



Finding the Business Case for financing energy and resource efficiency in SMEs

A training for Pakistani Financial Institutions

Material for facilitators



- 1) Slide number x: Indication of what you have to do when using the slide. Each indication has a time constrain. However, in case of noticing that interesting debates are emerging, be flexible with the time restriction

(Content explanation)
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Guide for the Facilitator:

This column will always link the text on the left to the presentation slides given in the section "*Material for trainees*" by providing technical information as well as references for additional reading.

Slides X (indication of the content of the slide) (time needed/suggested)

1) Slide number 2: Please read it

Specific objective

To develop a model for Sustainable Production 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 (e.g. sugar, pulp & paper, steel rolling etc.)

Overall objectives

- To improve the Energy and Resource Efficiency (E&RE) of Pakistan textile and tannery industries along the complete process chain
- To increase the technological capacity and know-how of Pakistani textile and tannery industries and induce technical innovations for promoting the indigenisation of technologies
- To minimise Pakistan's contribution to Greenhouse Gas emissions and enhance the share of renewable energy technologies
- To widen the scope of Sustainable Production (SP) at the local, national and international levels
- To create an enabling environment for promoting Sustainable Production amongst the targeted industrial sectors
- To strengthen links between EU and Pakistan research and industry from the technology to the policy level

Guide for the Facilitator:

Slides 2 introduces the SCI-Pak project.
(5 minutes)

1) Slide number 3: Please read it

Manufacturing LCA and Local IEMs

Capacity Assessment Life Cycle Assessment of the manufacturing production chain Technological capacity assessment of the manufacturer

Transfer of Technology to local IEMs and Universities

Preparation of training material and coordination of European host facilities
Implementation of training and study tour programme for IEMs Preparation and enabling of educational institutes for integration of technological courses with IEM partnerships Implementation and monitoring of the IEM-research partnerships

Implementation of Pilot Initiatives

Creation of a sustainable production network

Best practice collection on Sustainable Production Network
Establishment and development of the Sustainable Production Network
Development of a web portal and database integrating the SP Network
Assessment of environmental standardisation potential and needs
Facilitation of links between the SMEs and EU Environmental Standards organizations
Monitoring and evaluation of the SP Network

Creation of an Enabling Environment

Guide for the Facilitator:

Slides 3 introduces the SCI-Pak main activities.
(5 minutes)

- 1) Slide number 3: Please read it

Policy Dialogue Best practice collection on effective SME policy frameworks in Europe Survey of current policy framework in Pakistan Stakeholder consultation for an effective policy framework Contact and integration of key policy organisations and governmental departments Development of new, and modification of, existing policy frameworks for enhancing SP initiatives

Dissemination Creation of a project website Development of specific dissemination methodologies and material Strategy for engaging multipliers and monitoring transfer of knowledge/multiplier effects Implementation of workshops, seminars and events to involve and inform multiple industries Development of a strategy for exploitation of the results at the national and international level Strategy for monitoring and sustaining the mid- to long-term outputs from the project

Guide for the Facilitator:

Slides 3 introduces the SCI-Pak main activities.
(5 minutes)

1) Slide 4: Describe the SCP-Network

SCP networks act as effective catalysts to increase E&RE in SMEs by facilitating capacity building, technology innovation and access to finance.

Networks support **capacity building** for E&RE. They provide information, training materials and contacts to institutions which support SMEs in building capacities. Networks help to find and understand solutions by engaging different members in discussions and encouraging the exchange of experiences, both successful and unsuccessful. Capacity building addresses processes within the production phase, but also activities to improve the use of products.

To address the issue of **technology innovation**, networks support SMEs to see and understand which technologies are needed, available or beneficial to develop. By bringing experts and different stakeholders from inside and outside the network together, technology innovation is fostered. With high levels of cooperation, networks themselves can develop important technologies for E&RE. By establishing a coordinated division of labour, partners can focus on their core activities and increase overall efficiency. Products can be optimised by jointly developing new designs and new value adding models.

Networks can also support SMEs in gaining **access to finance**. By providing information on financial services which are available for SMEs, they help overcome one main barrier. Additionally, networks can provide help and advice in meeting criteria of financial institutions which would otherwise be too challenging for SMEs. Finally, networks can establish a direct link between financial institutions and SMEs and create trust and cooperation.

Guide for the Facilitator:

Slide 4 introduces the SCP-Network.
(5 minutes)

1) Slide 5: Why should Financial Institutions join the SCP-Network?

To be completed

Guide for the Facilitator:

Slide 5 invites the attendees to join the SCP-Network.

(2 minutes)

- 1) Slide number 6: Please read it
- 2) Slide number 7: The road map can be explained based on the following (5 minutes):

Every financial institution, regardless its field of work or types of instruments and approaches used to operate, aims at adding value to their shareholders and increasing profits for the institution. One alternative to do so is to consider energy & resource efficiency (E&RE) as a field to focus on in order to achieve a profitable business case. the design and implementation of Integral Systems for Environmental Management (ISEM). ISEM is in fact a strategy to strengthen the business policy of financial institutions. ISEM is an alternative to rethink the business models of financial institutions when facing the challenges set by the current social and environmental crisis. Of course, financial institutions can only achieve the benefits of ISEM when strategies are integrated and applied, not only in their own operations, but also in the operations of their clients, namely the SMEs.

Thus, for financial institutions, the implementation of ISEM leads to a business case, which can be achieved by:

- Acknowledging the business potentials when doing business with sustainable SMEs
- Increasing the internal operational efficiency in the financial institution
- Integrating environmental risk management instruments to approach SMEs

In consequence, the recognition of the business case for E&RE by financial institutions leads the market system to enable the access to finances (A2F) for E&RE innovations in SMEs and therefore, increase the profitability of financial institutions.

Guide for the Facilitator:

Slides 6 presents the goal of the training (1 minute)

Slide 7 presents the road map of the training. Please hand it out among participants (3 minutes)

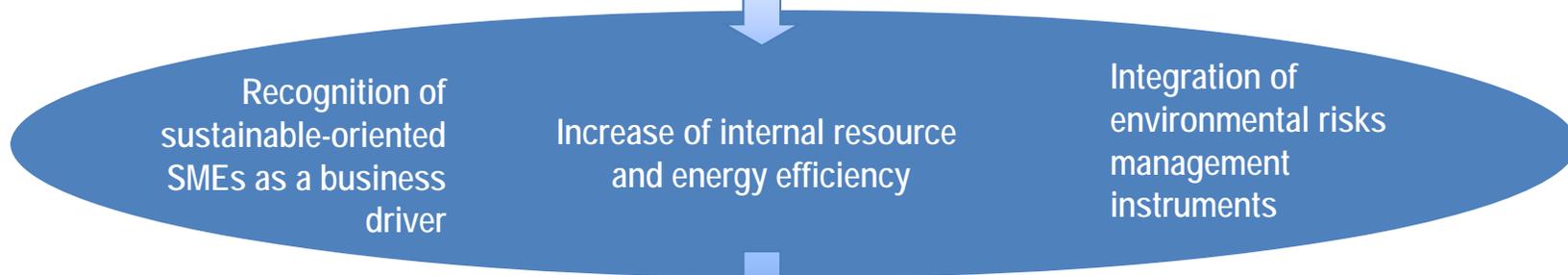


Goals of financial institutions:

Adding value to their shareholders and increasing profits



One alternative: Integral Systems for Environmental Management



The business case for E&RE (BC4ERE)



Access to finance (A2F) strategies and instruments

- 1) Slides 8 & 9: Please read the agenda

- 2) Ask each participant (no more than 10 minutes):
 - To introduce her/his institution and her/himself giving name and position
 - To quote shortly her/his expectations on the training
 - Highlight that the training is an opportunity for networking
 - Give a flash-back to the conclusions of the roundtable on policy initiatives to foster A2F for E&RE in Pakistan

Guide for the Facilitator:

Slide 8 and 9 introduce the agenda of the training

(2 minutes)

- 1) Hand out each definition and ask the participants to read them
- 2) Use additional 5 minutes to answer questions and clarify doubts from participants

Guide for the Facilitator:

Slide 10 introduces the range of concepts that will be used during the training

(10 minutes)



Resource Efficient and Cleaner Production (RECP)

continuously applies integrated and preventive strategies to processes, products and services. This increases efficiency and reduces risks to humans and the environment. RECP specifically works to advance: Production Efficiency: through optimization of productive use of natural resources (materials, energy, water) at all stages of the production cycle;

- Environmental Management: through minimization of the adverse impacts of industrial production systems on nature and the environment;
- Human development: through minimization of risks to people and communities,
- and support to their development.

Life Cycle Thinking, Life cycle is about going beyond the traditional focus on production site and manufacturing processes to include the environmental, social, and economic impact of a product over its entire life cycle, from cradle to grave. Hereby are taken into account all phases of the product lifecycle from its origin up to its end of life (e.g. raw materials extraction, transport, design and production, consumption, disposal).

UNEP, 2009

A2F means an absence of price and non-price barriers in the use of financial services and products. Non-price barriers can be for example: rigid criteria for conceding loans, exclusion of certain groups, etc.

Ganbold, 2008

Increasing Resource Efficiency (RE) at different stages

- A company can decrease energy and resource needs directly by reducing gas or oil consumption for machines and automobiles, heating and air-conditioning, and resources for manufacturing their products.
- SMEs can also decrease their energy and resource consumption indirectly by reducing the amount of products and services they use, like travel.
- Enterprises can foster efficient behaviour of their employees by increasing know how on RE, rewarding efficient and penalising inefficient behaviour.
- Companies can also switch to renewable sources

of energy and resources which grow back.

CSCP, 2010



1. Please read both slides

First module: Presenting the new Business Atmosphere for Financial Institutions

Guide for the Facilitator:

Slide 11 and 12 introduce the goal of the first module: Presenting the new business atmosphere for financial institutions

(1 Minute)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Slide 13: Get support from the following text

Why a BC4SCP for financial institutions?

As in every business, financial institutions also depend on the quality of the financial performance of their partners to achieve their goals. Thus, financial institutions can increase the possibility of doing business when three aspects are considered:

1. SMEs operating sustainably and striving for changes for sustainable innovations can be seen by financial institutions as potential business partners. They will better chances to expand their market share and revenues, decrease their operational costs and gain reputation. These factors opens opportunities for financial institutions to do business with such kind of enterprises.
2. Financial institutions need to manage their in-house environmental and social performance to be able to set standards for their clients externally. This is a requisite for maintaining credibility with clients. In addition, increasing the resource & energy efficiency of your institution can bring vast business benefits represented in a reduction of operational and management costs. It give financial institutions the opportunity to readjust their expected return on investment rate and therefore expand their business range with new clients.

Guide for the Facilitator:

Slide 13 explains what the business case for energy and resource efficiency is

(5 minutes)

Why a BC4SCP for financial institutions?

3. Financial institutions which assume and manage the risk of partnering with SMEs to promote SCP among their business can exercise considerable influence or control over investment and management decisions that could mean benefits for their own business.

The recognition of these three business drivers give financial institutions the opportunity to design business strategies for their portfolios, more tailored and accessible financial products & services, as well as the possibility of understanding stakeholders' interests in order to meet their expectations better.

Note for the trainer:

Guide for the Facilitator:

Slide 13 explains what the business case for energy and resource efficiency is

(5 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

1. Slide number 14: (to be completed)

how climate change and the unefficient use of resources lead to middle and long term economic failure? (to be completed)

The common environmental issues faced are:

- Pollution (waste, water, air),
- Use of chemicals and pesticides,
- Use of energy,
- Destruction of forest (brick-burning, charcoal production and wood logging)
- Destruction of soil

Guide for the Facilitator:

Slide 14 presents what environmental risks to business are

(10 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Slides, 15, 16, 17 and 18: Get support information from the texts below

From the perspective of banks, there can be different kinds of risk. A typical distinction is among: **Direct Risks, Indirect Risks, Reputational Risks**

Based on the story/example „*The leaning building*“ please explain what these three risks are. You can also support the explanation by using the following conceptual definitions:

Direct Risks: It is possible that banks are held directly responsible for the consequences environmental incidents. This, for example, can be the case when a bank decides to repossess a collateral after a borrower fails to meet his obligations and this collateral turns out to be contamination. The associated costs can exceed the nominal value of the collateral.

One option for the bank is to refuse taking over a contaminated collateral. However, as a consequence, the loan will not be secured anymore. Another way a bank can become directly responsible is through a “shadow directorship.” At times, especially during financial difficulties, banks may decide to take a leading role in the management of a company.

Guide for the Facilitator:

Slides 15, 16, 17 and 18 present the direct, indirect and reputational risks

Time: 20 minutes

Direct risks: .By taking a leading role, financial institutions hope to be able to secure a company's financial survival and thus avoid losing money. However, by taking a leading role, the responsibility linked to a management position may shift from the formal management in place to the de facto management role of the financial institution. As a consequence, banks may become liable for the company's actions, including its environmental risks. Another possibility is that a financial institution finances a piece of equipment or similar in such a way that it legally retains its ownership and is therefore assumed to be liable for its malfunctioning.

Indirect Risks: From the perspective of bank lending, funds are handed over to borrowers. Borrowers might be exposed to environmental risks and it is these environmental risks that can have a detrimental impact upon:

- the borrower's ability to pay back a loan, and/or
- on the value of the collateral or guarantee.

In these cases, environmental risks will have an indirect impact on the lending bank as they impact the bank via their clients. Indirect risks are far more common and far more important than direct environmental risks.

Guide for the Facilitator:

Slide 15, 16, 17 and 18 present the direct, indirect and reputational risks

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Reputational Risks: A third kind of risk exists: reputational risks. Banks are increasingly identified with the kind of businesses or projects they help to finance.

While the legal responsibility might be with the management or the shareholders of the borrower, stakeholders increasingly consider the financing of environmentally harmful businesses or projects as illegitimate.

Guide for the Facilitator:

Slide 15, 16, 17 and 18 present the direct, indirect and reputational risks

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Use this story to exemplify the different environmental risks

The leaning building (1)

In Ubatuba/Brazil in 2002 a constructor wanted to initiate a project in a region nearby Sao Paulo. The project comprised a building composed of 15 apartments. The constructor approached a local bank, in order to arrange two credit lines: one for itself to finance the early stage of the construction and the other for the future buyers of the apartments. The bank just demanded from the constructor the financial statements and project track in order to close the business. The project started and ended in May 2003. 40% of the apartments were already sold by the date. In August 2003 the structure lent over as the picture shows...

Due to the situation, a local judge ordered the constructor to pay back the buyers the value of the contract plus a compensation. The Ministry of Housing investigated the case and found out that the constructor did not follow the local regulation regarding the physical characteristics of terrains, over which new projects could be developed. At the end of the day, the bank not only lost over US 1,7 Million, but also its reputation and credibility in the sector devanished (*do not mention this underlined issue right now. The next slide will hint some questions where participants should derive this conclusion*).

Guide for the Facilitator:

Slide 15, 16, 17 and 18 present the direct, indirect and reputational risks

The leaning building (2)

Internally the bank also found out critical issues interlany that led to the problem:

- The credit anylsis department in charge of analysing the characteristics of the project did not have a policy to analyse and evaluate the physical conditions of the field, the types of materials that the constructor was going to work with.
- None of the people working for the department visited the terrain where the building was set up. When the investigations of the Ministry of Housing were carried out it turned out that the terrain was the former dumping field of the city in the 60s.
- The department ignored or overlooked the law of „territory ordering“ that had enacted the impossibility of developing any kind of construction projects without previous permit.

Conclusions:

Help participants derive some conclusions by asking them:

- What direct risks came up for the bank due to the case?
- What indirect risks might have happened if the building would have been inhabited when the leaning occurred?
- What reputational risks can you identify?

Guide for the Facilitator:

Slide 15, 16, 17 and 18 present the direct, indirect and reputational risks

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Unsustainable issues affect the operational and financial performance of SMEs. They represent risks for financial institutions, for instance:

- A private fund invests in a piece of equipment or similar in such a way that it legally retains its ownership and is therefore assumed to be liable for its malfunctioning (**direct risk**)
- Environmental problems can lead to a borrower being less economically successful and consequently unable to accomplish its pay-back duties (**indirect risk**)
- Rejecting or disregarding environmental-directed investment initiatives from the portfolio of services of the financial institution can be frowned upon by different stakeholders (**reputational risk**). Financing resource efficiency can be used by the financial institution as a communicational instrument towards stakeholders in order to improve its image and reputation.

Challenge: It is still difficult to understand how improvements of environmental efficiency in SMEs affect positively the business of financial institutions. It may be attributable to a combination of factors, including the high cost of obtaining appropriate environmental information and the lack of analytical tools.

Guide for the Facilitator:

Slide 15, 16, 17 and 18 present the direct, indirect and reputational risks



Some comments from European Financial Institutions...

“We reduce our credit risks, realize new opportunities, cut our costs, strengthen our reputation in the financial markets. For instance, by shutting down computers at times when they were not in use and by utilizing new generation computers with flatscreens, which shut down automatically at night, 1,660,99 kWh corresponding to Euro 200,000 in 2004 was saved. This constitutes a saving of Euro 2,55 million in energy costs that otherwise would have paid for 17,000 computers with running time of 3.5 years.” **HypoVereinsbank in Germany**

Banesto continued to install systems to reduce consumption. In 2004,, there were used in 144 workplaces. Consumption was cut by 15%. The reduction in electricity consumption was 4% over 2003, 10% in water and 17% in paper. Consumption of toners was 20% lower. **Santander Group in Spain**

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Read the slide and ask the participants whether they agree with the responsibility falling over the shoulders of the financial sector to achieve a green economy state

Guide for the Facilitator:

Slide 19 presents the evolution of the financial sector towards a green economy

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

1) Explain what the Equator Principles are:

The Equator Principles (EPs) are a voluntary set of standards for determining, assessing and managing social and environmental risk in project financing. The EPs are considered the financial industry 'gold standard' for sustainable project finance.

The EPs are intended to serve as a common baseline and framework for the implementation by each adopting institution of its own internal social and environmental policies, procedures and standards related to its project financing activities.

Equator Principles Financial Institutions (EPFIs) commit to not providing loans to projects where the borrower will not or is unable to comply with their respective social and environmental policies and procedures that implement the EPs. The EPs apply to all new project financings globally with total project capital costs of US\$ 10 million or more** (comment above in the following slide), and across all industry sectors. In addition, while the EPs are

not intended to be applied

retroactively, EPFIs will apply them to

expansion or upgrade of an existing facility where changes in scale or scope may create significant environmental and/or social impacts, or significantly change the nature or degree of an existing impact.

The EPs also extend to project finance advisory activities. In these cases, EPFIs commit to make the client aware of the content, application and benefits of applying the Principles to the anticipated project, and request that the client communicate to the EPFI its intention to adhere to the requirements of the EPs when subsequently seeking financing.

The adopting EPFIs view the EPs as a financial industry benchmark for developing individual, internal social and environmental policies, procedures and practices. As with all internal policies, these Principles do not create any rights in, or liability to, any person, public or private.

Institutions are adopting and implementing the EPs voluntarily and independently, without reliance on or recourse to International Finance Corporation or the World Bank. The Equator Principles in full can be found

at: http://www.equator-principles.com/documents/Equator_Principles.pdf

Guide for the Facilitator:

Slide 20 presents the Equator Principles

(15 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

2) Remark that, even though the Eps were designed *“to all new project financings globally with total project capital costs of US\$ 10 million or more, and across all industry sectors. In addition, while the EPs are not intended to be applied retroactively, EPFIs will apply them to all project financings covering expansion or upgrade of an existing facility where changes in scale or scope may create significant environmental and/or social impacts, or significantly change the nature or degree of an existing impact.”*, the important message for financial institutions is the philosophy behind them. The rationale behind the Eps can be applied for loan or project finance-based application at small-scale.

3) Read the principles posted in slide 20. Indicate that those highlighted in red have a major opportunity to be developed internally within the financial institution (e.g. By developing a sustainability policy) and therefore to be applied in SMEs.

Guide for the Facilitator:

Slide 20 presents the Equator Principles

(15 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Indications for a World Cafe:

Part I -60 minutes- Discussing the issues: This exercise will be conducted in form of a world cafe. The participants are encouraged to have a seat on one of the 5 group tables. Personal affinity to the topic is from minor importance as participants are going to move tables during this session. Each table presents one environmental risks drawn from the story „the leaning building”, whereas participants have to discuss on different strategies they would develop in order to avoid or overcome such risks:

1st table: In year 1 you lent US\$ 2 Million to a SME producing textiles, which in year 2 polluted ist neighbour river due to an unappropriated development of production processes

2nd table: A SME declares default because the cost of repairing the environmental externalities of its activity are higher than ist future cash-flow

3rd table: A bank decides to repossess a collateral after a SME fails to meet his obligations and this collateral turns out to be contaminated.

4th group: A bank lent money to a SME, which employees child manpower

Participants are encouraged to both listen and talk, and not edit their thinking or to worry about saying the ‘correct’ thing. There are two kinds of persons sitting together:

- Travellers** swap tables, taking ideas to a new group. They link and connect ideas coming from their previous table conversations—listening carefully and building on each other's contributions.

- Permanent Table hosts** remains at each table when others leave and welcome new guests from other tables and briefly share the main ideas, themes and questions of the initial conversation. (Should be selected in advance). Each table session should last 15 minutes. As the ideas move about the room, they bear fruit in unexpected ways and networks are both bolstered or established and knowledge is shared. Remember that participants should be able to have a look to the barriers, developed during the challenging session – making sure that the developed solutions are addressing their barriers efficiently. Each group is supposed to create a flip-chart that visualizes their findings – they should try to write down as much suggestions as possible-.

Guide for the Facilitator:

Slide 21 presents the exercise “displaying risks, recognizing opportunities”

(75 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

Part III – 50 min – Presenting the results (10min for each table)

After every traveller has at least set at every table, discoveries and insights will be shared. The people sitting at the table when the session closes will present their key findings with the help of the drawn flip chart. The facilitator collected the outcome from this session and put all results into an 'idea store'.

Part IV – 30 min - Discussion

A group discussion should enable participants to share results, opinions and open questions.

Materials:

- 5 group tables tapped with Flip-chart paper
- Sheets for each table highlighting the key questions discussion should move around (table below)
- Flip charts/ Facility to pin up the charts for the presentations
- Enough pens for everyone (thick ones – to be able to read what has been written down during the presentations)

Guide for the Facilitator:

Slide 21 presents the exercise “displaying risks, recognizing opportunities”

Finding the Business Case for financing energy and resource efficiency in SMEs: Presenting the new business atmosphere for financial institutions

When reporting the conclusions of the discussion, the facilitator can read the bubbles of slide 20 and add these ones:

- Managing risk on financial products and services provided in order to avoid losses
- Giving high priority to shareholder/member value by focusing the Fis' strategic objectives on raising productivity, efficiency and profitability
- Segregating the organisation into autonomous business units and channels in order to maximise productivity, efficiency and individual profit contribution
- Reorganising the branch network and reducing low margin services to cut costs and improve profitability
- Key positioning of IT systems in many aspects of banking (e.g. risk assessment and product distribution and outreach)

Guide for the Facilitator:

Slide 22 presents the conclusions of exercise “displaying risks, recognizing opportunities”

(5 minutes)

Second module: Integral System for Environmental Risk Management

Guide for the Facilitator:

Slide 23 introduces the second module

Slide 24: Please read it

Guide for the Facilitator:

Slide 24 presents the different strategies that a financial institution can adopt to manage environmental risk

2 minutes)

Slides 25 to 29: Get support information from the information below

Risk-adjusted pricing:

Banks are used to dealing with risks as all bank lending decisions are usually exposed to some degree of risk. Banks face the challenge to price loans accordingly. The agreed interest on a loan consists of many different components. The most important components are:

- The risk-free rate of interest
- Other costs
- Profit margin
- Expected net loss (on a portfolio level)
- Unexpected loss (on a portfolio level)

The risk-free rate reflects the time value of money. It is commonly assumed that investors prefer to have money sooner rather than later and the risk-free rate reflects this preference. Banks must obviously cover the costs (other than the costs for refinancing) that are linked to the lending decision. Additionally, banks usually aim to make a profit, which is reflected by the profit margin. Environmental risks can have an influence on the two components:

- Expected net loss (on a portfolio level)
- Unexpected loss (on a portfolio level)

Banks know that some of their loans will not be paid back in full. Put differently, they expect to lose some money. The amount of money they expect to lose must be priced in. Strictly speaking, this does not constitute a risk from the point of view of the bank. This is once again linked to the differentiation between systematic and unsystematic risks.

A bank that knows that it will lose one percent on average of the loans it gives out due to environmental reason will add one percent to the interest it agrees with its borrowers. It is unimportant in this context, if each particular loan loses one percent or if the loan portfolio in total loses one percent. However, some environmental aspects have a systematic nature and environmental risks can therefore not be diversified away entirely.

Guide for the Facilitator:

Slide 25 presents “Risk-adjusted pricing” strategy

(5 minutes)

As a consequence, the performance of the loan portfolio cannot be predicted with certainty; there is a risk that there might be unexpected losses. Even if banks do diversify, they are still exposed to this systematic risk. It is commonly assumed that banks, just like investors, are adverse to risk. Banks will therefore demand to be compensated for taking on this risk. This risk will come about whenever there are systematic environmental risks. Environmental risks can be linked to two out of the five components mentioned above.

Pricing risks correctly into lending decisions is at the same time crucial and notoriously difficult. It is important to understand that environmental risks can impact credit pricing in two very different ways. Risk-adjusted pricing must on the one hand price in expected losses, i.e., the amount of money the banks expects to lose on average. This can be done for each loan in isolation. Risk-adjusted pricing, on the other hand, must consider the amount of non-diversifiable risk that a loan adds to the loan portfolio of the bank. This is notoriously difficult to do.

The analysis of loan applications can thus be done both by looking at individual loan applications as well as by an analysis of the loan portfolio. It is important to note that risk-adjusted pricing of loans does not reduce the actual amount of environmental risk. However, by giving the corresponding price signals, banks can contribute to making sure that companies get the right incentive to reduce environmental risks.

Guide for the Facilitator:

Slide 25 explains the Risk-adjusted pricing strategy

(2 minutes)

Monitoring

In some cases, environmental risks will develop over time. By reacting timely to an upcoming threat, a bank's environmental exposure to environmental risks can be reduced. It can, for example, be useful to check regularly if a borrower who exerts an environmentally sensitive activity still complies with all relevant rules and regulations after the loan has initially been approved.

Guide for the Facilitator:

Slide 26 explains the Monitoring strategy

(2 minutes)

Covenants

In principle, loans can be approved subject to terms and conditions. These terms and conditions are usually called covenants and can cover environmental aspects. It is for example possible that a bank will demand that a borrower trains his personnel with respect to environmental risks. Covenants are a way for banks to help reduce environmental risks.

Guide for the Facilitator:

Slide 27 explains the Covenants strategy

(2 minutes)

Portfolio optimisation

As mentioned earlier, we can distinguish between systematic and unsystematic environmental risks. Unsystematic environmental risks can be diversified. As a result, they become expected net losses on a portfolio level. Systematic risks, on the other hand, cannot be diversified away as this is usually due to characteristics that all portfolio elements share. All companies use, for example, energy. An increase in energy prices will result in higher costs for all companies thus leading to a higher rate of energy price volatility. This situation will subsequently lead to a higher systematic risk for the entire portfolio. This risk can be dealt with both on an individual as well as on a portfolio level. One possibility is to do a portfolio analysis of environmental risks. This portfolio analysis will identify the key environmental characteristics of the environmental risks that an entire portfolio has been exposed to.

Guide for the Facilitator:

Slide 28 explains the Portfolio optimisation strategy

(2 minutes)

Refusal of loan

Another possibility for banks is to not grant a loan in response to environmental risks. Obviously, this is something that cannot be done every time there is a risk as most loans are subject to at least some risk. Not granting a loan is an option whenever risk-adjusted pricing cannot be practised.

Guide for the Facilitator:

Slide 29 explains the Refusal of Loan strategy

(2 minutes)

Rating approach

Environmental ratings can be used to answer the following questions:

- How green or sustainable is the company?
- How likely is it that a collateral is contaminated?
- How likely is it that a company will not be able to meet its financial obligations due to environmental reasons?

Ratings are conducted in many different ways:

1. Sub-grouping: For instance: Product – Process –Management
2. Sector-Activity specific or Eco-Ratings

Guide for the Facilitator:

Slide 29 explains the Rating approach

Please refer to section 3 of the booklet “Environmental Risk Scan”

(2 minutes)

Rating approach

When presenting the different Eco-Rating companies in the slide 29, stress out that the information can be relevant not only to benchmark the internal way of getting and analysing data in the financial institution, but also to encourage the cooperative work with organisations such as business associations, in order to co-establish a system of data collection and rating

Guide for the Facilitator:

Slide 30 and 31 presents different Eco-Rating Agencies

(2 minutes)

Screening approach

They include or exclude possible investments based on a list of predefined inclusionary or exclusionary criteria.

To really avoid the involvement of a bank with a particular activity, it is necessary to also consider different levels of the activity's lifecycle. For instance, to produce arms, input materials are required. It could be argued that involvement with a supplier producing input materials needed for arms production constitutes an involvement in the production of arms.

Screening approaches are especially useful when a bank needs to reduce its involvement with a particular sector or activity at any cost. This is especially the case when there are reputational risks at stake.

Guide for the Facilitator:

Slide 32 presents the screening approach

(2 minutes)

Integrated analysis approach

They include or exclude possible investments based on a list of predefined inclusionary or exclusionary criteria.

To really avoid the involvement of a bank with a particular activity, it is necessary to also consider different levels of the activity's lifecycle. For instance, to produce arms, input materials are required. It could be argued that involvement with a supplier producing input materials needed for arms production constitutes an involvement in the production of arms.

Screening approaches are especially useful when a bank needs to reduce its involvement with a particular sector or activity at any cost. This is especially the case when there are reputational risks at stake.

Guide for the Facilitator:

Slide 33 presents the Integrated analysis approach

(2 minutes)

Staggered approach

Once a borrower has been identified as being environmentally sensitive, different possibilities exist. Most lenders will, as a result, analyse the environmental risks in greater detail. The idea is to adjust costs and efforts according to the exposure of the borrower to environmental risks. Further steps can encompass among others:

- Demand of additional information (e.g via questionnaires)
- Commissioning of external rating reports
- Commissioning of external auditors
- Insurance of credit risks
- Covenants

How financial institutions will deal with environmental risks in such a staggered approach will depend to a large degree on the financial institution's policies on environmental risks.

Guide for the Facilitator:

Slide 34 presents the staggered approach

(2 minutes)

Company specific information sources

To assess the environmental risk of a potential borrower, financial institutions must of course gather information about the borrower. Some of the information sources typically used by financial institutions are:

- Many financial institutions use questionnaires to gather information. Typically, these questionnaires are sector- or activity-specific based on sector information.
- Some companies publish environmental or sustainability reports or similar. However, this applies mostly to large companies and a lack of standardization makes interpretation difficult.
- Some companies use processes that require special permits. By checking in specialised databases to see if the companies have applied for these permits, financial institutions can subsequently check to see if the companies undertake activities that could be linked to environmental risks.
- Another source of information are media sources
- Collaterals play an important role in environmental risk assessment of financial institutions. Land registry offices are an important source of information in this context. By finding out more information about the current and previous owner of a piece of land, the probability and kind of possible contamination can be assessed more easily.

Guide for the Facilitator:

Slide 35 presents the information sources useful to financial institutions

(2 minutes)

Organising for Environmental Risk Management Strategies

To be filled out later

Guide for the Facilitator:

Slide 36 presents the information sources useful to financial institutions

(2 minutes)

Organising for Environmental Risk Management Strategies

To be filled out later

Guide for the Facilitator:

Slide 36 presents the information sources useful to financial institutions

(2 minutes)

Organising for Environmental Risk Management Strategies

To be filled out later

Guide for the Facilitator:

Slide 36 presents the information sources useful to financial institutions

(2 minutes)

- Indications:
- Build groups of no more than 5 people.
 - Hand out the Loan Application Case of the company “Textiles for all!”
 - Ask the groups to analyse the form application and analyse it with regard to the

following issues:

Policy concerns

What kinds of environmental risks can you identify when analysing the borrowers’ operation?

What kind of environmental risks are there in the loan application? Are they direct, indirect or reputational risks?

How will you treat and deal with these risks`

- The options are:
- Refuse to loan money
 - Do risk-adjusted pricing
 - Ask for collaterals or guarantees to reduce the economic risks
 - Lending subject to terms and conditions, which ones?
 - Monitoring of environmental risk
 - What can your financial institution do with bad environmental risks?

Implementation issues

Sample issues related to refusing lend money:

- Can we screen out the sector?

Sample issues related to risk-adjusted pricing:

- What is your competitive environment, e.g can you set a higher interest rate?
- Are you able to price the environmental risk?

Sample issues related to collaterals and guarantees:

- Is there a link between the environmental risk of the process of the borrower and the collaterals/guarantee
- Which ones? How safe are the collaterals? Can you enforce guarantees and collaterals?

Sample issues related to lending subject to terms and conditions:

- What kind of term or conditions would you impose?

Sample issues related to monitoring:

Guide for the Facilitator:

Slide 37 and 38 present the exercise “Formulating the Environmental Risk Management Framework”

(60 minutes)

Objective: This action provides the opportunity to carefully examine and analyse the issues and questions that are likely to be raised when discussing the Environmental Risk Management concerns. Thus, this action is designed to define and understand the potential problems and issues that should be anticipated when the ERM group discusses with senior management executives, the financial institution’s clients, and stakeholders.

Internal Environmental Management System (IEMS) deals with the environmental impact of internal or in-house operational aspects. These impact can also be mentioned as “direct” impact. Significant direct environmental impact is primarily associated with internal operational activities. These include: heating and lighting in buildings, transport of employees and materials, waste in all its forms, purchasing of goods and services, and use of resources such as energy, paper and water.

Guide for the Facilitator:

Slide 39 presents the majors on “Internal Environmental Management Systems”

Having a systematic approach to the environmental management of your internal business activities can bring vast business benefits. These tangible and intangible gains can be summarized as follows:

List of benefits (please redo this graphic)



Financial Benefits

Oftentimes, improving energy and resource efficiency of materials will result in cost savings. Some of these savings are apparent right away and will reduce operational costs almost immediately. Other savings are often dismissed as miniscule and ignored but in actuality can add up to a significant amount. The twin component of improving efficiency of materials is the reduction of waste. The idea is simple: using fewer resources and minimising waste translates to cost savings. Incorporating energy and material-efficiency into the business culture can have powerful secondary effects. As the practice of saving and reusing resources takes hold with employees, the resultant financial benefits are bound to grow. These benefits are tangible. Another increasingly important aspect of introducing environment- friendly policies to your institution is the pre-emptive effect of lower future compliance costs with local, regional, national and international regulations. Anticipating these costs early and taking action to prevent them can result in a significant cost advantage. Moreover, several studies have found that environmental stewardship is connected to better financial performance.

Guide for the Facilitator:

Slide 40 presents the reasons why financial institutions should adopt Internal Environmental Management Systems

Reputational and Image Benefits

Reputation and image belong to the intangible value drivers. Strengthening these can go a long way towards advancing your bank's competitive advantage, which will turn into positive improvements in the bottom line. There are many ways to let the public know about your institution's efforts to enhance its social and environmental standing. You will read about these in this book. The box below provides some examples of how banks view their role and their image.

Workplace Benefits

Securing a safe and healthy work environment for employees is an obligation of all employers. By eliminating environmental pollutants and decreasing the amount of waste processed, the employer is able to protect its employees. A healthy and an environmentally sound work environment will improve employees' perception of your bank.

Environmental and Ecological Benefits

Environmental well-being is an intangible value driver. Preserving ecological resources might have innumerable positive benefits on many societal levels – to society as a whole, to external shareholders and partners of your corporation, the local community, and to individuals as well. The benefits for the local community or the city quarter may be obvious. You might lessen the negative contributions of your offices to local environmental problems such as air pollution, water scarcity, or an increase in municipal and electronic waste.

Guide for the Facilitator:

Slide 40 presents the reasons why financial institutions should adopt Internal Environmental Management Systems

Hand-out the following chart

Please redo this chart

TYPE OF ASSET	WHICH TANGIBLE AND INTANGIBLE ASSETS OF YOUR BANK WILL BENEFIT FROM THE IEMS ACTIONS?	<input type="checkbox"/> YES OR <input type="checkbox"/> NO	COMMENTS
TANGIBLE	<i>Profitability through revenue growth</i>		
	<i>Profitability through cost reduction</i>		
	<i>Better asset utilisation</i>		
INTANGIBLE	<i>Higher service level</i>		
	<i>Improved customer relationships</i>		
	<i>Brand equity and reputation</i>		
	<i>Business continuity</i>		
	<i>Alliances and partnership</i>		
	<i>Technology and other know-how</i>		

Guide for the Facilitator:

Slide 41 presents the exercise on Internal Environmental Management Systems

(15 minutes)

Please read the bullets

Guide for the Facilitator:

Slide 42 presents steps to adopt Internal Environmental Management Systems

(2 minutes)

Defining Priorities and Policy Development

An environmental policy is a set of fundamental principles and goals which helps a company put its environmental commitment into practice. It is the foundation upon which improvement of environmental performance and an internal environmental management system (IEMS) can be built.

With a company policy you can demonstrate to your customers your institutions' commitment to environmental management and maintain good public/community relations. Furthermore, you can improve cost control, conserve raw materials and energy, and also reduce incidents that result in liability.

1) Set-up a team

2) How to write an environmental policy?

It must be appropriate to the nature and scale of the organisation's activities, products, and services. It must include a commitment to continual improvement, pollution prevention, and compliance with relevant environmental legislation and regulations. It should concentrate on the priority environmental issues. It should also contain realistic statements on what environmental improvements the organisation would like to. Another possibility is to develop a separate policy statement on your institution's environmental policies. Being a responsible institution and a good corporate citizen that respects human rights and the environment is a non-negotiable business principle. Another option is not only incorporating general language about environmental stewardship into the policy but actually specifying what this means for the organisation. This is the approach taken by leaders in the field like HSBC. The bank's policy outlines certain international agreements that it uses to judge its own performance.

Guide for the Facilitator:

Slide 43 presents the first step "Defining Priorities and Policy Development"

(5 minutes)

Defining Priorities and Policy Development

Please hand-out this sheet.

Bank of Tokyo-Mitsubishi UFJ MUFG

Home Japanese MUFG Web Site

Environment Policy [Back to Previous Page](#)

1. Environmental Statement

We, the directors and employees of MUFG, recognize that protection of the global environment is the responsibility of all human beings and, as a good corporate citizen, MUFG fulfills its social responsibility by working actively towards the realization of a sustainable environment. Through our business activities, we will support environmental protection efforts by both industry and individuals that contribute to realizing a sustainable society.

2. Environmental Policy

In accordance with the spirit and philosophy outlined in its Environmental Statement, We, the directors and employees of MUFG willF

- Comply with all laws and regulations related to environmental protection and other requirements to which Group companies subscribeG
- Support business activities that contribute to the protection and improvement of the environment through the provision of high-quality financial products and services, and aim to reduce environmental risksG
- Recognize the environmental burden caused by consumption of resources and release of waste from our own business activities and aim to protect the environment through resource recycling as well as efficient use of energy and resourcesG
- Monitor the effects of our activities on the environment and work towards continuous improvement and pollution preventionG
- Provide in-house environmental education and support and promote environmental protection activities of individual directors and employees both during and outside working hoursG
- Inform the entire Group and the general public of our environmental statement and policy and help raise awareness of environmental issues through extensive communication.

Nobuo Kuroyanagi
Mitsubishi UFJ Financial Group, Inc.
President & CEO
March 2006

Guide for the Facilitator:

Slide 44 presents an example of an Environmental Policy

(2 minutes)

Defining Priorities and Policy Development

3) Develop an initial assessment

Once your institution has written and incorporated environmental policies into its overall policy document, the initial assessment of the environmental conditions in your firm should be performed. This being the first evaluation of your company's situation, the focus should be on the most important aspects. These aspects are energy and paper use. They produce the most CO2 emissions, present the most opportunities for improvement and their proper management could generate significant financial benefits for your organisation. A study of European banks showed that every single bank takes action on these two issues.

Guide for the Facilitator:

Slide 45 presents the first step "Defining Priorities and Policy Development"

Defining Priorities and Policy Development

3) Environmental Weather Map

Hand-out the environmental weather map.

Its purpose is to help you grasp the most imminent internal environmental issues of your financial institution. It also gives you an overview of issues that will be discussed in this book. How is the weather like in your institution regarding internal environmental issues? Which issues have already been addressed? Which issues still need attention? As you tick the boxes below, you will recognize the rainiest sides. You may want to focus on those and make them the highlight of your environmental policy statement.



You are performing well and you believe your performance is in fact above average.



The issue has been already managed in an environmentally friendly manner. There are almost no further improvement opportunities concerning this subject.



The issue has been partly addressed in your financial institution. Some action has been taken. However, you might consider more options to improve this area.

No action has yet been taken. It could be a priority area for improvement.

Guide for the Facilitator:

Slide 46 and 47 present the “Environmental Weather Map”

(10 Minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Integral System for Environmental Risk Management

2), 3), 4), 5), 6) Better Management of:
materials, water, energy, green house gases, business travels

Please refer to the "Resource Book: Internal Environmental Management System" -sections 3 to 7 (pages 36 to 101)- and indicate tips to develop strategies regarding each target category

Guide for the Facilitator:

Slide 48 presents the following steps to adopt Integral Environmental Management Systems

(10 Minutes)

7) Reaping the benefits of Sustainable Procurement

Sustainable procurement deals with purchasing goods and services. A financial institution can have a significant impact when switching to more green procurement. For example, financial institutions buy consumables like office furniture, equipment, paper, cars but also use contracting services like cleaning, catering, and energy services. Why it pays to be sustainable? A more careful and more “green” supplier management and product selection can have significant environmental impact.

Consider the life cycle: If you consider life cycle costs of a contract or a product, green procurement will save you money and protect the environment at the same time. By purchasing wisely, you can save materials and energy, reduce waste and pollution and encourage sustainable patterns of behaviour.

Sustainable Procurement is a high-profile activity. You can show to your customers, clients and other stakeholders that you are aware of the problems facing the environment and that you are taking steps to conserve the environment by, for example, printing your brochures on recycled paper and taking other actions. Using recycled stationery will show your clients and your employees that your financial institution also looks out for environmental concerns.

Guide for the Facilitator:

Slide 49 presents the Sustainable/Green Procurement strategy

(10 Minutes)

8) Better facility management

Facility management deals with planning, construction, renovation and use of office buildings and facilities that are part of the financial institutions' group. Facility management is also linked to other aspects mentioned above - energy, waste, water, purchasing and transport management, because the base for the use and consumption of these factors is laid down when the building is constructed, renovated or used. Facility management is also known as green building, green property management or green property design.

Guide for the Facilitator:

Slide 50 presents the facility management strategy

(3 Minutes)

9) Internal and External Communication of Environmental Performance

Environmental reporting (also sustainability reporting) has become an integral part of annual reports for most companies, including those in the financial and banking sector. Environmental reporting is used to create transparency and provide information to the stakeholders about the environmental performance of the financial institution. Publishing a sustainability report offers great reputational opportunities and has many benefits that can translate to shareholder value for the bank. Many banks create a sustainability report separately from the annual financial report.

Guide for the Facilitator:

Slide 51 presents Sustainable Reporting strategy

(3 Minutes)

Third module: Doing Business with Sustainable SMEs

Guide for the Facilitator:

Slide 52 introduces the third module

Please read the issues listed in the table

Guide for the Facilitator:

Slide 53 presents the internal and external characteristics of a sustainable SME

(5 minutes)

Finding the Business Case for financing energy and resource efficiency in SMEs: Doing Business with Sustainable SMEs

Sustainable SMEs develop their products based on a lifecycle perspective holds a variety of untapped opportunities that can lead to comparative cost advantages as well as to enhanced performance in terms of environmental and social impact. They can be described by using – among others – the following set of concepts:

- Efficient use of raw materials (e.g. lightweight construction with regenerative materials and reduce of waste)
- Resource efficient design (e.g. by optimisation of energy and water consumption or using less virgin materials)
- Durable design (e.g. stable construction and high longevity)
- High disposability (e.g. use of easily degradable materials)
- Efficient logistics (e.g. minimised packing and efficient transports)
- Service substitution (e.g. car-sharing and similar per capital resource consumption reduction strategies achieved through redesigning ownership structures)
- General working conditions (e.g. proper training and education for the workers, working hours)
- consumer healthy & safety (e.g. informing the consumer via product labels and voluntary information)

Guide for the Facilitator:

Slide 54 and 55 present the aspects that sustainable SMEs need to consider under a lifecycle perspective

(5 minutes)

Please read the slide

Guide for the Facilitator:

Slide 56 presents information that testify the relevance of SMEs for the Pakistani economy

(5 minutes)

Large enterprises and SMEs are interwoven and depend on one another to develop efficient operational processes. Since SMEs act as suppliers, sometimes are involved in logistic and distributions process, or are even final consumers of products/services generated by large enterprises, to provide financial solutions than enable them to increase operational efficiency will affect positively the financial state of other actors of the supply chain. Large enterprises are committed to design sustainable supply, production and commercialization business strategies that involve SMEs in developing countries. Since many large companies are potential receptors of financial services, the ability to respond to their financial duties depend on increasing improvements of productivity along the supply chain. SMEs performing sustainably along the supply chain have the opportunity to reduce costs and expand their market share. Other companies will be interested in partnering, which can be traduced in increase of efficiency.

Huge financial market opportunities can be taken in advantage in your country when broadening your market by providing financial instruments to local SMEs, which aim at performing sustainably, while reducing operational and administrative costs.

To do so, SMEs need adequate financial services and financial instruments for leveraging their operations, SMEs will hardly augment the possibility of performing properly. It can be of course traduced in a healthy financial state for SMEs, which enable them to accomplish their financial duties with lenders or shareholders.

Guide for the Facilitator:

Slide 57, 58 and 59 presents the importance of sustainable supply chains

Open Dialogue: Analyse the supply and demand factors that enable the access to finance for E&RE in SMEs

- How can you innovate to decrease administrative costs for small-scale business operations?
- What strategies would you suggest to enable a closer approaching to SMEs in order to outreach and communicate your financial products and services in a better way?

In groups of four people they will discuss on each question. Please pick one participant per group and let her/him speak out the conclusions

Guide for the Facilitator:

Slide 60 encourages participants to identify opportunities to enable the access to finance

(30 minutes group discussion
15 minutes reporting)

Carrying out the business case analysis:

Participants are assigned to groups of 2-4. Each group receives a case study sheet covering the whole information of the business cases as it should be their task to analyse the financial performance of the projects, assess its creditworthiness and discuss the possibility of doing business with the respective SME. Which conditions must be fulfilled? On which aspects would you emphasize on?

Afterwards the groups are required to give a 5 minutes presentation to the audience, in order to briefly present the case and their evaluation.

The practical involvement with the cases bridges the gap between theory and practice. Practical learning drums up the enthusiasm for the topic and contributes to long-term remembrance, thus participants are encouraged to apply the „message learned“ when allocating loans.

Guide for the Facilitator:

Slide 61 – Analysing pilot initiatives of the SCI-PAK project

(90 minutes)

The open space exercise allows participants speak their minds.
Please bring all participants together in a circle and ask them to talk openly on issues they might find important, good, constructive critics, etc, regarding:

- The importance of the topic
- The lessons learnt
- The methods

Guide for the Facilitator:

Slide 62 – Open space

(30 minutes)



- CSCP. (2005): The Lifecycle Management Navigator for SMEs. Online available: http://www.unep.fr/scp/lcinitiative/publications/training/lcmnavigator/index_c.html
- CSCP & ADFIAP.(2006): Internal Environmental Management System: How to improve environmental performance of your financial institution. Online available: <http://www.scp-centre.org/en/projects/ongoing-projects/env-standards-for-financial-inst.html>
- CSCP & ADFIAP. (2006): Environmental Risk Scan: A Tool for Integrating Environmental Aspects in Bank Lending Decisions. Online available: <http://www.scp-centre.org/en/projects/ongoing-projects/env-standards-for-financial-inst.html>
- Ernst & Young. (2003). The Materiality of Environmental Risk to Australia’s Finance Sector. Prepared for Commonwealth Department of Environment and Heritage-Australia. Online available: www.environment.gov.au/.../environmental-risk/pubs/environmental-risk.pdf
- Ganbold, B. (2008). Improving Access to Finance for SME: International Good Experiences and Lessons for Mongolia. Institute of Development Economics. No. 438. Online available: www.ide.go.jp/English/Publish/Download/Vrf/pdf/438.pdf
- OECD. (2006): The SME Financing Gap. Online available: http://ec.europa.eu/enterprise/newsroom/cf/itemlongdetail.cfm?item_id=1229
- Pacheco, A. (2002). Sustainable Finance: An assessment of environmental risks and opportunities in Latin America. Online available: www.lumes.lu.se/database/Alumni/01.02/theses/pacheco_alberto.pdf
- Triple Innova. (2006): Sustainable Supply Chain Management: How to manage triple value chains. Online available: <http://www.triple-innova.de/en/sustainable-supply-chains.html>
- UNEP Finance Initiative, Stockholm International Water Institute. (2005). Challenges of water scarcity: A business case for financial institutions. Online available: http://www.siwi.org/documents/Resources/Reports/Challenges_water_scarcity_business_case_study_2005.pdf