Want to Maximize Your Profitability and Create a Stable Business that Will Survive Into the Future? If So, Read This Booklet!
IMPROVING BUSINESS PROFIT

A Businessperson’s Guide to Profiting from Environmental Protection and Safety
PREFACE

Small and medium sized enterprises (SMEs) like yours face a variety of challenges on the road to becoming stable and profitable. Southeast Europe Enterprise Development (SEED) is a new multi-donor initiative managed by the World Bank Group's International Finance Corporation (IFC) to strengthen small and medium enterprises (SMEs) in Bosnia and Herzegovina, Albania, FYR Macedonia, and Kosovo. The five-year, $33 million effort offers a variety of services both to local SMEs directly and to other organizations that support them, and also works closely with the World Bank Group and other institutions to improve the difficult operating environment for small businesses in the four target economies. Headquartered in Sarajevo with offices in Banja Luka, Pristina, Skopje, and Tirana, SEED is funded by Austria, Canada, Greece, the Netherlands, Norway, Slovenia, Sweden, Switzerland, the United Kingdom, and IFC.

SEED supports the development of Small and Medium Enterprises (SMEs) as well as individuals and institutions that serve the needs of SMEs and works to enhance the broader enabling environment in which all of these stakeholders operate. SEED implements its mandate through tailored, enterprise- and organization-specific technical assistance, capacity building programs, training courses and research / policy interventions.

SEED is also working closely with the World Bank Group and other institutions to improve the difficult operating environment for small businesses. This booklet, which presents approaches to improving the stability and profitability of businesses in BiH through improved environmental management, is one of many services SEED has and will continue to provide under its mandate.
1. Business Development and Environmental Management

This booklet is designed to help you, a BiH businessperson, create profitable, stable businesses that can survive into the future. How? By providing you with information and guidance on how to manage your business to minimize costs and potentially raise revenues in ways that also benefit the environment and the health and safety of your workers and the public.

“Environment and safety?” you might be saying. In a difficult time of transition in BiH, businesses like yours may be struggling with many other factors such as market, production problems, product or service quality concerns, tax issues, access to capital for improving your business, cash flow or other limitations. Why then should you pay any attention to the environment or safety when it hasn’t been a significant issue in the past? Aren’t environment and safety issues just additional burdens that can keep you from becoming more profitable? Absolutely not!

Quite the opposite of being a burden, managing your business to improve efficiency, environmental protection and safety can be an opportunity to improve your business success by reducing costs and potentially capturing new revenues. SEED’s goal in this report is to show you the basic potential benefits of and incentives for managing your business with these key issues in mind. We’ll also discuss some basic tools and approaches for capturing these benefits.

"A company's environmental performance is becoming more important, especially as EU regulations come into effect in BiH. Investors will put emphasis on environmental performance when they consider investing in a company in BiH."

Mr. Michael Scherz, Commercial Counsellor, Austrian Embassy

Before we go further, let’s make sure we have a common understanding of what “environment” means. Next, we’ll take a look at how your business might have an effect on the environment. Only then will it be clear that nearly every business has an interaction with the environment and can benefit by managing these interactions in the most cost-effective way possible.
What is the “Environment”?  
This may seem like a funny question, but it really isn’t. Here’s why. The environment is extremely complex. Much more complex than many of us usually realize. For the purposes of our discussion, let’s define environment as:

“The complex interactions between the atmosphere, water, soil, landscape, and living creatures (including humans) that create conditions necessary to support human life.”

And to make the idea of environment even more complex, let’s also include the health and safety aspects to the definition:

“Environment also includes the working environment for employees and conditions for the public that affect their health, safety and well-being.”

So environment means much more than flowers and trees. Any action or activity that upsets natural systems on which humans depend for clean air, water and soil has the potential to create environmental impacts.

Your Business’s Interaction With the Environment

Figure 1 – Business Interactions with the Environment (see next page) illustrates that a business has two primary interactions with the environment. First, the environment provides the natural resources and energy used as the basic raw material inputs for business. Without inputs of sufficient quality and quantity, business suffers and economic development is threatened. Second, the environment is also used as a receiver of water, air, soil and solid wastes that are created by business. While the environment has a natural ability to absorb many types of waste, if the volume of waste is too great or the character of waste is such that the environment cannot absorb it, the environment’s natural ability to recycle waste is degraded. If this occurs, then in turn, the environment’s ability to provide inputs for economic development suffers.

Business interactions with the environment can also adversely affect the health of workers or the public. I’m sure you’re already familiar with the potential negative effects of pollution on people’s health and safety.

“Environmental Management” – The Key to Profitability Through Environment!!!

OK, so your business interacts with the environment by using inputs, including natural resources, and creating waste that requires disposal. So what? Managing your business activities in a way that maximizes the efficiency with which you use inputs and natural resources, minimizes use of hazardous materials, minimizes waste generation and waste disposal requirements and protects worker and public health and safety makes financial sense and can be
BUSINESS INTERACTIONS WITH THE ENVIRONMENT

THE ENVIRONMENT
Serves Business and Society by Providing Inputs to Production Including Energy

Provides Natural Resources from Extraction, Harvesting, Mining; also clean Water, Soil, Air

Basic Processing and Manufacturing

Conversion/Fabrication Production of End-Use Products

Distribution Activities Wholesale or Retail

Consumption

Adapted from "Environmental Management Tools for SMEs: A Handbook."
Center for Corporate Environmental Management. March, 1998
beneficial for the environment. Let's call this approach to managing your business “environmental management” and define it as follows:

"Environmental management" is the management of all your business activities that can have a negative influence on the environment and/or on worker and public health and safety.

From now on, we'll use the term “environmental management” to mean the full range of actions you might take to minimize costs and improve revenues by managing your business to reduce the amount or type of raw materials you use, the amount or level of hazardous waste you produce and the potential for your activities to negatively affect worker and public health and safety.

But let's summarize by saying that:

2. Financial Incentives for Environmental Management? - Definitely!

"Show me what they are," you might be saying to yourself. OK. Let's talk about specific financial incentives for environmental management. After all, you're busy. You don't have the time to do anything that might increase your costs and no one is putting too much pressure on you to think about environment or safety. So you need financial motivations for environmental management - right? Let's start with the "big picture" incentive of becoming a businessperson that recognizes the value of positioning your business to be as successful as possible.

Environmental Management: A Global Trend That Will Affect Your Business

Economic, political, and social conditions in BiH are changing in order to bring BiH into closer harmony with the EU. Integrating environment protection into business practices is now a major trend and practice in the EU and internationally. Why?

Governments, business leaders and citizens around the world recognize that a healthy environment and healthy people are a key foundation upon which economic and social prosperity depend.

Communities and governments in all developed countries now demand that businesses, both large and small, take an active, responsible role in protecting environmental quality and health. These demands take the form of increasingly stronger laws and regulations, increased penalties and liability and greater public pressure. The costs of not performing responsibly are growing, but so are the incentives and benefits of implementing good environmental practices. Let's now focus on these incentives.

Reducing Business Costs Through Improved Efficiency

Take a look back at Figure 1 and refresh your memory that the "environment" both provides the inputs you need to conduct your business (especially natural resources like air, water, energy, minerals and organic materials) and serves as a receiver of waste. You must pay for these material inputs. You must also pay for using the environment to dispose of waste. Waste related costs include waste storage and handling, labor, disposal fees, transportation and potential liabilities. As we'll discuss in a moment, businesses like yours in BiH haven't
had to pay the true costs of inputs like water and energy or of using the environment to dispose of wastes. But these costs are going to rise. So, if there were a way to reduce input and existing disposal costs, avoid higher future disposal costs or turn waste into revenue, wouldn't you be interested?

You can improve efficiency (minimize your wastes) in two primary ways:

1. Reducing material loss and waste at the points in your production process where they occur by changing: 1) type or quality of input materials; 2) technology; and/or 3) your product; and by 4) using good “in-house” management practices that can be implemented simply and cheaply.

2. Recycling waste materials both on and off-site if it is created by: reusing wastes in your production process or reclaiming your waste for use by others.

The strategies for improving efficiency go by several names such as waste minimization, pollution prevention, eco-efficiency, and clean production. For BiH, we’ll use “Clean Production” or CP because it is a common term used in Europe.

Since we’re only talking about the financial benefits of environmental management right now, let’s leave the details about how to implement CP in your business to the next chapter. But just to stimulate your interest, please refer to the four CP case studies that follow. These short examples clearly show that investments and technological needs to implement these and other CP techniques range from minimal (or even free!) to substantial. Since the costs and benefits of CP are critical to your decision to investigate CP, SEED understands that you’ll need more information on how to overcome any technical or economic barriers to seriously considering CP techniques in your business. This is especially true for SMEs in BiH that may not have significant financial resources or access to technical information. Whatever the costs, investments in CP make sense if cost savings enable the investment to be repaid over a reasonable time period. Investments pay for themselves in anywhere from months to four or five years.

A number of businesses in BiH have begun to make investments in technology that improve efficiency. Common examples are the reuse of wood waste for heating in the wood processing sector, installation of electrostatic painting systems that improve the efficiency of paint input use or installation of more efficient boiler systems that save energy costs and cause fewer air emissions.
CASE STUDY 1:
SLAUGHTERHOUSE EFFICIENCY IMPROVEMENTS

Company and Background: Masa Zlin Company is a medium-sized slaughterhouse located on the Czech-Slovak border. The company participated in a CP program as a result of Czech-Norwegian cooperation, after it adopted a proactive environmental management approach due to changing environmental conditions and regulations. Masa Zlin wanted to improve its business performance, meet environmental standards, improve its corporate image and take advantage of professional assistance available for CP planning.

CP Solution: The company implemented good housekeeping measures to reduce water use and improve wastewater quality, installed automatic washers for cleaning utensils and improved its wastewater treatment system.

Environmental Benefits: Reduced chemical load of wastewater, improved hygiene in the workplace and reduced biological contamination of wastewater (filtration for fat and solid particles).

Economic Benefits: Savings of approximately DM 406,420 per year, of which DM 313,870 resulted from reduced wastewater discharge fees. The repayment period for the several efficiency improvements made ranged from about three months to 20 months.

Source: International Network for Environmental Management

CASE STUDY 2:
WASTE REUSE IN A DAIRY COMPANY

Company and Background: In 1997, Lura d.d., a Croatian dairy company, was discharging highly polluted wastewater into a main sewer and from there to a local stream. Wastewater did not comply with the legal discharge standards.

CP Solution: The company installed a wastewater treatment plant, consisting of physical, chemical and biological processes. Wastewater quality now meets all State Water Directorate requirements. Initially, sludge from the plant was disposed at a municipal landfill for DM 313 per day (7 tons). The company invested in a facility to produce high quality compost, made from the waste sludge, unripe manure, bark of conifers and sawdust.

Environmental Benefits: A significant reduction of pollution load on the environment and significant improvement in receiving stream water quality.

Economic Benefits: Total investments were DM 2,297,855. Improved wastewater discharge quality saved the company about DM 1,030,722 per year in environmental fees. The compost production of about 6,000-6,500 tons per year results in DM 352,049 to DM 419,525 of new revenue. The payback period of the investment is expected to be about 1.5 years.

Source: Croatian Business Council for Sustainable Development

(continued on page 10) Note: all financial figures quoted in the case studies are based on the current value of the German Mark.
CASE STUDY 3:
ENERGY EFFICIENCY

Company and Background: The Norand Corporation in the US produces hand-held computers and other related equipment. Management of the company was concerned with high electricity costs.

CP Solution: Inefficient incandescent light bulbs were simply replaced with more efficient, longer-lasting fluorescent bulbs wherever possible.

Environmental Benefits: Reduced energy consumption saves natural resources and improves air quality.

Economic Benefits: Annual electricity costs were reduced by DM6,181. Payback period is estimated to be less than a year.

Source: U.S. EPA

CASE STUDY 4:
TOXIC MATERIAL SUBSTITUTION/WASTE RECOVERY
BY A PAINT MANUFACTURER

Company and Background: Dunolakk Company in Hungary manufactures paint and coating materials and produces paint application technologies. The need to minimize manufacturing process air emissions, reduce the use of hazardous raw materials, reduce chemical emissions during paint application, as well as other factors, motivated the company to investigate CP options.

CP Solution: Solvent-based products were replaced with water-based paint. Technology was also developed to reuse paint wastes, resulting in a savings of 4-6% of the input material.

Environmental Benefits: Reduction of hazardous waste, improved work environment for employees and reduced conflicts with residential areas that surround the company's factory.

Economic Benefits: The company invested between DM368,885 - DM442,663 to install the paint recovery technology. Savings on paint inputs and waste disposal costs will enable repayment in four to five years.

Source: International Network for Environmental Management
Rising Input Costs and Service Costs
In BiH are an Incentive for Implementing CP

Businesses that use natural resource inputs like water or public services like waste collection and disposal must pay for them. Fees are one way to motivate individuals and businesses to conserve resources and services – the more you use, the more you pay. In the past in BiH, businesses have not always paid the true cost of using resources or services. As a result, resources have been wasted or the management of services has not always been efficient or cost-effective. Both have led to negative effects on the environment. So what’s the point? Each entity is moving to charge fees for resources and services that reflect the true cost of providing them. This reflects a principle of environmental management and law in the EU – the “polluter pays” principle. It simply states that if you pollute or generate waste, you are responsible for paying the costs of minimizing the impact of that waste on the environment and safety. This principle is being integrated into new environmental laws now in preparation for both the RS and Federation. We’ll address these laws a little later.

Prices for electricity, natural gas, logs and mineral resources have already risen and it’s likely that the price of water, waste disposal and waste handling and transportation services will continue to rise. In fact, cost savings from reducing resource inputs and the volume or hazardous nature of wastes has been one of the main motivations for companies in other countries to implement CP. So, isn’t there an existing incentive for you to investigate environmental management activities that help you save money by using resources more efficiently and won’t there be an even greater incentive in the near future? Yes!

Improved Environmental Management Facilitates Access Capital To For the Growth and Development of Your Business

Improve Your Ability to Obtain Credit with Sound Environmental Management

Most businesses need capital for raw materials, equipment, facility improvements or other purposes at some point in their growth processes. Financial institutions (FIs) like banks and international credit programs can be the critical source from which you can acquire capital in the form of credit. Examples of financial institutions (FIs) in BiH include international programs such as EBRD, USAID and the International Finance Corporation (IFC), foreign banks operating in BiH like Volksbank or Raiffeisen Bank and BiH based banks such as UPI Banka or Kristal Banka.

Your ability to obtain credit is primarily based on a FI’s belief that your business is or will become profitable enough to repay the credit. An FI must therefore evaluate the risks it is taking by providing you with credit. Risks to your profitability may lie in several areas such as: product quality, current and future market demand, company management, financial management, production efficiency and environment and workplace safety.
Yes, the way you manage your business's commitment to worker and public safety and its interaction with the environment can affect your ability to obtain credit.

How? Pollution caused by your business; damage to your business from natural hazards like flooding; inefficient production that results in excessive use of inputs like energy or natural resources; handling, disposal or transport of hazardous materials; etc., could be sources of costs and lost revenue for your business. If you pollute a river, land or air, you could be fined; your production stopped until you solve the problem, you could be responsible for making costly investments or payments to solve the problem; your market could be reduced or you could face legal charges that cost you money. And as we will discuss, legal penalties such as fines or work stoppages for violating environmental laws are likely to get stronger soon. And costs to solve environmental problems, once they have been created, are growing. A FI may be much less likely to provide credit if there is a risk that your environmental problems could result in costs that reduce your ability to repay a credit. Figure 2 – Environment Risk in the Credit Process illustrates how a FI might integrate environmental risk into its credit evaluation process.

"Volksbank is obviously concerned about the risk we take when we provide credit to a small or medium sized enterprise. If there appear to be environmental problems, those problems can create costs or revenue losses that threaten the company's ability to repay our credit. Therefore, we may look more favorably upon companies without these problems."

Dr. Peter Setzer, General Director, Volksbank, Sarajevo

FIs are also concerned about their own legal liabilities and their reputation. FIs must avoid taking collateral such as land or facilities that are contaminated from pollution or is a threat to public health and safety. This could create clean-up costs or other liabilities for which a FI might become responsible if it must take ownership of your collateral should you fail to repay a credit. Since contaminated collateral is also worth much less than “clean” collateral, a FI would lose money should it need to sell the collateral. In addition, if your business causes an environmental or work/public safety problem, the bank’s reputation could suffer. FIs do not want to be associated with borrowers whose actions are irresponsible and cause harm to people or the environment. The bank could lose business, and as a result, lose revenue.

FIs may conduct a detailed analysis of the environment and work safety risks of business that have a moderate to significant potential to cause negative effects on people or the environment. USAID, IFC, the European Bank for Reconstruction and Development (EBRD) and Raiffeisen Bank are examples of
Figure 2
ENVIRONMENT RISK IN THE CREDIT PROCESS

<table>
<thead>
<tr>
<th>Business Submits Credit Application</th>
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<tbody>
<tr>
<td>• Immediate rejection if project on FI's list of unacceptable risk projects</td>
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<tr>
<td>• Preliminary environment risk assessment</td>
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<tr>
<th>FI Conducts Credit Analysis Process – can the credit be repaid?</th>
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<tr>
<td>• Risk level defined (including collateral)</td>
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<tr>
<td>• Site visit for most projects</td>
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<tr>
<td>• Detailed analysis by FI or environmental experts. Risk level reviewed</td>
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<tr>
<td>• Environment risk report completed</td>
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<table>
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<tr>
<th>Credit Approval</th>
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<tbody>
<tr>
<td>• Environment risk reviewed by all FI financial analysts – is risk acceptable?</td>
</tr>
<tr>
<td>• Borrower legally agrees to reduce risks to an acceptable level</td>
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</tbody>
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<th>Monitoring</th>
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<tr>
<td>• Ensure compliance with environmental and legal conditions</td>
</tr>
<tr>
<td>• Financial penalties for non-compliance or require reduction of liabilities</td>
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</tbody>
</table>

Source: Adapted from European Bank for Reconstruction and Development, Environmental Procedures Manual for Market Banka, BiH 1998
international sources of credit that conduct such evaluations. Several Bosnian
FIs have been or will soon be trained in these environment/work safety credit
risk processes. If an FI identifies environment risks, it will generally do one of
two things. First, it could approve a credit but only based on your legal
commitment to reduce the risks through concrete actions or investments.
Second, it could deny a credit request because the risks are too much of a
threat to your ability to repay the credit.

So, given these factors, isn’t it in your interest to manage your business in a
way that prevents or minimizes environment and work/public safety risks?
Of course it is!

**Good Environmental Management**

**Improves the Potential for Private Investment in Your Business**

Like FIs, investors will be less interested in providing capital for your growth and
modernization (and ultimately their own profit), if your company has potentially
costly environmental risks or inefficient production. So they’ll be interested in
identifying these risks. If you now need or might need private capital in the
future, you can better attract capital by implementing good environmental
management practices that reduce your related risks.

"Experience in the US shows that businesses that integrate sound
environmental management and work safety processes into their
operations have stronger markets, fewer problems with regulations, more
public support and overall, are more profitable. Bosnian businesses will
benefit from doing the same."

U.S Ambassador Thomas Miller

**Strong Environmental Management Improves**

**the Value of Businesses In the Privatization Process**

The value of a state owned enterprise might also be strongly affected by
environmental risk. Environmental risks represent actual or potential costs that
can lower the total value of an enterprise when it is sold. Would you be more or
less interested in buying a business if you will be required to pay for solving
environmental problems that it has or may create? Of course you’d require the
seller to reduce the sales price of the business by the amount of the cost of the
investments needed! And if the seller wasn’t willing to do this, wouldn’t his
chances of selling the business at the price he desires be reduced?

**Expand Your Market Through Environmental Management**

Can you be profitable if the market for your product or service is limited to BiH?
Do you need to expand your market beyond BiH to be successful? If so,
environmental performance may be an important factor in gaining access to EU
and other international markets. Why? As we've already said, the public, banks, governments and other businesses around the world care about how your business affects the environment and that concern is getting stronger everyday.

If you make an active, verifiable effort to avoid causing environmental problems, governments and businesses, especially in the EU, may prefer to do business with you rather than another company. In fact, they may be required to! So good environmental performance can be a competitive advantage!

A recent study in the EU concluded that environmental responsibility is the most important factor affecting what people buy after considering price and quality! A similar report by an American consultant showed that when the price and quality of competing products is similar, 76% of Americans are willing to switch to a product that is associated with a good cause, like environmental protection.

How do you demonstrate to these markets that your environmental performance is acceptable? The internationally recognized method is to follow the International Standards Organization (ISO) 14000 standards. ISO promotes development of international voluntary standards for products and business performance. In the early 1990s, ISO released the ISO 9000 set of quality standards. You may well have heard of these. Then, in response to the global demand for a common approach to environmental management of organizations, the ISO 14000 standards were released in 1996. These standards provide businesses with the guidance on how to manage, measure, improve and communicate the environmental aspects of their operations to the public.

The Eco-Management and Audit Scheme (EMAS) is another environmental management performance standard that is similar to ISO 14000, but is used specifically within the European Union. Its objectives and processes are very similar to ISO 14000. However, EMAS and ISO 14000 do have some important differences. While ISO 14000 is a voluntary instrument for improving environmental management, EMAS is a regulation and has legal status within EU member states. Also, EMAS applies specifically to manufacturing industries while ISO 14000 applies to all types of organizations. Because EMAS is specific to the EU and since BiH will be striving to enter the EU, EMAS has particular relevance to businesses in BiH. However, we have focused on ISO 14000 because it is an internationally accepted standard and because many businesses in BiH may already be familiar with ISO 9000. Your choice of which standard to pursue, EMAS or ISO 14000, will be based on the particular objectives of your business and on your target markets.

Businesses are not required to comply with the ISO 14000 standards - compliance is voluntary. However, even though compliance with ISO 14000 is voluntary, a business's compliance with ISO 14001, the element of the ISO 14000 standards that relates to implementing an environmental management system (EMS), is rapidly becoming a precondition for gaining contracts from
private firms and public agencies, especially in the EU. Compliance with ISO 9001 standards is already a common precondition for doing business with many companies and governments in the EU. EU business are increasingly requiring foreign companies from whom they buy products or services to demonstrate compliance with ISO 14001. We’ll talk more about ISO 14000 and the EMS process in more detail later.

The key point about ISO 14000 and your market is this - if you choose to follow these standards, the public, governments, regulators, and other businesses in the EU and internationally will accept your commitment to environmental management. That can boost your competitiveness in many markets around the world, especially the EU. Thousands of companies in the EU already have realized this fact and been certified as being in compliance with ISO 14001.

A study by the United Nations Industrial Development Organization (UNIDO) found that almost 75% of companies and business organizations surveyed in the EU agreed that compliance with ISO 14000 will either help them to access new markets or to strengthen their market share. Only three percent felt that ISO 14000 would not have a positive effect on their markets.

The Bosnia and Herzegovina standards BAS 14000 (environmental management system) have been adopted by the Institute for Standards, Measurement, and Intellectual Property. In addition to these standards, more than one hundred standards addressing air, water and soil have been adopted. Five three day seminars focusing on introducing the Environmental Management System according to ISO 14000 have been held in B&H over the last five years. The representatives of business organizations, scientific and professional institutions from all over B&H participated in the seminars as well as the representatives of the state administration.

Several BiH companies have begun efforts to implement the ISO 14001 standard, but none have yet been certified. Therefore, we don’t yet have any concrete

**MARKET BENEFITS OF AN EMS**

Loudwater Company in the UK is a printing firm with less than 50 employees. In 1996, it became registered under EMAS. Loudwater developed an EMS under EMAS because it wanted to improve efficiency and its commercial success. The managing partner said, "The large retailers and also the publishers were asking more and more questions about environmental aspects of our business and we had to be prepared and ready to answer."

The company had doubled its turnover. The managing partner said, "We have saved in excess of DM61,204 by reducing our waste, cutting down on our energy consumption and by recycling or selling our unavoidable waste. We are winning new business all the time, particularly from blue-chip companies that previously would not have considered us. The fact that we can prove our green credentials through EMAS and demonstrate our ability to work within the framework of environmental legislation in a wider Europe gives us that competitive edge."

Source: UK Competent Body for EMAS, Department of the Environment
evidence of how compliance with this and other standards within ISO 14000 can positively affect their market. However, take a look at the insert on Market Benefits of an EMS, for an example of how implementing an EMS (in this case under the EMAS standards) has improved the market and performance of a smaller sized company in Europe. Many other examples like this exist.

Some companies in the EU have reported that the market benefits of ISO 14000 have been similar to those they have gained from following the ISO 9000 standards. Since the ISO 9000 series of standards is older than the ISO 14000 series, there has been more time to assess the market benefits of following its key standard, ISO 9001. Over 25 businesses in BiH are certified as being in compliance with ISO 9001 and a number of others are in the process. Some have already seen improved business as a result of their efforts to follow ISO 9000 standards. You may well receive similar market benefits from following the ISO 14001 standard.

“Our ISO 9002 certification has resulted in a 30% increase in our production as a result of improved market access, improved internal management systems, and improved efficiency. It has also made our company more attractive to investors, who see the certification as proof of our competitive advantage and strong product quality. I believe that after just one year, the cost of the certification has more than paid for itself.”

Mr. Nasuf Grebovic, Director - Bitumenka Company, Sarajevo

“We are in the process of obtaining our ISO 9000 certification because we believe it will expand our market and improve profitability. We are aware of ISO 14,001 and EMS and believe it could be a next step in building our market.”

Mr. Momir Bojanic, Director - Vigmelt Company, Banja Luka

Conformance with the ISO 14000 standards has many other potential financial benefits in addition to improved market access. These are discussed in more detail in Section 3.

Conformance with Environmental Laws
Saves Money and Reduces Risks

Every business in BiH must be designed and operated in compliance with a comprehensive set of development and environmental related laws. Key laws in both the RS and Federation address physical planning, water protection, nature
protection, forestry, agriculture, air quality and many other environmental protection concerns, as well as work protection and safety. Some of these existing laws will be modified and new ones added in 2001.

Environmental laws are designed, at least in large part, to minimize the negative effects of human activities on the environment and worker and public health and safety. As we've already discussed, these negative effects can create liabilities, costs and lost profit for your business.

**Reduce Your Liabilities - Comply with Existing Regulatory Requirements**

You can minimize liabilities and costs by obtaining all required permits and over time, keeping your operations in compliance with regulations. At a minimum, you'll need an urbanism permit, a building permit and a work permit. If you don't already have them, you're not a legal business and haven't taken the basic steps to minimize your risks (fines, closure or other penalties) including some that relate to environment and work safety.

The process for obtaining these permits starts with your local municipality. Talk to the officials in your municipality's economic department for detailed information. You'll need to submit a variety of information including descriptions of the project, purpose, location, function, design, technological process, planned site development aspects, etc. The permit process may include evaluations by Municipal, Canton (in the Federation) or Entity level technical institutes or ministries to ensure that your business is consistent with existing environment and planning laws.

For projects that have a higher potential to cause negative impacts on the environment such as slaughterhouses, quarries, use or storage of hazardous materials, etc., you may be required to obtain permits from Entity level ministries and to submit detailed information, prepared by qualified experts, on the potential negative environmental effects of your project and measures you will take to minimize those effects. This is a form of environmental assessment (EA), a process for evaluating and defining the potential impacts of an activity on the environmental, social, and economic conditions and actions that must be taken to minimize or avoid the impacts. The EA process will probably become much more common and much more systematic once each entity in BiH passes new framework environmental laws that are discussed below.

If you can't demonstrate that your business is legal, do you think a financial institution would be willing to risk providing you with credit? No way!

**Sound Environmental Management**

**Can Help You Avoid Future Legal Liabilities and Costs**

New environmental legislation that incorporates stronger, more comprehensive principles of environmental protection and health now used in the EU will be completed for both the Federation and the RS this year. The legislation includes
a new framework environmental law and new laws on water protection, air protection, nature protection, waste and environmental licensing. On one hand the regulations will tend towards harmonization with European regulations, and on the other hand they will be realistic in order to correspond to the economic, technological and ecological conditions in BiH. Once these laws are approved, monitoring of your activities for conformance with the laws will intensify and stronger, more consistent application of penalties for failing to meet legal requirements is probable.

The new environmental laws are not the only new source of law or regulation that could have an effect on your business. Some environmental problems such as global warming and depletion of the ozone layer occur on such a large scale that they can only be addressed by international conventions or agreements. Countries that sign (ratify) these agreements commit to taking actions to reduce or prevent the problems. They also receive greater respect on the world stage for participating in solutions to such problems. BiH has recently and will continue to ratify international environment-related conventions.

Clearly, laws for environment are becoming stronger. Therefore, it is in your interest to avoid legal liabilities and costs by adopting environmental management practices that help you eliminate or avoid these liabilities and costs.

**Environmental Management Creates Public Support For, Not Against, Your Business!**

The shift to democratic institutions in BiH means that people and organizations concerned about protecting the environment and their health are beginning to take a stronger, active interest in how your business affects their quality of life. The closing of the Kakanj cement plant last year due to public protests about pollution and health is just one example. Concern over HE Neretva is another. There will be more such examples as local decision makers, citizens and non-governmental organizations (NGOs) in BiH become more organized and active in environmental planning and protection. Some local communities are now working to adopt environmental actions plans and a national environmental action plan is now being prepared for all of BiH. The public is, and will have, a growing influence on laws and decisions that can affect your business. Public
COSTS OF WORKER INJURY OR ILLNESS

- Wages paid to injured, but non-working employees
- Payment to clinics/doctors over the short or long-term
- Interruptions in production
- Reduction of productivity due to reduced worker trust
- Hiring and training costs for new workers
- Repair or replacement of equipment
- Reduced market due to drop in the company's reputation
- Reduced international market resulting from failure to meet international labor and work safety standards for export
- Reduced quality of product following an accident
- Loss of raw material
- Legal settlements

controversy, negative media coverage and conflicts resulting from your failure to protect workers, the public or the environment can adversely affect the your personal and business image. This in turn costs you money in lost market or other liabilities. Shouldn't this be an incentive to prevent environment and health safety problems for which these interests and others will want to hold you responsible?

Healthy Workers Are More Productive and Enthusiastic

The health and safety of your workers can have an important effect on your profitability and on your emotional well-being and community opinion about your business. Yet, in BiH, work and health safety conditions for workers can sometimes be poor. What is the cost of failing to provide good work and safety conditions? If you were more aware of the real costs of injury, accidents, or illness to your workers, might this influence you to make at least incremental investments to avoid these costs? The insert titled "Costs of Worker Injury or Illness", shows the potential costs of poor worker health and safety practices. In addition, indirect costs such as a worker’s personal medical expenses, time and money spent by a worker’s family in helping him or her back to health, public medical expenses, as well as emotional stress on you, your workers, or the families of injured or ill workers are possible.

Accounting for all the costs of poor worker protection may take you a little time, but it may be well worth the effort. This is especially true when the costs of failing to prevent injury and illness are likely to rise as BiH moves towards more internationally accepted labor safety standards that are more strongly and consistently enforced!

Because business conditions in BiH are difficult, you may only have a short-term, low-cost approach to managing your businesses. You may not see an advantage in investing time or money in protecting workers. One thing is for sure:

If you value your workers and intend to produce high quality, competitive products or services, it pays to invest time and energy to understand the true benefits of worker safety. Investment in your workers and their well-being does have a positive impact on your bottom line, especially when simple, low-cost ways to improve worker safety and health conditions are available.
3. Environmental Management can Create Financial Benefits - What Do You Do Now?

Before you can take concrete actions to use environmental management as a tool to better position your business for long-term profitability, you probably need more information about tools that are available, how they can be implemented in your business, their costs and benefits, etc. You’ve already taken an important first step by reading this booklet.

For now, let’s look further at two tools for improved environmental management that we’ve already introduced – Clean Production and the ISO 14000 standards. Remember, the goal is to become better informed. We can’t give you all the information you need to actually use these tools within the scope of this booklet. Should you wish to obtain further information and assistance, please contact the SEED Environmental Officer.

Tool #1: Clean Production – A Technique for Reducing Costs and Improving Revenues

Clean Production (CP) can improve efficiency, reduce costs and generate revenue. As the United Nations Environment Program defines it:

"CP is the continuous improvement of industrial processes, products and services to reduce the use of natural resources, to prevent – at the source – the pollution of air, water and land and to reduce waste generation – at the source – in order to minimize risks to human population and the environment"

The primary goal of CP is to reduce or eliminate pollution and waste at the points in a production process where they are generated, rather than having to treat, store, transport or dispose of pollution and waste once it is created.

CP is an internationally recognized approach for improving environmental quality and safety while benefiting business. It is a key part of many international agreements, laws, and policies of countries throughout the world, including the EU. As BiH has begun to integrate with the EU and international community, it is and will become even more important for businesspeople like you to be aware of what CP is and how to implement it. It might be in your interest to start now because the potential costs of waiting could be much higher than the time and financial investment you make in taking an active approach to CP today.
So What Techniques Are Used to Implement CP?

The first priority of CP is to reduce or eliminate waste before it is created. The second priority is to recycle or reuse waste once it is created. The third is treatment of waste, to reduce the volume or toxicity or so called “end of pipe” methods. This is because treatment usually occurs at the end of a production process when wastewater or air emissions are often emitted through a pipe. The fourth and least preferable is waste disposal. Figure 3 – Clean Production Techniques, illustrates the main methodologies for achieving the first and second priorities of CP.

“End of pipe” waste treatment approaches such as air filters or wastewater treatment system cost you money. While they do provide the benefit of helping to avoid liability for polluting air, land or water or for creating a worker or public health problem, if you could actually make money by avoiding liabilities, wouldn’t you want to? You may actually lose money by only using end of pipe approaches because you still may be using raw material inefficiently, paying for labor and transportation to process and handle the waste, and paying for disposal. Yet you are still possibly liable if your waste contributes to contamination of the environment or causes impact on worker or public health. Why not reduce or eliminate all of these potential costs by investing in prevention and efficiency!

If you are creating pollution of any kind, there is inefficiency in your business. Pollution equals inefficiency and Inefficiency equals increased costs.

A number of businesses in BiH already understand the importance of CP approaches to improve their businesses and many have begun to make investments in technologies that help meet the intent of CP priorities.

"We've installed a new painting line that uses paint much more efficiently, so were saving money. We've switched from toxic oil-based paint to water-based because its environmentally friendly – we plan to use this as a marketing advantage. The change also has improved work conditions. The paints are much less toxic and the system includes very effective ventilation and filters. Before, workers needed to break every 30 minutes to get fresh air. Now they work continuously, so we're more productive."

Kasim Gadzo, Purchasing Manager, Ans-Drive Company, Sarajevo
Figure 3

CLEAN PRODUCTION TECHNIQUES

Source Reduction
- Product Substitution
- Product Conservation
- Change in Product Composition

Source Control
- Use and Reuse
  - Return Waste to Original Process
  - Waste as Raw Input for Other Processes

Recycling Waste (Onsite and Offsite)
- Waste Reclamation
  - Process and Recover Waste
  - Process Waste as a By-Product

Input Material Changes
- Material Purification
- Material Substitution

Technology Changes
- Process Changes
- Change Equipment/Layout
- Additional Automation
- Change Operational Settings

Good Housekeeping Practices
- Procedural Measures
- Loss Prevention
- Management Practices
- Waste Segregation
- Improve Materials Handling
- Production Scheduling

"We recently purchased a new wood joining technological line that enables us to reuse smaller wood pieces that we used to throw away as waste. We’re now making money by having improved the efficiency with which we use wood input materials."

Madzak Omer, Director, GTP Maomex Company, Sarajevo

"We understand the benefits of using technology that minimizes our input costs and of reusing waste as an input. Efficient production and clean technology should help us to be more profitable."

Nenad Opacic, Director, Eurohem Company, Banja Luka

The range of actions you can take to implement achieve the first two CP priorities is quite wide. Simpler techniques are often called “good housekeeping practices.” These are basic, usually low-cost, practical measures based on common sense that may improve productivity, save money, and reduce the environmental effects of your business. Your workers, using checklists as a guide, can usually implement them. More sophisticated CP techniques involving more complex technological or design approaches may require expert analysis of production systems, product design and material inputs and technology.

The bottom line for you is whether the costs of implementing CP techniques and actions are outweighed by the benefits you receive. But remember this:

All over the world in many different economic and legal conditions, companies like yours are finding that YES, the benefits of clean production do outweigh the potential costs.
Tool #2: ISO 14000

We have briefly reviewed the origin of the ISO 14000 standards. Let’s take a more comprehensive look at this series of standards.

ISO 14000 is a series of international, voluntary environmental management standards. These standards address several environmental management issues including: Environmental Management Systems (ISO 14001), Environmental Auditing, Environmental Labels and Declarations, Environmental Performance Evaluation and Life Cycle Assessment. The standards are now used as the guide for business to implement an environmental management program and to verify to others that it is taking continuous action to address its activities that have an effect on the environment.

The key standard within the ISO 14000 series of standards is ISO 14001 – Environmental Management Systems – Specifications with Guidance for Use: This standard identifies the structure of and requirements for an environmental management system (EMS):

An EMS is a systematic approach to address the environmental aspects of an organization (like your business!) that enables it to control the impact of its activities, products or services on the natural environment.

If you are to capture any of the benefits of improved environmental management, you’ll need a systematic approach to planning, measuring and improving the actions you can implement to create those improvements. An EMS is exactly that system. The completion and maintenance of an EMS shows that your company is continually working to minimize its effects on the environment and worker and public safety.
Figure 4 - "EMS Components" illustrates the five primary steps in preparing an EMS as well as some of the key elements in each step. Let's briefly review each step.

1. Environmental Policy:
First your company needs a framework to guide your actions for improved environmental management. Your policy defines your company's commitment to:
- continuous improvement of the EMS to ensure you are always trying to achieve better environmental performance;
- prevention of pollution; and
- compliance with all relevant environmental legislation and other requirements. (Notice the connection to CP!) An EMS can help you identify opportunities for implementing CP techniques.

2. Planning:
Based on your policy, you must devise a plan with objectives and targets related to the three areas of commitment contained in the environmental policy. For example, you might set a target of reducing energy use by 25% in the next year. Another target may be better management of your warehouse of input materials to prevent spills or leakage to save costs and reduce pollution.

3. Implementation and Operation:
Next you must decide how to implement your objectives and targets. For example, you might install a lighting control system that reduces electricity consumption.

4. Checking and Corrective Action:
Have you met your objectives and targets? The EMS must include a plan to monitor your actions to determine whether you've met your objectives and targets. If objectives and targets are not met, then there must be a method for taking actions to meet them.

5. Management Review:
You or your top manager(s) must review the EMS on a regular basis (usually once a year) to determine if it is effective. If it isn't, then changes are made as necessary.
Figure 4

EMS COMPONENTS

Start

Management Review of the EMS

Continual Improvement

Checking and Correcting the EMS
- Monitoring and Measurement
- Identify non-conformance to EMS and corrective/preventative action
- Keep Records
- Auditing of the EMS

EMS Planning
- Define Environmental Aspects
- Identify Legal Requirements
- Develop Objectives and Targets
- Define an Environmental Management Program

Develop an Environmental Policy

EMS Planning
- Define Environmental Aspects
- Identify Legal Requirements
- Develop Objectives and Targets
- Define an Environmental Management Program

EMS Implementation/Operation
- Define Structure & Responsibility
- Training, Awareness & Competence
- Communicate EMS to employees
- Create EMS Documentation System
- Develop Emergency Preparedness Plan
Implementing an EMS can have significant benefits for your company. Please refer to the insert – Benefits of an EMS, for a summary of these benefits. Notice that compliance with ISO 14001 can help you capture almost every benefit of environmental management that we've covered in this booklet!

An EMS is highly flexible. No matter the size or complexity of your business, an EMS can be tailored to its needs. An EMS is not intended to be too complex or difficult to implement, otherwise it might not be maintained and its benefits would not be captured. You create the objectives and targets to improve your environmental performance by identifying and prioritizing the environmental aspects of your business that should be addressed. Again, notice the key link here with CP! Improving efficiency (while indirectly reducing negative environmental effects) could be an objective you include in your EMS! The main point is to show continual improvement towards meeting the objectives. You must update continually your EMS to make sure it serves as an overall guide for improving your environmental management.

Becoming certified under ISO 14001 takes commitment, time and money. "Certification" requires that an independent auditor review your EMS to make sure it is being maintained by your company. It may actually be too big of a task for many smaller companies in BiH to accomplish in the next year or two. Other companies may find it practical to begin the process as soon as possible.

It is important to note that ISO 14001 shares many features of ISO 9001. If you are already in the process of obtaining ISO 9001 or have obtained it, it can be used as a basis for setting up an EMS.

While certification under ISO 14001 is the most concrete way to obtain all of its many potential business benefits, some of these benefits might also be possible by taking less comprehensive, step-by-step actions that are within your business's ability to implement right now or in the near future. SEED hopes to help you obtain guidance and assistance on these actions as well.
4. Summary and Next Steps

Hopefully, this booklet has given you a fundamental sense of why environment management can be an important tool for your business success. You may feel overwhelmed by it all right now. Remember, the idea of using environmental management as a tool for improved business performance is relatively new in BiH. You can't be expected to take huge leaps in environmental management capability in a short amount of time. Integrating international environmental management practices into BiH business culture will take time.

The important thing is that you now begin to understand the role of environmental management and the benefits it can have. Give it some thought. Look at your business and consider the concepts we've discussed. Seek advice or information from experts that can help. Contact SEED and help us with recommendations for bringing more information and assistance to you on how your business can profit from environmental management. We would also be grateful if you would fill out the survey card attached to the back cover of this booklet.

SEED welcomes your feedback to this brochure and your questions and needs for information and technical assistance to better understand and implement the principles discussed here. Please feel free to contact Samir Besirevic, our Environmental Specialist, for further assistance.

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