



METABUILD

Resource Efficient Supply Chain for Metal
Products in Buildings Sector in South Asia



Lessons Learnt Report

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1. Introduction

The METABUILD project (Resource efficient supply chain for metal products in buildings sector in South Asia) (2016 – 2020) is part of the European Union’s SWITCH-Asia programme. The SWITCH-Asia programme was launched by the European Commission in 2008. Its goal is to promote economic prosperity and reduce poverty by encouraging sustainable growth with a low environmental impact from industries and consumers. The programme specifically aims to promote sustainable products, processes, services and consumption patterns in Asia. More information on the SWITCH-Asia programme can be found on the SWITCH-Asia website <http://www.switch-asia.eu/>.

METABUILD is one of more than 120 grant projects being implemented under the SWITCH-Asia programme in 24 Asian countries. More information on METABUILD can be found on the website <https://metabuild-southasia.org>.

As a multi-country, multi-partner project, METABUILD has drawn on the expertise, experiences and exchanges of the stakeholders engaged to support over 400 SMEs in the metal sector to become more resource efficient. This support has taken the form of direct industry support and awareness building among SMEs in the project countries of Bangladesh, Nepal and Sri Lanka, as well as wider stakeholder engagement including through technology fairs, customer roundtables, policy exchanges, and financial institution engagement. Building on the achievements of the preceding SWITCH Asia ACIDLOOP project (Sustainable production through market penetration of closed loop technologies in the metal finishing industry) in India, METABUILD has successfully replicated the approach across three geographies, generating lessons learnt and success factors along the way.

Objective of the Report

This lessons learnt report shares the key success factors and learnings generated from scaling-up a successful approach to wider contexts. Touching on both the direct industry support component and stakeholder engagement component of the project as well as project management insights, the report is designed to inform future scaling of projects and action in Resource Efficient Cleaner Production (RECP) measures for SMEs. The goal of this report is to support other implementing organizations to successfully set-up, coordinate and monitor comparable multi-country and multi-stakeholder projects. It provides essential lessons learnt on the practical challenges of such a project, and good practices on the overarching project design to maximize the benefit of multi-partner and multi-country RECP projects for donors, project teams and, most importantly, all different stakeholder groups involved.

Structure of this Report

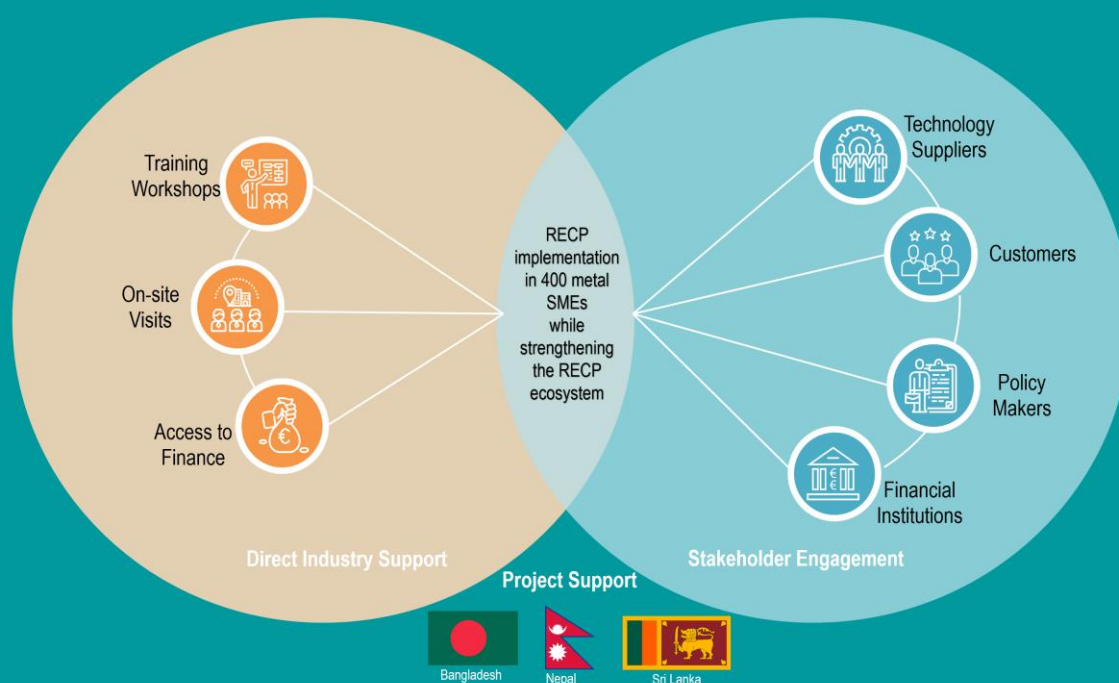
The report begins with an overview of the METABUILD project approach before outlining the context for metal SMEs in the project countries. By assessing the achievements and challenges faced in (1) direct industry support, (2) stakeholder engagement, and (3) project management, and drawing insights from the project management team and local technical consultants, the report presents key success factors and learnings for each. This resolves in a final section that **summarizes elements of successful project design for scale-up and sustainability**.

Project Approach

The METABUILD project targeted metal product SMEs, industry associations, financial institutions, policy makers as well as customers in Bangladesh, Nepal and Sri Lanka to encourage RECP in the metal supply chain of building and construction sector. **The objectives of the project are threefold:**

1. to sensitize and mobilize action within metal SMEs to invest in RECP measures
2. to build a pool of local RECP consultants who can support these SMEs beyond the project
3. to mobilize stakeholders such as policy makers, industry associations, and financial institutions to build a supportive framework for resource efficient SMEs and to green the supply chain.

The project drew upon multiple partners and international and local expertise to achieve these objectives.



The project was implemented along three project dimensions: **a. Direct Industry Support:** The primary activity of the project was steered towards direct industry support provided to industries through capacity building measures, direct consultation and guidance through the process of implementing concrete RECP measures. **b. Stakeholder Engagement:** Specific activities in this component were conceptualized and implemented to target key stakeholder groups individually – through customer roundtables, technology fairs, policy dialogue and financial sector engagement – to create a comprehensive support framework for RECP uptake in metal industries. **c. Project Support:** Managing a multi-country, multi-stakeholder project required project support measures to facilitate and optimize the direct support delivered to SMEs and wider stakeholder engagement. Here, key success factors for effective and efficient project management were derived from internal project management, balancing the activities and stakeholders involved, as well as reporting and continuous internal learning of project team members.

Project Partners

The METABUILD project was implemented by a project consortium comprised of organizations from the project countries (Bangladesh, Nepal and Sri Lanka) and international partner organizations from India, Germany and Austria – each with specific expertise to contribute to the overall success of the project.

The project was led and coordinated by **The Energy and Resources Institute (TERI)** (www.teriin.org) from India. **STENUM Asia** (www.stenum-asia.org) as the second Indian project partner, together with the Austrian partner **Austria Recycling, Verein zur Förderung von Recycling und Umweltschutz in Österreich (AREC)** (www.austriarecycling.at/en) led the technical component of the project. The **Dhaka Chamber of Commerce & Industry (DCCI)** (www.dhakachamber.com) from Bangladesh, the **Society for Environmental & Economic Development - Nepal (SEED-Nepal)** (www.seednepal.org) from Nepal and the **National Cleaner Production Centre (NCPC)** from Sri Lanka (www.ncpcsrilanka.org) carried out the on-the-ground implementation of the project in the respective countries. **adelphi research gGmbH** from Germany (www.adelphi.de/en) led the policy and finance components in the project.



2. The Metal Industry

Economic and population growth in South Asia has led to a boom in construction and manufacturing sectors. As steel and other metals are a key, yet resource-intensive, aspect of construction, there is a significant opportunity to improve environmental and economic performance through adopting RECP measures in the metal sector. RECP measures leading to reduced resource consumption can ensure the business continuity of many enterprises and enhance their competitiveness in their respective national markets and internationally.

In South Asia, small and medium enterprises (SMEs) comprise a significant portion of the economy, including in the manufacturing and construction sectors. **SMEs in Bangladesh account for 45% of value addition in the manufacturing sector, 80% of industrial employment, and 75-80% of export earnings. The industrial sector – mostly comprised of SMEs – makes up 31% of GDP. In Nepal, SMEs constitute about 80% of industrial employment, 70% of the total national export, and around 25% of the country's GDP. Likewise, in Sri Lanka, SMEs are considered the backbone of the economy, contributing to 52% of GDP and 45% of employment.** In all of these three countries, many SMEs are working specifically in the metal sector.

Despite their significance in the economy of these countries, many SMEs have low financial and technical capacities, leading to inefficient and resource-intensive production, – especially in terms of energy, materials and water – and non-competitiveness. Hazardous substances used in production, improperly handled, make the workplace unsafe and put the employees at risk. All of this points to the need to target SMEs for implementing RECP measures with a view to increasing their competitiveness and contribution to the national economy while creating environmental benefits.

Major barriers to fostering RECP among SMEs

- The lack of awareness in SMEs with regard to potential for RECP improvement in their daily operations
- The lack of access to the communication channels and peer business networks that would allow SMEs to obtain information on the available options and economic and environmental benefits of RECP measures
- The lack of internal capacity to achieve and maintain good operation standards including occupational health and safety standards
- The lack of a supportive framework and green supply chain in their sector
- Limited financial capacity of SMEs to invest in mid to high cost RECP measures that is further hindered by a lack of appropriate financial mechanisms that support these investments

3. Insights from Direct Industry Support

Direct industry support is a core component of the METABUILD project, and is implemented at a local level across the three project countries. It includes both capacity building of the local technical experts through Training of Trainers (ToT) workshops, as well as individual and cluster level SME support within the metal sector. The industry trainings were developed on overarching topics such as energy efficiency, material flow analysis, water efficiency, basic occupational health and safety and relevant RECP measures that can be implemented.

Key Success Factors

The successful implementation of direct industry support to SMEs in Bangladesh, Nepal and Sri Lanka depended on ensuring quality standards of the support across project teams, drawing on early adopters to mobilize further engagement of SMEs, and on demonstrating the expected returns of the investment into RECP measures.

Ensure quality enterprise support through a mix of standardized and tailored Trainings of Trainers (ToTs) to local consultants

Working with local technical consultants across project countries meant that project management, business support, and technical capabilities varied within and among teams. To ensure that the industries supported had access to both a standardized approach and the benefits of cross-partner exchange of expertise, the METABUILD project provided a set of Training of Trainers (ToT) to each local team. These ToTs were initially standardized to bring teams together on a level playing field, and later tailored to the needs and requirements of each local team. Refresher ToTs were also provided to ensure consistent support in the methodology and industry support approach.

Leverage pioneer industries to mobilize enterprise engagement

Encouraging engagement in the implementation of RECP measures requires communication and awareness raising on the economic and environmental benefits of increased resource efficiency. A key success factor of the METABUILD project was the identification of pioneer industries who were keen to engage and adopt RECP measures, and then share the benefits they accrued to motivate the other industries. The pioneer industries were critical to generating evidence in the local context that could be used to build confidence and willingness to engage in RECP measures.

Address industry priorities

A large number of measures are usually identified in the initial assessment; however, they need to be prioritized keeping in view the pain points of the industries. For example, energy was an important resource in Bangladesh and industries were willing to reduce energy use; the same importance was not extended to water use. This was an important success factor since the team took into account industry priorities while preparing the detailed action plan for implementation.

Demonstrate implementation and expected returns to enterprises

Integral to industries adopting RECP measures was their demonstration, either through on-site implementations or through showcases based on implementations in other similar industries.

This was supplemented by technical notes on specific technologies, technology suppliers and additional links with suppliers created through clean technology fairs in each of the project countries. Showcases always highlighted the economic benefits of investing in RECP. We found that integrating on-site implementations early into the industry support programs brought additional value to enterprises and encouraged further participation. In particular, for smaller industries, implementing the measure at one of the sites using local resources was more effective in motivating other similar industries to replicate.

Story #1: Demonstrating low to nil investment RECP measures



In July 2018, the Bangladesh METABUILD team visited Automation Engineering and Controls Ltd. in Chittagong to study the production process and to identify opportunities for improving resource efficiency. The company produces transformers (50 KVA to 3000 KVA) which, when assembled, go into an electrically-run heating chamber to complete the drying process.

During an initial assessment, the team identified high skin temperature on the edges of the heating chamber, and suggested proper insulation to minimize heat loss. Following a technical discussion on the benefits of insulation and improved efficiency of the heating chamber, some suggestions were given for low to nil investment measures that could be taken to improve the heating chamber efficiency.

When the team visited for follow up, they were shown a new placement of the heating chamber to facilitate access, and a restructured insulation and sealing costing BDT 25,000. This reduced the skin temperature from 140°C in some places to 65°C, leading to reduced electricity consumption by 8,100 kWh and approximate cost savings of around BDT 72,900 annually.

Showing how investing a little can achieve high savings is an effective way to create interest in additional RECP measures to bring economic and environmental benefits to the company.



“We have benefitted from METABUILD project in terms of materials and power consumption. As per suggestions received from METABUILD team, we have used various steps which gave us chance to use daylight more than before. The initiatives they have proposed will certainly benefit the industries in Bangladesh.”

Mr. Kawsar Alam

*Manager, Steel Mark Building Solutions Ltd.
Bangladesh*

Challenges and Solutions

Despite these key success factors, we encountered certain challenges in some of the project countries, particularly when it came to mobilizing and ensuring continued participation of industries. Some of the solutions found to address these challenges could be integrated into future projects at the outset to minimize disruptions.

Engage with local industry associations and relevant stakeholder groups to mobilize industries

Despite initial challenges in mobilizing industries to participate in the project, it was possible to achieve the project objective of supporting 400 SMEs through engaging with local industry associations and stakeholder groups such as the customers. Through their member networks and events, it was possible to mobilize industries, and to encourage them to engage with RECP measures. In Nepal, for example, attendance to stakeholder events was high due to invitations coming from an industry association. Pioneer industries also supported the mobilization of enterprises, as did industry visits in industry clusters and corridors.

Build clarity around expected project outcomes and monitoring

Clarity around the expected outcomes at an early stage in the project would have improved the local teams ability to engage with and support the industries. Collecting information on the industry with regard to resource consumption, cost savings and environmental indicators was required for effective monitoring; however, collecting baseline data proved to be a challenge. Many industries were hesitant to share data or were unable to collect the data needed for calculations on potential savings. In these cases, the team relied on available data and relevant assumptions to estimate potential impact of RECP measures.

Story #2: Mitigating production risks through engaging floor workers



During a METABUILD team visit to Sarah Industries, a nail manufacturing company in northern Sri Lanka, the initial assessment showed multiple opportunities for improving risk mitigation to workers at the factory. While the owner was enthusiastic to make changes to the factory to improve efficiency and safety, the team wanted to ensure that the recommended measures to improve safety were taken up by shop floor workers and responded to their needs. After speaking with the owner, options and observations were presented to the shop floor workers, and an awareness session to all floor workers was provided.

In a follow up call, the owner indicated that all shop floor workers had relevant personal protective equipment (PPE), were aware of the benefits and how to use the equipment. An electrochemical engineer had also been engaged to further mitigate risks in the electroplating facility to make it a safer place to work. As a result of the positive environmental and safety changes at the factory, the owner is now able to apply for a certification of ISO 14001 EnMS.

Engagement at various levels in the factory can help to disseminate practices to increase efficiency and safety, and to ensure that all workers have awareness on occupational safety and RECP.

Extend the trainings to cover sector specific technical trainings

The trainings provided to the industries directly focused on clusters and identified potential RECP measures that could be implemented. The METABUILD team found that further trainings on common types of RECP measures and common technologies such as energy efficiency in compressed air systems, boilers, and water saving techniques would bring benefit to the SMEs. Trainings could also be extended to sharing best practices and methodologies for knowledge sharing and dissemination among technical consultants.

Summary

- Integrate standardized ToTs and needs-based ToTs for the project teams
- Leverage local industry associations, pioneer industries, and customers to mobilize industry participation
- Demonstrate cost savings and environmental benefits through showcases of implemented measures, pioneer industry success stories, and savings calculations using data available
- Extend the cluster trainings for industries to sector specific awareness and information sessions, based on industry needs



“By the second industry visit I have learned how a single suggestion can make a big impact for an enterprise’s production and for the monetary value as well.”

Ms. P. A. Harshini Rananjali

*Local Consultant, NCPC
Sri Lanka*

4. Insights from Support in Access to Finance

Despite their role as a backbone for the economic development in the markets relevant to METABUILD, SMEs have issues in obtaining cleantech finance to improve their resource efficiency, working standards and overall sustainability. This blocks them from realizing promising competitive advantages within and beyond their markets. The most prevalent challenges across the three project countries are listed below. The success to secure financing for 133 of the 403 industries and the intense engagement with financial institutions helped the METABUILD project to further understand which key success factors and recommendations would lead to an even larger impact.

Challenges for SMEs in Cleantech Finance

High interest rates and collaterals for SME loans

Due to poor loan applications and a lack of knowledge on the specific needs and repayment capacities of SMEs, banks usually compensate for these prevailing uncertainties with high interest rates and tough collateral requirements. As a consequence, many SMEs cannot afford loans and eventually refrain from RECP investments, even though these might save production costs and increase profitability in the medium- or long-term.

Limited capacity amongst SMEs to apply for cleantech loans

Many SMEs lack the technical skills and financial literacy to cope with the complex technical and bureaucratic requirements for loan applications and the necessary supporting documents. Poorly written applications with incomplete information are often not considered by potential lending institutions.

Limited variety of available loans and grants, especially for waste and water efficiency

Even though there are some grant schemes and loans available in the three countries targeted in the METABUILD project, they are mostly limited to increasing renewable energy capacity or energy efficiency. Even though these two themes belong to core aspects captured by the concept of RECP, many other important facets that require customized cleantech financing opportunities are blended out, such as (solid) waste management, use of primary materials, water efficiency or occupational safety.

Lack of information on available cleantech financing

With regard to the (often grant-based) financing options for RECP, awareness of such financing opportunities is low amongst SMEs. Both multinational development banks (MDBs) and policy makers need to increase awareness and convince SMEs of the potential cost advantages to be realized through RECP measures in the medium- and long-term.

Availability of cleantech

Even if financing hurdles are overcome, SMEs planning to decrease their resource footprint and become more sustainable, face additional problems in purchasing and installing relevant green-tech technologies. One factor is the necessary technological know-how to evaluate, install and maintain the technologies on site. Another factor is tariffs and taxes on importing RECP enhancing technologies.

Challenges for Financial Institutions in Cleantech Finance

Problems with increasing the overall effectivity and efficiency of cleantech finance not only arise for SMEs. Financial Institutions (FIs), willing to leverage RECP in their national economies, also face some significant challenges.

Lack of industry knowledge

Most FIs lack expertise on the technical and operational reality of industries and thus are unable to provide customized financial products or to anticipate problems along the way, such as a lack of financial knowledge within industries to handle complex loan application requirements.

Missing best practice examples for cleantech finance

There exists a great need amongst FIs to connect with each other and to share best practice examples of successful RECP funding for SMEs. Peer-to-peer exchange would be key to disseminate such cases, even if they stem from other sectors or other emerging economies.

Insufficient mobilization of SMEs

FIs need to stack up their efforts to create awareness among SMEs for already available schemes for cleantech finance in order to jump-start SMEs' efforts to obtain such financing.

Small project size of RECP measures

Many of the RECP enhancements represent comparatively small projects from a FI's viewpoint, which is why they are not automatically considered as vital lines of business and are often not recognized enough in the overall market strategy of financiers.

Lack of acknowledgement of own systemic role

FIs often lack the insights into global environmental and climate agreements and the national policy frameworks and policy goals derived from national governments. As such, they rarely have internalized the systemic role that they as financiers should play in order to initiate, facilitate and enable a national, regional and even global transition towards a green and resource efficient economy. For many FIs, this would require an internal paradigm shift with regard to market strategy and product development.



“We suggest facilitating multi-stakeholder workshops to bring together financial institutions, technical consultants and industry representatives to optimize the exchange on the financial and technical specificities of RECP.”

Mr. Rainer Agster

*Director of Private Sector Cooperation, adelphi
Germany*

Story #3: Suggesting high investment RECP measures where necessary



In January 2019, the METABUILD team in Nepal visited Saakha Steel Industries that produces thermo mechanically treated (TMT) steel bars.

During the visit, the team noticed that the re-heating furnace was of lower capacity than the rolling mill, so the re-heating furnace was running at over capacity. Four fuel burners had been installed at the top of the furnace, resulting in wear and tear of the refractory material.

To increase efficiency of the re-heating furnace and to reduce the potential safety hazard of collapse of the furnace, the team suggested that the capacity of the re-heating furnace should be increased. Once the production manager was convinced of the benefits of doing so, he suggested conveying the suggestion to the owner once the report of the findings from the initial assessment was provided. When the team returned to share the report, it was found that in the meantime, the top of the furnace had collapsed within a month of their visit, and the industry was planning to change the whole re-heating furnace.

Following that incident, the industry took the assessment suggestions seriously, even when a more significant investment was required.

In necessary cases such as these, it was a good practice to suggest a larger investment as it was important both to enhance resource efficiency and to ensure safety, preventing incidents such as these.

Recommendations to Improve Cleantech Finance for SMEs

- Create platforms for exchange between SMEs and FIs to increase reciprocal understanding of SMEs' operating reality and FIs' requirements and criteria for granting cleantech loans
- Strengthen the overall RECP framework through financial incentives such as co-financing for FIs providing cleantech financing schemes or tax deductibles for SMEs implementing RECP measures
- Build SME capacities on applying for RECP-relevant loans and provide support tools e.g. an online tool for project impact calculation and eligibility checks
- Encourage SMEs to apply for RECP-relevant loans by providing additional incentives e.g. incentivizing the energy audits
- Use existing best practices for cleantech financing to encourage design and development of RECP-specific financial products
- Encourage FIs to collaborate with organizations having significant technical and/or local cleantech and RECP expertise to optimize the design and marketing of their products
- Use online tool for impact calculation and eligibility check to support applications for cleantech finance schemes

5. Insights from Stakeholder Engagement

Beyond direct industry support to implement RECP measures, the METABUILD team engaged with a wider group of stakeholders to build a supportive framework for SME action. This included engagement with regional policy makers, associations and industry groups, financial institutions, and customers. The objective of these engagements were to create awareness and demand for resource efficient metal products in the local markets, and to ensure appropriate financial instruments and policy frameworks evolve to support SMEs in their implementation of RECP measures.

Key Success Factors

By engaging with stakeholders across the three project countries, it was possible to identify specific practices that generated the most impact in garnering support for resource efficiency for SMEs.

Link stakeholder engagement to larger events

Where possible, linking stakeholder engagements to larger industry events amplified the impact as shown in Sri Lanka where the project closing event was linked to the National Cleaner Production Awards. This made it more effective to ensure the right stakeholders – in this case various industry sectors, funding agencies, government representatives, media – were able to join, and build interest and momentum around the conversations.

Engage with a wide range of stakeholders

Engagement with a wide range of stakeholders that work with and in support of resource efficiency in SMEs proved to be an effective approach in galvanizing support in the sector. We identified customers as a key stakeholder due to their ability to demand resource efficiency in the products they buy. Through roundtables, customers were sensitized to RECP measures, and trained in greening their supply chain. In Bangladesh, this also helped in mobilizing industries to participate in the project.

A success factor in engaging a wide range of stakeholders was a comprehensive approach. By explicitly inviting participants with diverse backgrounds and affiliations, the integration of insights from all aspects of the stakeholder actions was encouraged thereby contributing towards creating an enabling ecosystem for RECP adoption in industries.

Challenges and Solutions

While stakeholder engagement was on the whole successful, in some of the project countries, there were challenges in moving forward following initial engagement, especially when it came to implementation of the support measures discussed. Challenges also centred on awareness raising with the stakeholders, who may not be conversant with RECP measures or the economic and environmental benefits that are derived from them.

Curate national level policy dialogue for required stakeholder engagement

Required engagement of policy stakeholders due to regulations and permissions proved a challenge in some project countries. Local teams faced difficulties presenting project information to

stakeholders who were not aware of the benefits accruing from RECP initiatives in SMEs. Future initiatives could therefore go beyond a regional policy dialogue to undertake national-level policy dialogues and policy stakeholder engagement to assess the current policy landscapes on Sustainable Consumption and Production (SCP) and to sensitise relevant stakeholders to its benefits.

Encourage cross-stakeholder engagement to drive implementation

Despite successful stakeholder engagement with a wide range of stakeholders, we found follow-on action sometimes to be lacking. For financial institutions, for example, following an awareness-raising meeting, there was interest in developing banking products that are targeted towards resource efficient SMEs and investment into RECP measures, including flexible repayment schedules. Technical knowledge on the sector specific business cycles and needs of the SMEs, however, is lacking. A future solution could be cross-sector stakeholder engagement and the on-boarding of local RECP consultants as technical experts to advise in the developing of financial and policy instruments to support resource efficient SMEs. We tested this in Nepal, where financial institutions from prior engagement set up stalls in the technology fair, with successful results.

Involve customers along entire value chain

Customers who are not direct buyers of SME products are often not interested in RECP adoption by their supply chain members who are far removed from them. A solution could be to involve both customers who are direct buyers and ones who are at a higher level and can influence product decisions.

Summary

- Engage with stakeholders across the supportive framework for SMEs, and along the value chain
- Encourage cross-stakeholder engagement to support technical and financial knowledge sharing and the development of targeted financial and policy instruments to support SCP
- Link stakeholder engagement to larger events to mobilize stakeholders and create momentum
- Support national level policy dialogues in addition to regional policy dialogues to gain required stakeholder support and sensitize policy stakeholders

6. Insights from Project Support Activities

As a multi-stakeholder, decentralized project running in three countries, effective project processes and management were critical to achieving the objectives. Dealing with differing SME contexts and capabilities of team members within and across the countries required a targeted yet flexible project management system that drew on templates and standard processes to ensure quality deliverables across the countries.

A key objective to the METABUILD project was to ensure sustainability of the project by capacity building of a team of local RECP technical experts who can continue to support SMEs and offer services beyond the project life cycle.

Key Success Factors

The key success factors to the project centre on the provision of standardized templates and processes to guide the achievement of project objectives coupled with flexibility and ownership of the process at the local team level.

Provide clear templates for reporting and monitoring of the project, and clear communication

We found that the provision of clear templates to all team members for reporting on the achievements and challenges of project implementation were useful across the teams. The provision of these templates was coupled with clear and frequent communication, twice yearly meetings for project updates and steering, and quick decision making among the project leads. Where multiple templates were cumbersome and not effective, prompt corrective action was taken (such as providing a single report for very small industries in Bangladesh instead of one after initial assessment and one with the action plan for prioritized measures). Annexes on specific implementations provided with the templates have been compiled as technical notes to support future RECP work. Similarly templates for resource monitoring (compiled as a Resource Control Tool) has been shared with industries for in-house use. In the future, financial management templates would also prove useful to support teams in financial reporting.

Develop flexible action plans that respond to needs of the context

Action plans developed with the teams in Bangladesh, Nepal and Sri Lanka proved to be useful as well. In some cases, where achievement of project outcomes proved difficult, we altered the action plan and leveraged other action points to achieve success. In the case of Bangladesh, where industry mobilization proved challenging, the ability to alter the action plan and leverage customer roundtables to mobilize industry engagement proved successful. Where project management was inadequate – as in Bangladesh – additional support was put in place early on in the second year of the project.

Rely on objectively verifiable indicator (OVI)-driven implementation

By providing clear indicators and using OVI-driven implementation, the project teams were able to ensure a clear direction throughout the project. The teams found OVI-driven implementation useful to having clear expectations across team members and for efficient measuring of success of the project at different stages.

Build ownership through Whole Person Process Facilitation (WPPF) methodology

The use of Whole Person Process Facilitation (WPPF) methodology in team meetings led to strong engagement across the teams, and built ownership at a local level to drive the project forward. WPPF methodology leverages contributions of the individual and wisdom of the group through a participatory process that reduces communication barriers. By taking ownership of the project objectives and process, team members across countries were better equipped to implement the project and continue working on the objectives of implementing RECP in SMEs beyond the project life cycle.

Challenges and Solutions

As with any multi-country, multi-partner project, the project team encountered several challenges during implementation that necessitated corrective action. The solutions found to these challenges are presented below, and could be integrated into future projects to avoid such challenges.

Target capacity-building support for different abilities in teams

Natural imbalances in skill sets between and across teams led to challenges in project implementation and achievement of the project goals in each of the target countries. To deal with this challenge, the project built flexibility in the ToTs provided to ensure that specific support could respond to the varied needs of the team members and the country contexts. Clear coordination and reporting facilitated the quick identification and response to gaps in capabilities and to leveraging the capabilities of other team members. We also provided refresher ToTs to ensure continued learning and capacity development. In some cases, the international team had to invest more time and resources into on-boarding the local team and providing continued handholding during the project course.

Build the capacity of multiple consultants at the beginning

Due to the length of the project (4 years), we found that there was some turnover in staffing across the teams. This challenge had the potential to undermine timely completion of the project objectives, especially in a project where we required significant on-boarding time to align team members to the project approach and objectives. Having provided initial training to a larger group of



“The elements that enable smooth project implementation involve building ownership of local teams, maintaining regular communication and quick response for problem resolution.”

Dr. Malini Balakrishnan
*METABUILD Team Lead, TERI
 India*

consultants than those who joined the project, the teams were able to draw from a group of trainers who had already been on-boarded and received initial training. This allowed us to fill human resource gaps quickly, and to reduce the lag time required for on-boarding.

Assume a decentralized team approach to support internal team growth

A core objective of the METABUILD project was to build the competencies of local RECP consultants to take action beyond the end of the project cycle. We achieved this through trainings, a combination of class and fieldwork, such as on-site industry visits, and bringing together consultants from diverse fields. In the future, we would suggest additional opportunities for exchange between local teams – such as inviting junior and field teams to specific sessions of the project meeting. Furthermore, additional trainings on project management and team management could be provided to increase skill development in these topics.

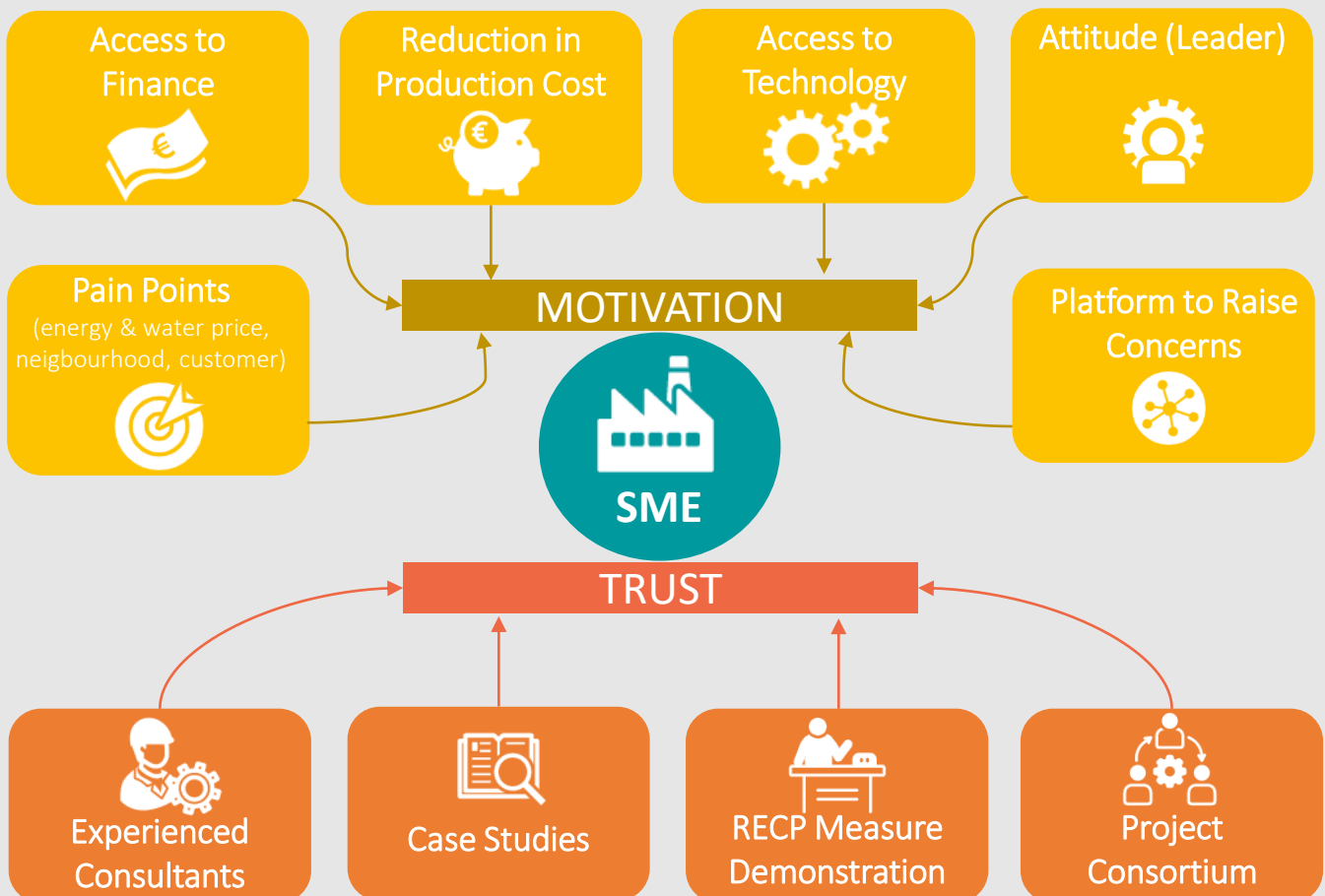
Summary

- Provide clear and streamlined templates for monitoring and evaluation
- Put into place clear communication and coordination mechanisms to enable quick decision making and problem solving
- Use a decentralized team structure and Whole Person Process Facilitation (WPPF) methodology to create ownership of the project across teams
- Target capacity building support and the development of action plans to specific country and team contexts and to fill gaps in skill sets to ensure timely and effective achievement of the project goals
- Build the capacity of a wider group of local consultants where turnover may be likely (i.e. for longer projects or nascent industries)

7. Summary and Outlook

The objective of scaling a successful project approach developed by ACIDLOOP in India into 3 additional geographies in METABUILD has increased the project knowledge, unveiled new good practices, and presented challenges that have been addressed as a project team. These learnings and good practices are presented in this report to encourage building on the knowledge obtained through this project in future efforts to support SMEs in RECP measures, or scale a successful approach into a multi-country, multi-partner, multi-stakeholder initiative.

The goal of METABUILD from the outset was to achieve sustainability in its approach in Bangladesh, Nepal and Sri Lanka, and to improve awareness and willingness of SMEs to adopt RECP measures within a supportive framework. The capacity building of local teams to support SMEs to do so is a key output of the project, and the anticipation that lessons learnt and good practices from the METABUILD project will be integrated into further work of these teams contributes to this sustainability.



SMEs will change their performance with regard to RECP if management and employees are willing to do so. This willingness depends on a certain mix of motivation and trust.

Motivation: Without a clear intrinsic motivation of participating SMEs, the actual impact of a project is doubtful. Even if RECP opportunities are identified, they are unlikely to get implemented.

Trust: The leadership and staff of SMEs need to trust in the RECP approach and the team recommending it thereby willing to share information, commit time, implement suggested measures and make changes in the management of resources.

Factors contributing to motivation



Pain Points: Directly impacting the SME operations, pain points such as high energy prices, low fresh water availability, neighbors impacted by pollution or customers demanding certain standards in production can be a key motivator for adopting RECP.



Access to Finance: Considering the limited access to financial resources both internally and externally, SMEs can be motivated through additional finance made available externally, with the exclusive objective to finance RECP.



Reduction in production cost: The competitiveness of SMEs depends upon the production cost per unit and determines the financial performance. Producing more with the same resource input increases profits thereby encouraging RECP implementation.



Access to technology: New, refined and adapted technologies can heavily influence production quantity as well as quality. RECP is one path for an SME to access new technologies which are being made available.



Attitude (leader): A clear commitment towards RECP from the SME owner or management communicated to all staff and workers will increase motivation thereby improving quality of output.



Platform to raise concerns: The availability of a platform such as an active local industry association, relevant chamber of commerce that addresses the overall requirements of its members would encourage SMEs to embrace RECP.

Factors contributing to trust



Experienced consultants: RECP is a people's business. SMEs will be willing to implement measures only if they trust the consultants to provide relevant and quality recommendations. Experienced consultants with good training in technical and management aspects will be able to gain trust.



Case studies: Case studies of very closely related SMEs from the same or similar sector, from the same country or region will serve as an example for other SMEs to follow. The case studies serve as examples set by peers and lead other SMEs to trust in RECP.



RECP measures demonstration: Direct demonstration of RECP measures in an SME that can be shown to other SMEs in the cluster or region is a strong element to create trust. Any demonstration which can be physically experienced leads to trust in the RECP approach.



Project consortium: An experienced consortium with maybe a mix of trusted national and international members will also bring trust to SMEs and furthermore transfer the trust instilled in them to consultants directly working with SMEs. A positive reputation leads to trust.

Way forward

For many years, RECP projects have focused on dozens of enterprises with SWITCH Asia as a whole; in particular with ACIDLOOP and METABUILD, a scale of dozens of enterprises has been achieved and replicated in different sectoral and country contexts. The next step is now to use a streamlined approach for thousands rather than hundreds of supported SMEs and thereby realize an even larger impact. To achieve this scale, several elements need to be put in place, during the design, implementation and post-project sustainability phase of future projects.



Project Design : what is needed?

- Reputed organization(s) that are willing to highlight the business case for RECP, can gain trust of SMEs and use existing links to mobilize industries to participate in RECP projects
- Trained teams and infrastructure (e.g. measuring equipment) either available with the implementing organization(s) or organizations willing to integrate trained teams and facilities in their mandate
- Identified peer leaders / associations who are committed to adopting and promoting RECP

In the implementation phase, following factors are needed. To obtain large impact, the one-to-one hand holding can be reduced for highly motivated medium sized industries having in-house personnel who can be trained on RECP. Building in-house RECP teams, cluster level learnings and Do-It-Yourself (DIY) tools could be used to shorten the time and resources required from consultants. For smaller industries with limited resources (e.g. to form an internal team), a certain amount of hand holding is required and means for long term support has to be planned for and secured.

Project Implementation : what is needed?

- Availability of RECP experts in the region
- Wide and continuous publicity of RECP services through industries, associations at relevant events
- Low-cost or no-cost recommendations for RECP; easy to use tools for self monitoring; initial rapid training of identified staff
- Cluster level lecture-demonstrations for more difficult recommendations using hired equipment at volunteer SME(s)
- Incentive schemes (legal or financial) and programs providing experience exchange, networking sessions on RECP related topics and further development of the topics to address future challenges
- Incentives for financial institutions, technology suppliers linking their sales strategies with existing finance schemes where feasible
- Installing local/cluster wise Expert Cell (equipped with basic measurement equipment) to support industries in their RECP activities and ensuring long term financing of their services
- Local level RECP websites with details of expert organizations, experts, infrastructure, project references and success stories

Project Sustainability : what is needed?

- Cluster and/or topic wise common RECP techniques – technical notes, DIY tips in phone app
- SME days at financial institutions for awareness creation and financial product improvement
- Cluster associations to host Expert Cells, partially subsidized by bigger industries (customers), municipalities and financial institutions to make their respective service affordable for smaller industries





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