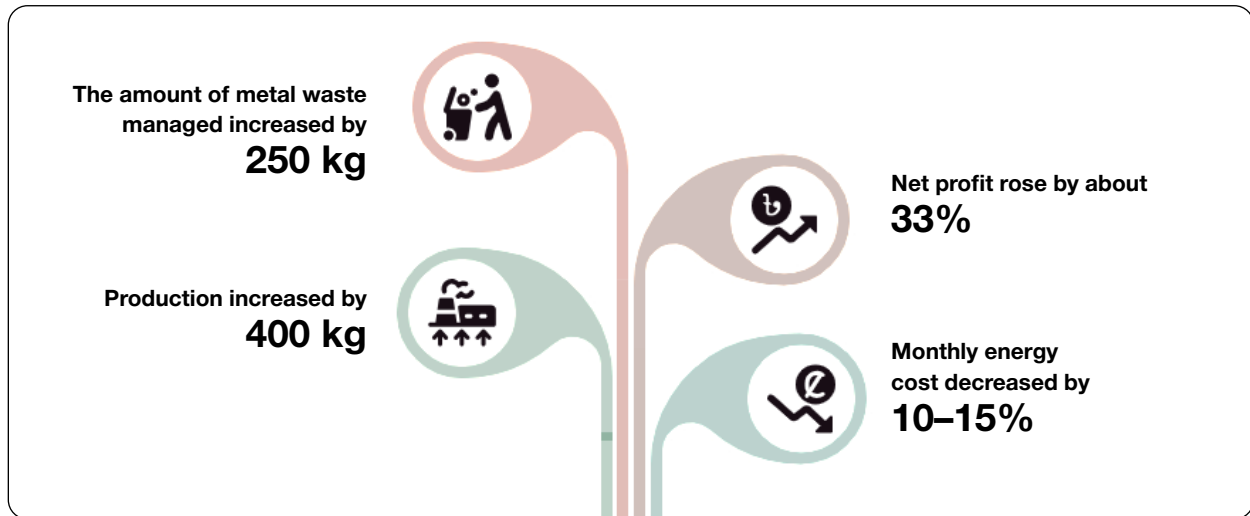
That began to change when Pinky, supported by 'BASTOB – Initiative for Peoples Self Development' under the SMART project, decided to adopt Resource-Efficient and Cleaner Production (RECP) practices at her factory. With a BDT 20,000 RECP grant and a first-time loan of BDT 8 lakh, she installed a solar power system to run her lights, fans, water pump and equipment; introduced proper waste storage for metal dust through a dust collector; and added an exhaust fan to improve air circulation on the factory floor.



After installing solar panel, I don't use electricity from the national grid during the entire daylight hours. As a result, my monthly electricity bill has been reduced. When other factories are closed due to load shedding in the area, work continues on a small scale in my factory.

- Shabiha Akter Pinky
Small Manufacturing Enterprise
Owner, Kadamtoli, Dhaka

Monthly impacts of adopting RECP practices



“After installing solar panel, I don’t use electricity from the national grid during the entire daylight hours. As a result, my monthly electricity bill has been reduced. When other factories are closed due to load shedding in the area, work continues on a small scale in my factory.”

The numbers back up her experience. Since adopting RECP practices, Pinky’s production has climbed from 1,800 kg to 2,200 kg, while her energy costs have dropped by 10 to 15 percent: from BDT 22,000–25,000 to BDT 20,000–22,000 per month. Her net profit has grown from BDT 5–6 lakh to BDT 7–8 lakh, and rather than discarding metal waste, she now collects and sells roughly 1,050 kg of it, up from 800 kg previously left unmanaged.



Collecting metal dust using industrial vacuums reduces workshop pollution and helps turning waste into extra revenue.

The changes extend beyond the balance sheet. With solar power now running lights, fans and even a CCTV camera, and with the dust collector keeping the workshop cleaner, Pinky also invested in two split air conditioners to improve conditions for her staff. The effect on morale has been tangible.

“We have a nice working environment in the factory. So, we are encouraged to work more in this comfortable environment in the heat, and the working spirit has also increased,” says one of the factory’s workers.

Pinky’s transformation has not gone unnoticed in her community. Other micro-entrepreneurs, curious about the advantages and disadvantages of going solar, have visited her factory to see the system for themselves — and she has become an informal advocate, encouraging her neighbours to make the switch to cut their own electricity costs. She has also linked her business with the Bangladesh Electrical Merchandise Manufacturers Association (BEMMA) to expand her market reach.

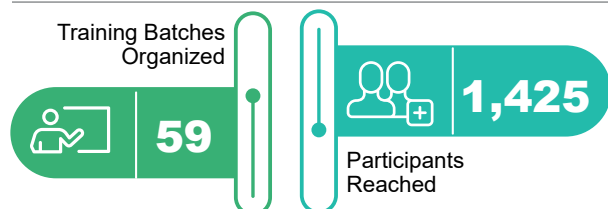
Looking ahead, Pinky wants to grow further: expanding into new territories, strengthening her product branding to reach more buyers, and building her capacity in e-commerce-based marketing. With continued support, she is confident her cleaner, more efficient factory can become an even bigger source of livelihoods in her community.

TRAINING AND WORKSHOP >>

STRENGTHENING INSTITUTIONAL CAPACITY FOR SUSTAINABLE PROJECT DELIVERY

Through a comprehensive capacity development program, the SMART project has continued to strengthen the technical and operational capabilities of its Partner Organizations. Up to May 2026, the Project Management Unit (PMU) organized 59 training batches across seven core thematic areas, reaching 1,425 participants from

the POs. The training covered critical aspects of project implementation, climate vulnerability and climate-resilient Resource-Efficient and Cleaner Production (RECP), environmental management, monitoring and evaluation, procurement, financial management and audit, as well as management information systems and reporting. These targeted learning initiatives have equipped project personnel with the knowledge and skills required to effectively implement SMART interventions, strengthen institutional systems, and ensure high standards of governance, accountability, and environmental sustainability across all project activities.



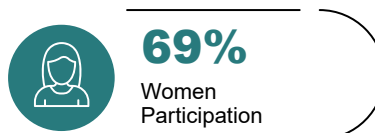
BUILDING CLIMATE-RESILIENT MICROENTERPRISES THROUGH KNOWLEDGE, SKILLS

Capacity building remained at the heart of the SMART project's support to microenterprises, with Partner Organizations conducting 2,233 training batches that reached 53,282 participants by May 2026, nearly 69 percent of whom were women. The largest share of participants, 40,598 micro-entrepreneurs, received training on climate vulnerability and climate-resilient Resource Efficient and Cleaner Production (RECP), including grievance redress and SEA/SH management. Complementary sessions on environmental management, occupational health and safety, safe production practices, technology transfer, business development, branding and certification, product diversification, digital marketing, knowledge exchange visits, and workshops further enhanced entrepreneurs' technical, managerial, and market-oriented capabilities. By integrating climate resilience, environmental stewardship, and enterprise development into a comprehensive learning program, SMART is enabling microenterprises to improve



Coast Foundation organized practical training for the micro-entrepreneurs on production of organic dry fish.

productivity, strengthen business competitiveness, and pursue more sustainable and resilient growth.



SNIPPETS FROM FIELD >>

SMART ENTREPRENEUR RECEIVES SAFE FOOD AWARD 2026

Md Sohel Rana, a micro-entrepreneur under the High-value Crops (mango) sub-project, implemented by GHASHFUL, was honored with the Safe Food Award 2026 on 9 May 2026 in recognition of his outstanding contribution to safe crop production. The award was presented at the Dhaka Regency Hotel by the Department of Youth Development under the Ministry of Youth and Sports after a rigorous selection process that included document assessment and on-site farm evaluation.

Receiving the award, Sohel Rana described the recognition as a testament to his commitment to producing safe, adulteration-free fruits and earning consumers' trust. He expressed his determination to continue adopting modern, safe agricultural technologies



while inspiring fellow farmers to promote food safety and supply high-quality produce to the market.

FDA OBSERVES WORLD HEALTH DAY

On 7 April 2026, a World Health Day awareness program was organized at Dularhat Secondary School by the Dularhat Environment Club of Poribar Unnayon Songstha (FDA)'s Cattle and Buffalo sub-project. The event brought together students, teachers, local community representatives, and project officials to promote healthy lifestyles and personal hygiene. Activities included a health awareness rally, discussion session, student speech competition, and prize distribution. Through interactive participation, students learned about the importance of proper nutrition, personal cleanliness, and maintaining a healthy environment. The initiative strengthened health awareness among young people and encouraged them to adopt positive health practices, contributing to the development of a healthier and more informed generation.



SANGRAM OBSERVES NATIONAL FOOD SAFETY DAY



The National Food Safety Day was observed at the head office of SANGRAM in Barguna on 2 February 2026, under the SMART project of PKSf, with the theme, "Ensure Safe Food, Build a Healthy and Strong Life." The celebration featured a colorful rally, a debate competition, and a discussion on producing and marketing pesticide-free dry fish. Environment Club members actively participated in the debate, while experts highlighted the importance of food safety, environmental protection, and public awareness. The program encouraged safer food production practices and reinforced the shared responsibility of ensuring public health through sustainable and chemical-free food systems.

WORLD MILK DAY OBSERVED IN BHOLA

Poribar Unnayon Songstha observed World Milk Day in Aminabad Union of Char Fasson Upazila on 2 June 2026 to promote the nutritional value of milk, safe dairy production, and the importance of the dairy sector in rural livelihoods. The program featured a colorful awareness rally followed by a discussion session with dairy farmers, women entrepreneurs, project beneficiaries, local representatives, and community members. Speakers highlighted the role of milk in improving nutrition, modern livestock management, and safe food production, while emphasizing on the contribution of small-scale dairy farming to rural economic development. The event strengthened public awareness of nutrition, food safety, and sustainable dairy farming practices.



RRF SHOWCASES FLORICULTURE INNOVATIONS

From 5–7 May 2026, the SMART floriculture sub-project, implemented through Rural Reconstruction Foundation (RRF), participated in the Agricultural Technology Fair 2026 organized by the Department of Agricultural Extension (DAE) at the Jhikargacha Upazila Parishad in Jashore. The SMART exhibition stall featured a vibrant display of flowers and value-added floral products produced by women entrepreneurs under the project, highlighting their skills and business potential. During the closing ceremony, the stall was visited by Sabira Sultana, Hon'ble Member of Parliament (Reserved Women's Seat), who commended RRF's contributions to empowering women entrepreneurs and promoting sustainable floriculture through the SMART project.



FIELD DAY DEMONSTRATES CLIMATE-SMART FARMING



Society Development Committee (SDC) organized a Field Day at a sprinkler and mulching demonstration cluster in Dhuldi, Faridpur, on 18 May 2026. The event brought together around 100 local farmers to witness the successful application of climate-smart agricultural technologies. Progressive farmers showcased impressive yields of brinjal, sponge gourd, and cucumber using sprinkler irrigation, mulching, solar-powered irrigation pumps, hybrid seedlings, organic fertilizers, and eco-friendly pest management practices. The chief guest, Dr Md Kibria, Chief Scientific Officer of the Faridpur Soil Research Centre, praised the initiative and encouraged wider adoption of these technologies. The program concluded with the distribution of agricultural equipment to outstanding entrepreneurs, inspiring greater interest in sustainable and resource-efficient farming among local producers.

TRAINING SPARKS INNOVATION IN IMITATION JEWELRY MAKING

Between 19–30 April and 7–25 June 2026, a 25-day advanced training program under the Imitation Jewelry sub-project, implemented through Shishu Niloy Foundation, transformed the handmade jewelry industry in Maheshpur, Jhenaidah. Twenty-five micro-entrepreneurs received hands-on training in modern jewelry design, precision metal cutting, finishing techniques, resource-efficient production, branding, and market linkage, producing more than 200 market-ready pieces, twice the initial target. The program strengthened participants' technical skills, creativity, and confidence to develop innovative products for both traditional and digital markets while promoting sustainable livelihoods through improved craftsmanship and entrepreneurship. "This training has completely altered my outlook. Learning precision metal cutting and modern finishing



techniques directly by hand has unlocked absolute creative freedom. I now feel like a true artist capable of crafting distinct, modern jewelry pieces that can stand out on competitive digital e-commerce platforms," says Salma Begum, a micro-entrepreneur who took part in the training.

SUS ORGANIZES YOUTH ENGAGEMENT PROGRAM



Social Upliftment Society (SUS) organized a Youth Engagement Program at Bhakurta Union High School and College in Savar on 14 June 2026. The event, organized by the Goyna Palli Nobo Sobuj Environment Club under the Imitation Jewelry sub-project of SUS, engaged 50 students in discussions on environmental protection and climate change, a quiz competition, and a tree plantation campaign. Ten students were also selected as SMART Youth Volunteers to champion environmental awareness within their schools and communities. The initiative encouraged youth leadership while promoting sustainable practices and environmental leadership among the next generation.

WORKSHOP PROMOTES SUSTAINABLE PLASTIC RECYCLING

Young Power in Social Action (YPSA) organized an awareness workshop in Chattogram under the plastic recycling sub-project to promote RECP practices in the plastic recycling sector on 8 April 2026. The event brought together representatives from government agencies, development organizations, the media, and plastic recycling enterprises to discuss sustainable waste management and sectoral growth. Participants highlighted the importance of strengthening collaboration, improving resource efficiency, and supporting micro-entrepreneurs through technical and financial assistance. Chief Executive Officer of Chattogram City Corporation Mohammad Ashraful Amin was present at the event as the chief guest. He said, "Coordination between local government and private initiatives is essential for effective plastic waste management. At the same time, developing viable alternatives to plastic can make urban management more efficient and sustainable."



EXPOSURE VISITS FOSTER LEARNING, INNOVATION

As part of its commitment to strengthening microenterprises, different sub-projects of the SMART project organized several exposure visits during May and June 2026, enabling entrepreneurs to learn from successful industries, adopt modern technologies, and build stronger market linkages across diverse sub-sectors.

On 7 May 2026, entrepreneurs from the Machinery and Equipment sub-sector visited SMR Agro and Ripon Engineering Workshop in Rajarhat, Jashore. The visit brought together entrepreneurs from the Bogura cluster, who exchanged technical knowledge with industry experts and explored modern agricultural machinery manufacturing practices before participating in a coordination meeting.



On 9 May, 14 leather footwear entrepreneurs from Kishoreganj visited the export-oriented Italy Footwear Ltd. factory in Sreepur, Gazipur, where they observed the complete production process, from design and cutting to quality control and packaging, while learning about modern machinery and manufacturing techniques.

On 13 June, 35 participants, including 27 mini-garment entrepreneurs, attended the Dhaka International Textile & Apparel Expo and Dhaka International Colour & Chemical Expo at ICCB, Dhaka, gaining valuable insights into quality raw materials, emerging market trends, and supplier networks.



On 24 June, 30 floriculture entrepreneurs participated in a knowledge-sharing visit from the Ganna cluster to the Jhenidah cluster, where they explored climate-smart flower cultivation, efficient irrigation, solar-powered technologies, composting, and sustainable production practices.

On 25 June 2026, another 30 fruit entrepreneurs under the High-value Crops (Fruits) sub-project, implemented by Shishu Niloy Foundation (SNF), participated in an exposure



visit to Chougacha, Jashore, and Maheshpur, Jhenaidah. The participants visited successful fruit farms and nurseries to observe climate-smart cultivation practices, including vermicompost, pheromone traps, bagging technology, solar-powered pest management, water-efficient irrigation, improved fruit varieties, and agricultural waste management. The visit concluded with an experience-sharing session, enabling entrepreneurs to exchange practical knowledge on sustainable fruit production and RECP practices.

Collectively, these exposure visits equipped entrepreneurs with practical knowledge, inspired innovation, and enhanced their capacity to improve product quality, productivity, and market competitiveness.

IN-DEPTH



BUILDING A CLEANER, MORE COMPETITIVE MACHINERY SUB-SECTOR

Muhammad Khaled Aminul Hasan

Senior Program Manager (Enterprise Development-Light Engineering)

The machinery and equipment sub-sector is a vital part of Bangladesh's industrial base, with steady demand for spare parts, machines, and equipment. Yet micro-enterprises in this space still struggle with outdated, energy-inefficient technology, a shortage of skilled workers, and limited access to finance. The result is poor resource use, high energy consumption, excessive material waste, and weak environmental performance. Under PKSF's SMART project, Resource Efficient and Cleaner Production (RECP) practices offer a practical route to improving both the economic and environmental performance of these enterprises.



Modern CNC machinery boosts manufacturing precision while cutting material waste, saving energy, and improving product quality.

Solar photovoltaic (PV) adoption has been one of the most visible interventions. Around 425 of the roughly 1,600 microenterprises in the cluster, about 27 percent, have now commissioned solar PV systems. These installations are cutting electricity consumption by 10 to 20 percent at the enterprise level, though actual savings depend on system size, load profile, and seasonal sunlight. Beyond cost savings, solar adoption reduces dependence on the national grid and strengthens energy security.

Power Factor Improvement (PFI) plants are delivering similar gains in electrical efficiency. Inductive loads from lathes, milling machines, grinders, and compressors typically pull power factor down to 0.75–0.80. PFI plants raise this to at least 0.95, cutting reactive power losses on the grid while helping

enterprises avoid utility penalties and improve voltage stability. Twelve micro-enterprises have adopted PFI plants so far.

Modern manufacturing equipment, including CNC (Computer Numerical Control) vertical machining centers and CNC lathes, is also reshaping the cluster. These machines produce dies, molds, and spare parts with greater precision, cutting material waste by 15 to 20 percent and improving energy efficiency per unit of output by 10 to 20 percent. They also reduce rejection rates and rework, boosting both productivity and product quality for the 11 micro-enterprises now using them.

In foundries, induction furnaces are replacing conventional ones, cutting energy use by 20 to 30 percent and emissions by 25 to 40 percent, while reducing slag generation by 30 to 50 percent. Better waste management practices are enabling a further 20 to 30 percent reduction in solid waste through recycling and reuse.

Proper handling of metal chips and scrap is another key practice. Segregating chips by type and managing them with manual compactors and mobile trolleys improves recycling efficiency, frees up storage space, and reduces hazards from scattered sharp waste. Foundry slag, once dumped along roadsides and on farmland as a pollution hazard, is now being recycled into blocks, pavement tiles, and other construction materials, turning a waste burden into a circular-economy asset.

Occupational health and safety improvements round out the picture. Clean drinking water, scheduled machine



Implementing occupational health and safety measures protects industrial workers while boosting workplace efficiency.

maintenance, clear safety signage, and standardized operating procedures are reducing workplace accidents and supporting compliance with responsible production standards.

Taken together, these interventions show how the SMART project is helping the machinery and equipment sub-sector cut costs, reduce its environmental footprint, and strengthen domestic production capacity in place of imports.



The coal-fired cupola furnace has been replaced by an electric induction furnace that has eliminated GHG emissions and ash.



Using CNC machines in small workshops enhances production precision and speeds up manufacturing. This RECP practice reduces raw material waste and lowers production costs.



SMART INSIGHTS

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