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2 About this booklet

What can this booklet offer?

This booklet provides recommendations on how an SCP network for the textile and tannery sector in Pakistan should look like. It gives recommendations in terms of

- type of network for the goals it shall deliver
- initiating actor for the network
- financing structure
- stakeholder involvement.

The first part gives generic recommendations for an SCP network in Pakistan. The second part demonstrates, what the project consortium can deliver as part of the project „Sustainable and Cleaner Production in the manufacturing industries of Pakistan –SCI-Pak“.

What is the background for the recommendations?

The recommendations are based on the first part of the booklet it hand, titled “Best Practice Collection on SCP Networks”. In it, nine European and Asian SCP networks are analysed. Both booklets were prepared for the SCI-Pak which is operating under the SWITCH-Asia network facility.

The project aims to develop a model of sustainable production through the implementation of Energy- and Resource efficiency (E&RE) initiatives among small and medium-sized enterprises (SMEs) in the textile and tannery sector in Pakistan.

One activity of the project is the creation of a Sustainable Consumption and Production Network in Pakistan. The Network shall link SMEs of the manufacturing industries with stakeholders from financial institutions, universities, the government and consumers to exchange know-how and experiences, to build capacities and provide credits, respectively. The aim is to create a collaboration facility to foster multistakeholder dialogues towards SCP in Pakistan.

3 Recommendations for an SCP network in Pakistan

3.1 Potential goals of the Pakistani SCP network

Most important goals: SMEs in the textile and tannery sector could greatly benefit if they go beyond collaborating to reach one specific goal. The real opportunities lie in understanding why they should engage in SCP practices, identifying the potentials for improvement in their production processes, to learning about and getting access to technologies and behaviour changes that decrease energy and resource consumption in the production process. Looking at the **political, financial and technical framework conditions** that Pakistani SMEs in the textile and tannery sector face, it becomes clear that the SCP network should also facilitate the improvement of these conditions. Policy intervention should be improved in terms of enforcement and by using more supportive instead of regulatory instruments. Additional financing opportunities directly tailored to SMEs willing to increase their energy and resource efficiency should also be a goal of the network. Finally, the network should facilitate the transfer and development of technologies which are urgently needed to increase energy and resource efficiency of SMEs.

The “broad network” type is best suited to deliver these different and complex goals. The different goals that should be reached by the network correspond to those described in the “holistic approach” above.

3.2 Recommendations in terms of potential initiators

Who can initiate a network: Most SMEs in the textile and tannery sector in Pakistan are not aware of the concept of SCP and don't have sufficient knowledge on the benefits that can arise from increasing energy and resource efficiency. Against this background it is unlikely that SMEs will initiate an SCP network themselves.

Therefore, either the government of Pakistan or development cooperation agencies operating in Pakistan would be well suited to establish a Pakistani SCP network. The optimal case would be a cooperation between the domestic and the international parties, as it becomes clear when looking at the arguments below. As the network should broadly cover different aspects of sustainable consumption and production and not only focus on one narrow goal or joint project between the SMEs, they would also be the right actors to guarantee, that all relevant stakeholder groups would be invited and see a reason to join the network.

The government: The Pakistani government, in particular the Ministry of Commerce, the Ministry of Environment, the Ministry of Industries of Production and the Ministry of Labour as well as the Alternate Energy Development Board, the National Energy Conservation Centre (ENERCON), the Pakistan Environmental Protection Agency (Pak-EPA), Provincial EPAs, and the Small and Medium Enterprise Development Authority (SMEDA) should support the setting up of a network. In order to link the network to other international activities on energy and resource efficiency and to create synergies with other countries' efforts, development cooperation agencies would also be suited to initiate the Pakistani SCP network.

The Pakistani governmental ministries and agencies in cooperation with organisations working in the area of SCP should identify stakeholders from academia, NGOs as well as consultants who could support SMEs in terms of capacity building and technological questions and innovation. They should also establish the contact with other companies that provide material relevant to the production processes of SMEs like boilers or effluent

treatment facilities. The Pakistani government should also use its power to increase access to finance for SCP of the SMEs being part of the network by negotiating with financial institutions located in Pakistan like for example the SME Finance Department, the Pakistan Industrial Credit & Investment Corporation (PICIC), the SME BANK Pakistan, the Industrial Development Bank of Pakistan and the State bank of Pakistan (SBP).

Development cooperation agencies: Development cooperation agencies should establish links to international experts for SCP and companies providing technical equipment to increase energy and resource efficiency. In the case of Pakistan, most of the technology responsible for energy use in SMEs of the textile and tannery sector is imported from other countries. Together with the national government, development cooperation agencies should foster the transfer of established technologies from developed countries to Pakistan and learn from the experience of other Asian countries facing similar challenges like for example India. International agencies should also establish the contact to development banks, like the Asian Development Bank (ADB) or the World Bank in order to increase access to finance for SCP of SMEs in Pakistan. Development cooperation partners should also make efforts to link the Pakistani SCP network to the international network of established National Cleaner Production Centres and the follow up strategy of UNIDO and UNEP, the Resource Efficient and Cleaner Production (RECP) programme strategy. International agencies should also foster the link to buyers and consumers of the textile and tannery products produced by SMEs. By making buyers and consumers aware of production conditions in Pakistan, progressive SMEs can be rewarded through purchasing decisions. This link can best be made by using the instrument of labelling.

3.3 Recommendations for financing the network

Self-financing model no option for Pakistan: Establishing a network that will finance itself as seen in some of the case studies doesn't seem to be feasible in the case of Pakistan. First of all, the scope of the network should be much broader than in the OEBU or Hackefors Model Network described above. Secondly, the SMEs will need to understand and experience the business case for the network and improvements in energy and resource efficiency before they would be willing to pay for it.

Public funding: Governments and/or development cooperation agencies would need to finance the initial phase of the SCP network. Over time, as all stakeholders see the benefit of cooperating within the network, the network could partly or completely become financially independent over time. Similar to the example of National Cleaner Production Centres, a Pakistani ministry or agency could then host and continue the network. SMEs could also be asked to pay fees to certain support tools.

The Pakistani government should have a genuine interest in the network, as the network will support many goals that lie in the national interest, such as:

- increased international competitiveness of Pakistani SMEs due to more efficient production,
- decreased amounts of waste and waste water,
- decreasing needs for energy, which the government struggles in supplying,
- better economic performance of SMEs due to better capacities, new partnerships, innovative technologies, access to finance, and
- increased national know-how on SCP due to fruitful collaboration between SMEs, other companies and academia.

Development cooperation agencies have an interest in building local capacity in the area of SCP and to foster technology transfer and innovation. Strengthening Pakistani SMEs, technology providers and science are essential for fostering development and economic growth in general while keeping pressures on the environment as low as possible. A holistic SCP network also enables development cooperation agencies to interact with government bodies and influence Pakistani policy making in a way that supports sustainable development. When the network is established and running well, it is well suited to secure a long term impact even after the development cooperation ends.

3.4 Recommendations in terms of potential actors and members of the network and their roles

SMEs

SMEs of the textile and tannery sector should be the main target group of the network.

Their role is to interact with the other stakeholders to increase capacities, use technologies and access financing opportunities and to use the services and the support provided by the network.

Companies providing technology to SMEs

Companies providing technology to SMEs like local industrial equipment manufacturers (IEMs) but also manufacturers and sellers of that technology from countries other than Pakistan will be both, target group and provider of goods for the network at the same time.

Their role is to provide technology to increase energy and resource efficiency to SMEs. In some cases, especially for the local IEMs, this will mean that new technologies need to be developed which suit these needs. In the cases of foreign companies, this will mostly mean the transfer of technology.

Academia

Academia – universities and research institutes – should be targeted as a knowledge provider and multiplier.

Their role is to support research and development of new technologies on the one hand, and to offer training and learning courses on the topic of E&RE to their students and other stakeholders of the network on the other hand.

National governmental agencies/ministries

National governmental agencies and ministries be relevant for initiating and steering the network.

The Pakistani government has in the initial phase of the network the role to create the administrative structure, provide (parts of) the funding and bring the other stakeholders into the network.

After establishing the network, the government's role mainly lies in supporting SMEs in their efforts for energy and resource efficiency with related policy intervention. The services and programmes already offered by the Government of Pakistan should be incorporated and extended as part of the network activities. The ministries should also clearly display the regulation relevant to SMEs to increase transparency.

Development Cooperation Agencies

Similar to the national governmental agencies and ministries, development cooperation agencies should also engage in initiating and steering the network.

The role of development cooperation agencies in the initial phase of the network would also be to create the administrative structure, provide (parts of) the funding and bring the other stakeholders into the network, especially international ones. They should make sure that international lessons learnt, for example from the National Cleaner Production Centres, will be incorporated into the activities.

After establishing the network the agencies should continuously support steering the network and monitor its success. They should also offer or facilitate technology transfer from foreign companies, capacity building by offering courses and support the access to finance by if possible, providing funding directly or cooperating with development banks.

Civil Society

Civil Society and consumers should in some areas engage with the network.

The role of Civil Society Organisations (CSOs) that are already active in the field of energy and resource efficiency should engage in trainings. Consumers should be able to find information about the efforts made by SMEs to take them into account for their purchasing decisions. Consumers can support SMEs in developing new products which fulfil their needs whilst having a smaller environmental impact.

External Experts

External experts from Pakistan and foreign countries should support the network.

The role of external experts is to transfer knowledge and skills to SMEs and companies providing equipment to SMEs. Business and Industrial Associations (BIAs) should also take the role of external experts, where they have the appropriate capacities.

Financial sector

The financial sector should at least indirectly be part of the network.

The role of the financial sector is to support SMEs in becoming more energy and resource efficient by offering them the funding necessary for this. It is a task of the national government and international development cooperation agencies to convince financial institutions to offer attractive services to SMEs. In the optimal case, the institutions would directly display their services on the network website and offer information and support courses within the network activities.

3.5 Recommendations for tools to be used

Provision of information should be done in detail on the main issues of:

- Benefits of increasing energy and resource efficiency
- Technologies available for increasing E&RE
- Trainings, support and consultation offered for increasing E&RE
- Tools available for SMEs to improve their performance
- Financing available for increasing E&RE
- Policies related to E&RE
- Financing tools related to E&RE
- Labels available to demonstrate the commitment to customers

Consultation should be offered for SMEs to identify their specific technical opportunities for E&RE. They should also include training of the staff to increase their capacities.

Training should be one important aspect of the network and should be available for staff of SMEs but also for companies providing technologies, local authorities and academia. These trainings should be held locally to ensure that the target groups can easily reach them. Trainings should include demonstration and replication units. The trainings should also include sections on implementation methods.

Specific trainings to train the trainers should also be offered to ensure the dissemination and long-term continuation of E&RE.

Meetings on specific topics should be offered to

- Demonstrate the importance of E&RE
- Exchange experiences and learn from each other
- Jointly develop new (technical) solutions and discuss cooperation strategies (e.g for reusing waste)
- Link up with other international and national incentives.

Website which provides members and non-members of the network information on all the activities linked to the network and a platform for communication. The website should also inform foreign customers of the SMEs of their efforts to increase E&RE.

Collaborating online platform should be established to support the network members from the same regions to find each other and start collaboration and for members from Pakistan and external experts or customers to establish the contact.

Newsletter should be published four times a year to highlights the networks success and to inform about upcoming activities.

Marketing/PR should be done through publications and forums used by SMEs in the textile and tannery sector in Pakistan but also via word of mouth recommendation.

Network facilitation is essential to ensure the success and long-term effects of the network. "Self help groups" between local SMEs, technology supplies and academia should especially be strengthened.

Provision of best practices should be shown on the website and used to convince more stakeholders to join

the network. The demonstration of pilot cases in real life should also be used to convince others to become active. Additionally, the best practices should be used to expand the idea of E&RE beyond the textile and tannery sector.

Research, Development and Presentation should be supported by academia, SMEs, companies offering technologies and local and national authorities to foster the local technology innovation for SMEs in the longer term .

Monitoring of SME performance should be taken very seriously to secure the long-term success of the technology adaptation by the SMEs..

Monitoring of whole network process should be done by external experts to identify improvement opportunities and ensure that the funding is used efficiently.

4 Actions taken by the SCI-Pak project based on the recommendations

4.1 Goals of the Pakistani SCP network

The SCI-Pak project supports the holistic approach for increasing energy and resource efficiency in SMEs in the textile and tannery sector in Pakistan by various activities that will be linked with the SCP network. However, due to staff and financial limitations, it can only provide some aspects of the SCP-network recommended for Pakistan.

4.2 Initiators for the network

- The four consortium partners will initiate the SCP network for the Pakistani textile and tannery sector in form of a web portal, where information and actors are displayed and can interact with each other.
- The portal will provide subsections on
 - The E/RE challenges (Technology matrix): Challenges and solutions are demonstrated along the processing phase of the textile and leather products, IEMs can offer their technical solutions
 - Training: Courses offered by the institutions linked to the network, training material developed during the project or by other SWITCH Asia projects
 - Learning: Brochures, links, information material, interactive questions and answer space, material from other SWITCH Asia projects
 - Environmental labelling: Information on existing labels, on pros and cons, and on how to obtain them
 - Best Practice: Derived from the pilots of the project as well as other international ones
 - Interactive Match-making platform: Companies and knowledge/research providers can search for partners
 - Jobs: Section on offering internships/jobs etc.
 - Links to consumers and buyers: Information will be provided on how SMEs can present themselves on international platforms to potential customers highlighting their improvements in E/RE
- The consortium will try to engage the government of Pakistan or bilateral donors to support the building and extension of the network.

4.3 Financing the network

- Initial funding of the network will be provided as part of the SCI-Pak project. As the resources for the are very limited, the network will heavily use the web portal for its activities to keep costs low
- Services will be offered by including actors who are active in these fields:
 - Capacity building for SMEs will be offered by BIAs

- technology innovation and transfer will be supported by IEMs.
- An overview on possibilities for A2F will be presented by the project partners
- As soon as the network is established and the benefits have been shown to its members, a small membership fee will be applied. In addition to this, services to SMEs will be charged by the BIAs and IEMs offering them.
- In order to ensure that the network can still undertake activities after the project ends and extend its coverage, the consortium will try to find additional funding opportunities for example from international donors like the World Bank, UNEP, UNIDO, bilateral donors like development cooperation agencies, or national donors like the Government of Pakistan, business associations or banks.

4.4 Stakeholders of the network

The main target group are SME and Local industrial equipment manufacturers (IEMs) aspiring to implement energy and resource efficiency measures.

The network will as a second target group engage educational institutes, financial institutes, policy makers and government organizations to create a conducive environment for sustainable production in Pakistan. They can use the network to display information, offer services and get in touch with SMEs and IEMs.

The third target group are consumers of and retailers for Pakistani products, locally and internationally. They gain easy access to SMEs and IEMs in Pakistan and learn about their efforts to improve E&RE.

SMEs

- SMEs will find support on the topics of E&RE challenges and the corresponding SP solutions (with links to the IEMs providing these solutions (i.e. energy consumption, heat recovery, water recovery etc.)) as well as detailed technical and financial summary of previous successful implementations
- SMEs will find quantified pre- and post-project consumption figures (e.g. tonnes of steam per unit of product or percentage of chrome recovered) to highlight the impact of the initiatives
- SMEs will find information on Labels that aim to foster E&RE in the industries. The advantages, opportunities, requirements and challenges of different environmental standards will be presented which will lead to follow-up activities and projects that expand the dissemination of accredited Green Labels in Pakistan

Companies providing technology to SMEs

- Forward looking local industrial equipment manufacturers (IEMs) offering the solutions to energy and resource efficiency challenges will be able to display their available skills set, project references, and technologies they can provide for increasing E&RE for the targeted SMEs
- IEMs will be encouraged to create profiles for their companies and outline their equipment along with the costs, payback periods, and environmental pollution benchmarks, etc.
- For each technology, a reference business and financial summary, including payback period, return on investments etc., will be formulated

Academia

- Educational Institutes will be encouraged to make their orientation material prepared for students available on the portal which will include lecture slides, handouts, readings and assignments
- The educational institutes will be encouraged to offer additional introduction courses for other stakeholders of the network
- The list of energy and resource efficiency challenges on the web portal will help the institutes to find the areas of their interest for research
- The match-making section will help academia to network with the IEMs and SMEs working in that particular energy and resource efficiency challenges
- University students will find opportunities for internships in IEMs and SMEs

National governmental agencies/ministries

- Policy makers will be engaged in policy dialogues on the SCP network, environmental labelling, financial instruments and SME policy frameworks for E&RE initiatives
- The consortium will support to connect and network policy-makers with SMEs, business associations, IEMs, certification agencies and financial institutions and reach a consensus on policy reforms among the diverse stakeholders

Development Cooperation Agencies

- The German partners of the consortium will establish links to other international incentives for SCP, especially the Switch Asia programme
- The international partners will also try to approach international financial institutions

Civil Society

- International potential or existing customers interested in deepening or establishing cooperation with SMEs in Pakistan will be invited to visit the website

External Experts

- The consortium will support the SMEs by providing courses on their expertise
- BIAs will be able to offer tailored E&RE services to SMEs

Financial sector

- The orientation material on access to finance will be available on the portal, highlighting the existing financial instruments for energy and resource efficiency measures and the mechanisms to utilize them

4.5 Tools used by the network

The following tools will be used by the network and established by the consortium partners.

Provision of information

- Information on the network itself
- Information on the project, its partners and goals
- Information on other actors engaged in the network and relevant for E/RE
- Educational institutes will also display information on E&RE projects undertaken by them
- Financial Institutions will present information on the offer of financial products specifically targeting IEMs and SMEs
- Information for SMEs on the different green labels and on how to attain them will be presented
- Links to international CDM information will be provided.
- Policies relevant to SMEs will also be displayed on the website to provide easy access to information on regulation

Consultation

- Consultation will be done as on site visits to SMEs interested in participating in pilot projects, followed by technical analysis of the problems, and cost benefit analysis done in assistance with the IEMs. Experiences from these pilots initiatives will be available on the website

- After these activities are concluded, IEMs will be able to offer consultation

Training

- 2 training for Industrial Equipment Manufacturers (IEMs) will enable them to assess energy and resource optimisation opportunities and propose solutions and have the technical capabilities for this
- Training materials will be made available for other IEMs
- Training and general information on CDM will be made available
- Educational institutes will offer a regular orientation session and where possible, display courses which are open to external participants
- Financial institutions will provide technical assistance to IEMs and SMEs with regard to the most effective way to collect and prepare information needed when applying for credits and other financial products
- Business and Industrial Associations will present information on the range of capacity building services offered to IEMs and SMEs to increase capacities on how identify appropriate technologies, increase E&RE techniques and develop better disclosure before financial institutions

Meetings on specific topics

- Meetings will take place e.g. with BIAs, policy makers, financial institutions etc. During each of these meetings, topics relevant to E/RE will be discussed and the results will be placed on the website. When feasible, the meetings will already be announced on the website to recruit participants

Website

- The website will be in place to display the information and materials listed above

Collaborating online platform

- A collaborating online platform will not be directly part of the website. SMEs will find a selection of the best suited online platforms in Europe and elsewhere to present and sell their goods. A guideline on how to sign up for them will support SMEs in taking action

Newsletter

- A newsletter will be established when network has been running for a while. To make actors in Pakistan aware of the network, other news and dissemination activities will be taken

Marketing/PR

- Marketing/PR will be done to convince the stakeholders to become members of the network by all project partners. The partners will promote the network in all activities carried out within the project

Network Facilitation

- Network Facilitation will be done by enabling SMEs to easily access contacts of providers of information, training and equipment
- By offering a question and answer section, the website will provide a platform for joint learning and information sharing
- By providing concrete support for SMEs on registering on selling online-platforms the networking with international customers is supported
- A section for project financiers looking for potential CDM projects will be included
- Both European and Pakistani IEMs will display their available technologies on the website and explain the benefits of using them to attract SMEs as customers

Provision of best practices

- Provision of best practices will be done by placements on the website in the form of energy and resource efficiency challenges with technical and financial feasibilities along with environmental impact evolution. The potential E&RE measures that the SMEs can benefit from are demonstrated along with payback analysis
- Pilot projects will be displayed on the first area of the website to demonstrate benefits of using new technologies

Research, Development and Presentation

- Research, Development and Presentation will not be directly part of the network, but the match making section can assist members to find the right partners for those activities

Monitoring of SME performance

- Monitoring of SME performance is being developed for the pilots that will include detailed data collection and monitoring

Monitoring of whole network process

- Monitoring of whole network process will be done by an independent internal auditor in the 3rd year to assess the effectiveness of the network