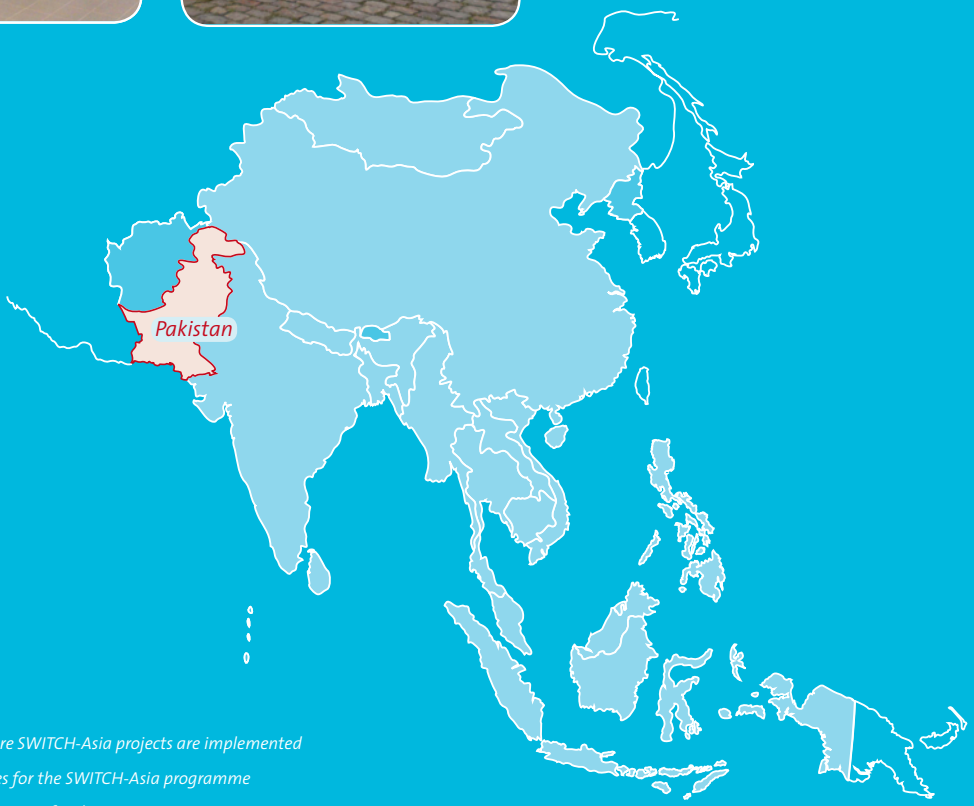
switchasia
NETWORK FACILITY

PROJECT PROGRESS SHEET

SUSTAINABLE AND CLEANER PRODUCTION IN THE MANUFACTURING INDUSTRIES OF PAKISTAN



Legend

Eligible countries where SWITCH-Asia projects are implemented

Eligible Asian countries for the SWITCH-Asia programme

Non-eligible Asian countries for the SWITCH-Asia Programme

Project implementation area

City

Region

Country

The boundaries shown on this map do not imply on the part of the European Union any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

BRIEF PROJECT DESCRIPTION

The specific objective of SCI-Pak is to develop a model for sustainable production (SP) through the implementation of a range of energy and 'resource efficiency' (E&RE) initiatives in the textile and tannery sectors in Pakistan, with the potential to adapt these initiatives to other manufacturing industries in the long-term.

The overall objectives encapsulating the core project challenges are to improve E&RE of the Pakistan textile and tannery industries along the process chain by increasing their technological capacity and know-how, to minimise Pakistan's contribution to greenhouse gas emissions and to enhance the share of renewable energy (RE) technologies, to widen the scope of SP at the local, national and international levels, to create an enabling environment for promoting SP amongst the targeted industrial sectors, and to strengthen links between EU and Pakistan research and industry from technology- to policy -level.

Resource conservation and minimisation of energy use are vital for companies seeking to be at the forefront of industrial and political progress, given the global impetus for minimising the impact on the climate whilst meeting the increasing demands of society and business. The move towards greater efficiencies thereby implies a concurrent development of technological capacity and expertise. Therefore the project seeks to strengthen target industries and associations by providing training, capacity and experience to enable sustainable and cleaner production processes. Greater capacity and know-how amongst the stakeholders must thereby be supported by an underlying policy structure assisting the development of an enabling environment in which SP initiatives can flourish. The integration of government departments and financial institutes (vertically), and industry associates and stakeholders (horizontally) should therefore reduce the country's climate impact - specifically regarding carbon release (cleaner production) – and increase the proportion of RE initiatives (sustainable production). The aim - to put SP initiatives at the forefront of manufacturing processes - requires the formation of international links between European businesses and organisations and Pakistani industries.

PROJECT PARTNERS

ttz Bremerhaven – TTZ, Germany; UNEP / Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP), Germany; Iqbal Hamid Trust (IHT), Pakistan; Cleaner Production Institute (CPI), Pakistan.

PROJECT IMPACT

The project is making an impact in whole of Pakistan.

PROJECT ABBREVIATION

SCI-Pak

PROJECT WEBSITE

http://www.sci-pak.org/

PROJECT DURATION

March 2009 - March 2012

TARGET GROUPS

- SMEs
  - Enterprises active in the textile processing and tannery sectors of Pakistan;
  - the sector in general, benefitting from an enabling environment that will lead to a greater number of SMEs adopting sustainable production technologies;
- Industrial equipment manufacturers (IEMs) i.e. boiler, water recycling and recovery plant manufacturers, etc., who will be trained to design and produce modern energy-efficient and resource-optimized machinery and equipment;
- Consumer organisations and groups: Pakistan Tanners Association, All Pakistan Textile Processing Mills Association;
- Government: Ministry of Environment (Pakistan).

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OUTPUTS TO DECEMBER 2009 TO BE SHARED WITH WIDER AUDIENCE

IEM Participants in Tannery workshop with the main speaker Mr. S. Booth (BLC, 3rd from right) at "Fischereihafen" in Bremerhaven.

Project website:
www.sci-pak.org

Microsoft Project based Project Plan
Omar M. Malik (IHT)

Technologies Identification Draft for Resource and Energy Efficiency in Textile Processing and Tanneries
Omar M. Malik (IHT)

Newspaper advertisements for identification of In-dustrial Equipment Manufacturers (IEMs) in Textile Processing and Tannery Sector
Omar M. Malik (IHT)

Project Poster for SWITCH-Asia Networking Event
Omar M. Malik (IHT)

Press Release for IEMs Training Workshop published in national newspapers
Omar M. Malik (IHT)

Training Material for Tannery IEMs
Omar M. Malik (IHT)

Report for Tannery IEMs Training Workshop
Omar M. Malik (IHT)

Course Contents for Educational Institutes
Omar M. Malik (IHT)

6 Case Studies for Dissemination
Omar M. Malik (IHT)

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RESULTS ACHIEVED TILL JANUARY 2010

HAS THE PROJECT ENGAGED WITH THE TARGET GROUP SUCCESSFULLY?

The project has identified IEMs, SME Associations, Financial Institutions, Universities, and Policy-makers as the project stakeholders. IEMs, SME Associations, and Universities have been engaged successfully during the first year of project.

To achieve the objective of technology transfer, advertisements in the national newspapers were placed to identify IEMs in both textile processing and tannery sectors. Responses were received and based on site visits and a carefully designed selection criteria, the project shortlisted 30 from a total of 125 IEMs. The training workshop for tannery sector IEMs was completed along with networking activities between local and European IEMs. Preparations for a Training Workshop of Textile Processing Sector IEMs is underway.

Six universities have been contacted to enable them to integrate sustainable technology courses in existing graduate programmes. Memorandum of understanding (MOU) agreements have been signed with two educational institutes, and experts are working to formalise the relationship with remaining institutes.

WHAT ARE THE DIRECT SUSTAINABILITY GAINS (I.E. LINKED TO ENVIRONMENT, SOCIAL AND ECONOMIC ASPECTS) SO FAR?

Sustainable Production Technologies Matrix, based on life-cycle assessment, hot spot analysis, technological capacity assessment of local IEM, have been developed. The technology matrix provides guiding principals for energy and resource conservation for the manufacturing sector of Pakistan and will be practically demonstrated through pilot initiatives (planned to be implemented during the second year of project). Technology transfer and networking activities have enabled local IEMs in the tannery sector to undertake sustainable production initiatives in the target industrial sector.

WHAT SCP REPLICATION MECHANISM THE PROJECT HAS BUILT, OR CONTRIBUTED TO AND HOW WAS IT DONE (E.G. THROUGH SERVICE PROVIDERS, VALUE CHAIN PARTNERSHIPS, BUSINESS PROVIDERS, FINANCIAL INSTITUTIONS)?

A Sustainable Production (SP) Technologies Matrix includes sustainable technologies of wider application and is an instrument to replicate project outcomes across all industrial sectors of Pakistan.

Capacity building of local IEMs aims to provide sustainability of the project outcomes. These IEMs (currently in the tannery sector) are now capable of marketing and implementing SP concepts in their target sectors. Moreover, the networking activity has enabled local IEMs to establish long-term relationships with European IEMs for technology transfer from Europe to Pakistan.

And finally, engagement of the educational institutes for integration of SP courses in current graduate programmes is another mechanism to replicate project outcomes. It is envisioned that graduates from these engineering universities will influence policy decisions for the application of advanced energy and resource efficiency (E&RE) techniques and technologies in the industrial sector after they join the technical workforce.

HOW DID YOU PLAY A ROLE IN UPDATE OF SCP POLICIES?

Policy instruments will be designed during the 2nd year of the project. All relevant stakeholders, to be engaged for policy dialogue, have been identified.

LESSONS LEARNT SO FAR

STRENGTHS:

- Logical sequence of actions to achieve project objectives
- Life-cycle assessment for hot spot analysis and preparation of SP technologies matrix at stepping stone for implementation of SP technologies in the industrial sector.
- Technology transfer initiatives for local IEMs and educational Institutes to ensure sustainability, extendaibility, and replication of project outcomes.

WEAKNESSES:

- Lack of flexibility in time frame and activities to counter external factors such as target groups' ability to respond quickly, e.g. visa restrictions on Pakistani IEMs travelling to Europe, and reluctance of European experts to travel to Pakistan.

PROBLEMS ENCOUNTERED:

- Slow responsiveness among project target groups due to bureaucratic and administrative bottlenecks.
- Lower level of understanding of SP technologies and associated environmental and economic benefits associated with these technologies among industrial associations and local industrial equipment manufacturers.

STAKEHOLDERS, PROVEN TO BE MORE IMPORTANT TO THE PROJECT THAN OTHERS

As envisioned earlier, IEMs have proved to be more important than other stakeholders due to their role to influence manufacturing practices and to ensure long-term sustainability and replication of project outcomes. Similarly, educational institutes have played a more important role.

DIFFICULTIES TO ACHIEVE/ESTABLISH LOCAL PARTICIPATION/OWNERSHIP IN THE PROJECT

The overall situation is satisfactory; the IEMs trained in SP technologies are willing to undertake implementation of these technologies through marketing and influencing manufacturers' decisions. The IEMs are motivated to implement SP technologies, which will be further strengthened by the design of policy and financial instruments and through dissemination of results of successful pilots on SP technologies across the industry for wider adaptation. Some of the SMEs have also shown their willingness to adapt SP technologies and processes for resource and energy conservation measures.

Educational institutes are willing to participate in technology transfer initiatives and are also willing to take ownership once relevant academic staff have been trained by the project on the use and application of SP technologies. The target academic personnel at participating educational institutes are enthusiastic and motivated to learn new concepts and are looking forward to transfer the knowledge to their students and peers.

OUTREACH AND SYNERGIES

BENEFITS FROM THE EXPERIENCES FROM OTHER PROJECTS

- Participation in the SWITCH-Asia conference in June 2009 in Kuala Lumpur opportunity to meet representatives of projects implemented in other parts of Asia and discuss aspects of project implementation regarding success stories, lessons learnt.
- Mr Gerhard Weber, Project Director Sequa GmbH (lead partner of RE-TIE project consortium) attended a training workshop for SCI-Pak Project IEMs in Germany in December 2009 ▶he delivered a presentation about the project ▶provided opportunity for networking with other SWITCH-Asia projects, enabling rich exchange of experiences for successful implementation of project activities.

POSSIBILITIES FOR EXTENSION AND REPLICATION

- Capacity building material was developed so it can easily be replicated in other Asian countries with similar characteristics in SMEs sector and structure (activities 4.1 "Booklet on SCP Networks & Setting up of SCP Networks"; 5.1. Two Management Navigators for financial institutions and business associations). Some sections present generic aspects of topics addressed (e.g. business case for SCP, European best practices); others are dedicated to include local information related to core issue (e.g. final recommendations).
- The SP technologies matrix includes sustainable technologies for industry-wide application and trained IEMs (currently in the tannery sector) capable of extending and replicating SP concepts in target sectors.
- Model for SP, developed as one of main outcomes of project activities, has potential for adaptation for other industries (e.g. sugar, pulp and paper, steel re-rolling, etc. ▶Identified and part of SCI-Paks dissemination campaign.
- Capacity building of participating educational institutes is another mechanism to replicate and extend outcomes. Graduates trained in SP technologies will be enabled to influence policy decisions for application of advanced E&RE techniques and technologies in industrial sector.

POLICY LINKAGES FORESEEN

A thorough review of policy instruments will be completed in the second year. It is envisioned that the project will establish policy linkages with public sector institutions, international stakeholders, SME Associations, and financial institutions, local and international.

GUARANTEE OF CONTINUITY OF PROJECT ACHIEVEMENTS AFTER END OF PROJECT LIFE-TIME

1. Integrated activities related to setting up SCP Networks (activities 4.1 and 4.2). One aim is to design a strategic plan for establishing future SCP networks for the target groups – with collaboration of public institutions and current local partners – IHT & CPI.
   A roadmap should be defined to support the implementation plan of the network.
2. An SP Network will be created to act as repository of project information and dissemination. It will include information on hot spot analysis, IEMs capacity assessments, E&RE technology matrix, business models for pilots, course material for SP.
3. The SP Network will be published on the project website and shared with SMEs, industrial associations, financial institutions, government agencies, international donors.

4. Indigenisation of E&RE technologies.
5. Enhanced capacity of IEMs to implement SP technologies.
6. Trained engineering graduates ▶ educate and influence manufacturers ▶ implementation of SP initiatives.
7. Business modelling of pilot initiatives instead of project funding.
8. An effective plan for stakeholder engagement will ensure sustainability, replication, and extendibility of outcomes after conclusion of activities.
9. Design of financial and policy instruments will make outcomes economically sustainable.

COOPERATION AND CONNECTIONS ESTABLISHED WITH OTHER ON-GOING PROJECTS:

- A list of projects on cleaner production conducted in Pakistan has been prepared and relevant stakeholders will be engaged in the second year of the project to share experiences and lessons learned.
- National Productivity Organization:
  A Government of Pakistan entity under the Ministry of Industries was contacted and meeting with NPO's regional director and senior consultant arranged. Project scope, activities and possibilities of cooperation were discussed. Both parties agreed to cooperate in the areas of course development, since NPO has experience in conducting energy efficiency and auditing courses.
- Mr Gerhard Weber Project Director of Re-Tie Bangladesh was invited to attend the training workshop for tannery sector IEMs and exchange the experiences and best practices with workshops participants. Areas of mutual interest were financial instrument being designed by SCI-Pak, nucleus approach of Re-tie, and measures identified for effective resource and energy conservation.

A linkage was made with the Textile Training Programme being undertaken by the Training and Development Center of Bavarian Employers' Associations (bfz gGmbH). Project partners are in contact with Mr Martin Strahle, and Mr Salahuddin Farrukh, and have exchanged knowledge on various topics.

AWARENESS OF PROJECT OF LOCAL POPULATION AND AUTHORITIES:

There are publications in national newspapers and development of project website aimed to promote initiatives developed within project and to enable flow of information to as wide an audience as possible in effective manner. News items about IEM Trainings have appeared in national press.

Meetings conducted with project target groups and stakeholders to appraise them of project activities. Target groups and stakeholders contacted so far include SME associations, IEMs, and educational institutes. Engagement of government bodies, remaining SME associations, financial institutions, and international stakeholders scheduled to take place during second year of project.

IEM Participants in Tannery workshop (held at TTZ Bremerhaven 14th-17th December 2009) with the speakers Mr JCrowther (SWYSTEM Logic GmbH; second from left), Mr Christian Zahler (Mirrox; 4th from the right) and Mr Gerhard Weber (Sequa GmbH; 2nd. From right) at BIO Nord building in Bremerhaven (6th from left: Mr GSchories; Technical Director of TTZ Institute for Water Energy and Landscape Management)