

## Eco-management in Polish Companies

### Zarządzanie środowiskowe w polskich przedsiębiorstwach

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#### **Abstract**

Economic activity has an enormous influence on the environment. Enterprises contribute to the progressing degradation of existing ecosystems, cause serious threats to the biological diversity of our planet, emit hazardous pollutants and use available natural resources excessively, which can lead to their premature exhaustion. Therefore, for the world's nations to grow and develop in a sustainable manner, there is an urgent need to minimize the adverse impact of business activities, households and whole societies on the environment. Environmental degradation cannot be restrained by the neutralization of produced pollutants alone. Today, we need efficient environment-friendly technologies and production processes. Effective efforts aimed at the reduction of our ecological footprint should be undertaken by all involved entities, including designers, engineers and managers at all stages of the product design, production and distribution processes. The concept of corporate social responsibility, understood as a voluntary process of taking into account a wide array of social and ecological issues in all business activities as well as contacts with stakeholders, has become very popular in Poland. Development of the concept of corporate social responsibility (CSR) and sustainable development has a huge impact on the shaping of pro-ecological attitudes in society. From this perspective corporate social responsibility (CSR) can be rightly regarded as a concept useful to ensure sustainable development at the micro-level, i.e. at the level of enterprises. CSR is a component of sustainable eco-management. It can ensure that the principles of sustainable development are effectively implemented at the level of socio-economic systems, as well as individual actors involved in change.

Lublin Voivodeship has a clean and attractive environment. This paper presents research findings of the study carried out in 2005-2010 by researchers from the Faculty of Management, Lublin University of Technology. The main purpose of the study was to analyze the environmental activities and initiatives undertaken by enterprises operating in the region, directions of pro-environmental investments, implemented environmental management systems, as well as motivations of business managers to pay more attention to environmental issues.

**Keywords:** eco-management, corporate social responsibility (CSR), sustainable development

#### **Streszczenie**

Działalność gospodarcza ma ogromny wpływ na środowisko. Przedsiębiorstwa przyczyniają się do postępującej degradacji istniejących ekosystemów, powodując poważne zagrożenie dla różnorodności biologicznej naszej planety, emitując niebezpieczne zanieczyszczenia i nadmiernie wykorzystując dostępne zasoby naturalne. Istnieje konieczność przeprowadzania różnorodnych działań w celu zahamowania degradacji środowiska poprzez minimalizację negatywnego wpływu podmiotów gospodarczych, gospodarstw domowych i całego społeczeństwa. Nie wystarczą już tylko inicjatywy, których celem jest unieszkodliwianie zanieczyszczeń wytworzonych. Niezbędne jest poszukiwanie rozwiązań prowadzenia działalności w sposób jak najmniej uciążliwy dla środowiska w czasie planowania produkcji, projektowania dóbr oraz na każdym etapie procesu wytwórczego.

Społeczna odpowiedzialność przedsiębiorstw rozumiana jako dobrowolne uwzględnianie aspektów społecznych i ekologicznych w działaniach biznesowych oraz w kontaktach z interesariuszami, stała się pojęciem powszechnie znanym w Polsce. Rozwój koncepcji społecznej odpowiedzialności i zrównoważonego rozwoju ma ogromny wpływ na kształtowanie właściwych postaw proekologicznych w społeczeństwie. Z tej perspektywy, CSR może być traktowana jako koncepcja zapewniająca zrównoważony rozwój na poziomie mikro, czyli na poziomie

przedsiębiorstw. CSR stanowi element zrównoważonego zarządzania. Może zapewnić realizację zasad zrównoważonego rozwoju nie tylko na poziomie społeczno-ekonomicznych systemów, ale także indywidualnych działaczy zaangażowanych w zmiany.

Województwo lubelskie jest regionem czystym i atrakcyjnym środowiskowo. W latach 2005-2010 w celu oceny działań prośrodowiskowych najczęściej podejmowanych w przedsiębiorstwach zostały przeprowadzone badania w grupie podmiotów prowadzących działalność w tym województwie. Celem artykułu jest ukazanie kierunku inicjatyw prośrodowiskowych wyznaczanych przy prowadzeniu działalności gospodarczej, najczęściej podejmowanych inwestycjach prośrodowiskowych, wprowadzanych systemach zarządzania środowiskowego, a także czynnikach skłaniających do uwzględniania wpływu podmiotów na stan środowiska naturalnego oraz barier takiego postępowania.

**Słowa kluczowe:** zarządzanie środowiskowe, społeczna odpowiedzialność biznesu (CSR), zrównoważony rozwój

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## 1. Introduction

The paper presents a reflection on ecological aspects of corporate social responsibility and research findings of the study on environmental activities of companies operating in Lublin Voivodeship. For the purpose of the study, we developed a dedicated questionnaire in order to obtain necessary information from the most polluting companies based in the region. Obtained data were transferred to Statistica version 9.1 software, used to carry out a statistical correlation analysis. The research findings indicate that generally employees have positive attitudes to corporate social responsibility and that big and medium-sized companies undertake more pro-environmental actions than small enterprises.

The main goal of eco-management is to reduce the adverse impact of business activity on the environment. Growing social awareness has caused companies to pay more attention to environmental issues. If a company wants to survive in the market in the long run, it should generate profits in accordance with the law. According to the APO model of social responsibility (after profit obligation), the most important task of every business entity is to generate profit and respect binding legal regulations. These are the basic obligations which constitute the base of social responsibility (Carroll, 1979). In the short term, environmental and economic goals compete with one another. However, a more environmental friendly approach is beneficial to enterprises and can allow them to increase their profits markedly through a significant decrease in energy consumption, costs of raw materials and production components (Adamczyk, Nitkiewicz, 2007). Companies which invest in pro-environmental projects and implement environmental management systems, for example ISO 14000 or EMAS, constantly monitor and analyze their environmental impacts and make corresponding efforts to reduce environmental burden of their business activities.

The scope of responsibility of business entities towards different groups of stakeholders is widely debated in Europe, including in Poland (Laszlo, 2008).

Decent labor conditions, environmental protection, fulfilling contractual obligations, as well as the quest for solutions that can lead to a significant improvement in the quality of life of local communities, should all be essential components of contemporary business management systems. Customers, consumers and employees, in making their decisions, take account of various aspects of activities run by business entities. Therefore, all aspects of business activity, including legal, economic and social responsibility should be properly balanced. Only best managed companies can effectively achieve that equilibrium.

In relation to the environment, Corporate Social Responsibility (CSR) is a form of corporate self-regulation integrated into a business model whereby companies, besides generating profits, make efforts to ensure that undertaken activities are in strict compliance with the rules of law and ethical standards, and managers take account of environmental impacts of both operations and strategic decisions. This kind of approach is in line with the principles of sustainable development and contributes to significant improvements in the quality of life. Socially responsible business entities assume responsibility for the environmental effects of their activities, strive to reduce the levels of emitted pollutants and increase the efficiency of natural resources used (Mazurkiewicz, Grenna, 2003). One should remember that rapid economic growth, associated with the intensive exploitation of resources, is in opposition to the protection of these resources for future generations. Every nation has the right to use available natural resources but also the responsibility to protect its natural resources from intensive exploitation (Ikerd, 2008).

The concept of sustainable development is widely discussed in literature (Gawor, 2006; Piątek, 2007; Jaskiewicz, 2008; Sanchez, 2008; Pawlowski, 2009; Borys, 2010; Myga-Piątek, 2011). Many authors attempt to analyze ethical aspects related to ecology and the environment (Ikerd, 2008; Keitsch, 2011). The issue of responsibility relates to individual persons, as well as to various aspects of human activity, including economic, social and ecological activities (Kuzior, 2006).

### Development of Corporate Social Responsibility in Poland

The first phase of development of the concept of social responsibility in Poland took place between 1997 and 2000. During this time, the concept of social responsibility was hotly debated in literature, while entrepreneurs remained completely uninterested. The primary argument raised in the debate was that business owners have just one goal: to maximize the value of their enterprises. Adamczyk (2009) claims, that the concept of social responsibility in business developed markedly only in the period of 2000-2002 when some businessmen, journalists and political commentators became very concerned with the concept and considered the principles of the free economy as the canons of enterprise development. In 2000, the Responsible Business Forum (RBF) was established. It is the largest and the oldest non-governmental organization in Poland engaged in promoting responsible business. The Forum presents good CSR practices and undertakes other actions in order to encourage Polish companies to behave responsibly and make CSR principles standard in Polish business. RBF develops annual reports on CSR practices in the biggest Polish companies (Responsible Business Forum, 2002-2009) and presents comparative surveys of managerial attitudes towards social responsibility in various countries.

An increasing interest in the concept of corporate social responsibility was observed in 2002-2004, when big corporations, mainly companies with foreign capital, started making claims about their pro-ethical and socially engaged activities. In 2003, the Foundation for Social Communication (FSC) launched a report on nation-wide research on consumers' and opinion-makers' attitudes towards the idea of corporate social responsibility. Upon Poland's accession to the European Union in 2004, business circles started to become more actively engaged in various sponsoring and charity campaigns, largely regarded as part of their marketing activities. In 2006-2007, companies became much keener on publicizing their CSR practices and analyzed their business environment in order to identify expectations of various stakeholders. At that time, social responsibility was largely associated with charity activities (Adamczyk, 2009).

In 2006, the Institute for Private Enterprise and Democracy carried out a comprehensive, qualitative and quantitative study on gains and benefits derived by Polish companies from the implementation of CSR principles in their business activities.

The research included a statistical analysis of differences in distribution of variables determining benefits resulting from the implementation of CSR principles. The research was carried out on two groups of companies, companies that adopted a business model based on CSR principles, which

was confirmed by Business Fair Play Certificates, and a group of companies which did not participate in the Business Fair Play Certification Program, operating in the same sector and employing similar numbers of employees. These companies were selected from a database kept by the Central Statistical Office (Bąk et al., 2006).

Current liquidity is markedly higher in companies which have adopted and consistently applied in their business activities the principles of corporate social responsibility (higher by approx. 80%), which is very important in a business model based on human capital. Human resources are also better utilized. In that group of companies' gross profit per employee was 22% higher. On average, sales income was lower; however, sales profitability was higher by about 13.5%. It was also observed that the average salary in this group of companies was about 20% higher than in companies that did not adopt the CSR-based business model. Certainly the observed differences may be caused by various factors and socially responsible business conduct may not be the only contributor.

In the period between 2008 and 2011, a growing number of press publications, articles in professional journals as well as conferences promoting the development of responsible business was observed in Poland. Today, one can easily observe that the concept of CSR, which has developed dynamically in western European companies in the 1970s, is becoming equally popular in Polish companies.

Werther and Chandler (2006) claim that the growing importance of CSR in the 21<sup>st</sup> century has been caused by a series of factors, including the growing affluence of certain segments of society, which stimulates further growth and development, changes in social expectations resulting from growing social awareness, progressive globalization, the free flow of information, and the necessity for ecologically sustainable development.

The aim of the *Lisbon Strategy*, set out by the European Council in March 2000, was to make the European Union the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth. The European Union member states undertake many initiatives towards sustainable development (Pawłowski, 2009). According to Article 5 of the Polish *Constitution*, the Republic of Poland shall ensure the protection of the natural environment pursuant to the principles of sustainable development. In many aspects and areas the concepts of social responsibility and sustainable development overlap, which contributes to the integration of economic, social and environmental goals. From this perspective, corporate social responsibility can ensure sustainable development at the level of enterprises (the micro level). Some authors profess that effective implementation of CSR principles can not only contribute to sustainable development at the level of socio-

economical systems, but also at the level of individual players engaged in the process of change (Perrini et al., 2006).

A. Pawlowski points to several groups of problems associated with sustainable development. He claims that the ongoing discussion on sustainable development touches on three levels (Pawlowski, 2011). The first level is ethical reflection. The second level concerns environmental, social and economic issues. And finally, the third and equally important level of the debate concerns a wide range of technical, legal and political issues. According to Pawlowski the most important is the moral dimension. He claims that without ethical reflection the sustainable development revolution would never have taken place. The most hotly debated is the second level, however, without the third level any precise practical solutions would be unfeasible. CSR activities could also use such a hierarchy, but with some restrictions concerning the third level, because CSR should go beyond legal requirements and political pressures.

#### **A Study of Corporate Social Responsibility in the Lublin Region**

Social responsibility issues have been widely discussed for a number of years now and the research findings are presented during thematic conferences. In 2005-2009 Faculty of Management of the Lublin University of Technology carried out a research project on the social responsibility of businesses based in the Lublin region and environmental aspects of undertaken CSR activities.

The research involved a group of employees and managers, including managers and employees of companies which activity constitute significant burdens for the environment.

The Lublin region, which occupies 12% of the total area of Poland, is located in central-eastern part of Poland between the Vistula and Bug rivers. Its eastern frontier borders with Belarus and Ukraine. The region is clean and environmentally attractive, which is conducive to the development of tourism and agro-tourism, as well as health resorts. This is the reason why both regional and local authorities as well as local communities pay a lot of attention to the way companies operating in the region behave toward the environment. A prime example of this care can be The Economic Prize Contest organized annually by the President of the city of Lublin. Regional development strategy perceives the region as a future *Ecopolis* that take advantage of its most valuable assets – pure environment, healthy food, tourist potential and renewable energy sources. Most entrepreneurs demonstrate their commitment to environmental issues and cares of various stakeholders. Regional economic development strategy is based on the two key elements – efficient regional business and very attractive re-

gional health resorts and spas, as well as development of agro-tourism. There is a common consensus that the region should develop in a sustainable manner and its economic growth should be reconciled with a wide range of environmental issues, including development of cleaner production technologies.

During the first stage of the research, which involved a group of 600 employees of randomly selected enterprises, it was revealed that social responsibility was mainly associated with ethical behavior, acting according to binding legal regulations and care of the environment going beyond the legal requirements. According to the respondents' opinions, a more positive company image and a cleaner environment are among the most important benefits resulting from socially responsible attitudes.

The second stage of this empirical research was designed to analyze the most frequent environment protection activities, was carried out on a sample of companies whose business activity generates a significant burden for the environment in the Lublin region. The research sample was selected based on the classification of installations that can produce significant pollution in the environment or certain eco-systems, listed in a document issued in 2002 by the Minister of the Environment (Journal of Laws of 2002, no 122, item 1055). Initially, 103 business entities were selected, but finally the research involved 53 enterprises.

The research proved a close link between the company's size and its ecological activities. Researchers observed that there was a correlation between the size of the company and the number of undertaken ecological and environmental initiatives going beyond the legal requirements (correlation coefficient  $r = 0.6779$ ). The number of ecological and environmental initiatives undertaken by organizations, depending on the number of employees, can be expressed by the following formula:

$$LDP (AEA) = 2,2893 + 0,0152 * x$$

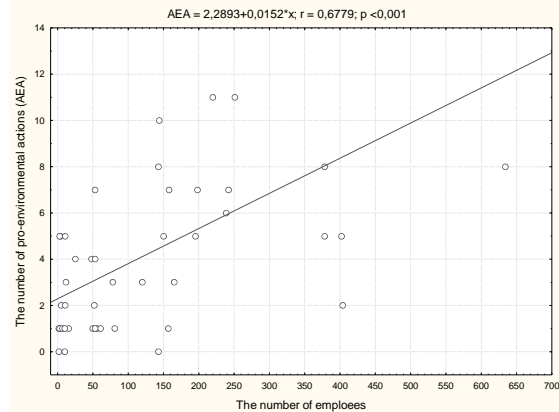
where:

$x$  represents the number of employees, and LDP (AEA) represents the number of ecological (pro-environmental) initiatives.

The research revealed that small businesses generally are not interested in the implementation of environmental management systems (EMS) and their environmental activities are confined to those explicitly required by the law. Most pro-environmental measures were undertaken by big and medium-sized companies. They also more frequently incorporate environmental management systems into their business management systems, spend more on staff training, and invest in research and development projects more than small enterprises. As for micro-enterprises and small enterprises, owners are mainly responsible for environmental protection issues. Frequently these issues

are also entrusted to employees responsible for occupational health and safety, quality assurance departments or even to technical personnel. Bigger companies have specialized departments responsible for environmental protection issues that are staffed by highly qualified personnel, well-prepared to deal with environmental issues.

Figure 1. Correlation between company size, measured by the number of employees, and the number of undertaken pro-environmental activities and initiatives (Authors' own work)



The implementation of environmental management systems (EMS) is currently becoming one of the most popular environmental protection activities. Almost 40% of respondents declared that they either had already put into practice the ISO 14001 standard or had plans to implement it in the near future. The purpose of this standard is to help all types of organizations to minimize their environmental footprint and improve their environmental performance regardless of the kind and extent of business operations, based on developed and introduced procedures. To date, the European Union's Eco-Management and Audit Scheme (EMAS) is little-known in Poland. The EMAS implementation procedure is quite complex, takes a lot of time and requires substantial capital and human resources. Despite potential difficulties, a growing number of companies have plans to put EMAS into practice in the future.

According to the research, most companies operating in the Lublin region undertook actions aimed at reducing air pollution which went beyond requirements imposed by the law. About 41% of analyzed units have purchased equipment that reduces or neutralizes gas pollutants emitted in the atmosphere and 47% of companies have installed dust pollutant collectors. Pro-environmental investments in almost 50% of analyzed companies included biological sewage treatment plants, modernization of sewage systems and equipment reducing the amount of produced contaminants and decreasing their harmfulness.

The research also revealed that environmental fees, including fees for the modification of the environ-

ment and using its resources for economic activity, tax relief, preferential credits and loans, credit guarantees, as well as the possibility of converting fees imposed for the excessive pollution into investments reducing this pollution turned out to be the most effective environmental policy instruments. In the case of a cement plant included in the research, the most effective instruments were transferable pollution emission permits, emission certificates and fees for excessive levels of pollutant emission.

There is no doubt that the ecological awareness of top-level managers of the companies analyzed was the main factor that, besides the binding legal regulations and possible sanctions, has motivated them to undertake pro-environmental activities and initiatives. Pro-environmental investment decisions were made based on environmental regulations, recommendations made by regulatory authorities, and the managements' ecological awareness. Almost 70% of top-level decision-makers expressed opinions that pro-environmental activities were less costly than corrective actions, and over 50% of them demonstrated sufficient knowledge about how the reduction of emitted pollutants can contribute to ensuring atmospheric balance. 67% of top level managers took the view that pro-environment activities had improved their company's image and perception by customers.

The research also showed that managers noticed measurable economic benefits resulting from environment protection investments. They pointed to the lower environmental fees (46% of respondents, including 34% of managers who managed to decrease environmental fees by up to 30%), and lower equipment and machinery utilization fees calculated by production volume and machinery efficiency (indicated by 21% of respondents). Pro-environment investments should be regarded as long-term profitable investments. In the analyzed companies an average investment return period ranged from 5-10 years (42% of companies). Sixty percent of companies that made pro-environment investments found them profitable, while 33% of companies did not analyze the profitability of undertaken ecological investments. Additional benefits resulting from the implementation of environmental management systems and pro-environment investments pointed to by the companies covered in the study included developing internal regulations and procedures relating to the company's daily operations, development of environmental impact monitoring systems, as well as a significant increase in the number of new customers and increased loyalty of business partners.

In 2004-2008, pro-environment investment outlays, purchased services, and expenditures associated with the research and development works and staff training were the most significant components of the environmental protection budgets of companies

included in the study. Regardless of the fact whether managers are motivated by pressures exerted by the stakeholders or act voluntarily, if their activities go beyond the legal requirements, they can be considered as manifestations of corporate social responsibility and therefore they contribute to sustainable development. It was also observed that in 2006-2008 these companies gradually decreased the percentage of pro-environment investment outlays in their environmental protection budgets, while the proportion of costs associated with factory laboratories, research-and-development and staff training costs increased.

Limited financial resources turned out to be the main barrier that hampered pro-environment and ecological investment decisions. Entrepreneurs pointed to the high costs of ecological investments, long investment return period, difficult financial conditions and other investment priorities. Eighty seven percent of companies financed pro-environment investments from their own resources but only a quarter of these businesses managed to win co-financing by the National Environmental Protection Fund (NEPF), Regional Environmental Protection Fund (REPF) or other assistance funds offered by the European Union.

### Conclusion

In the Lublin region, the concept of social responsibility is associated mainly with environmental protection and running business activities in accordance with eco-management principles. Often the companies undertake pro-environment investments in order to reduce air pollution and to modernize existing water supply installations, as well as sewage collection and disposal systems. A typical investment return period is up to 10 years. Therefore, companies, which comply with eco-management principles, should be encouraged to seek external financial resources, for example preferential credits, grants and subsidies offered within the framework of various EU programs. The most popular eco-management system is the ISO 14000 environmental management system, composed of the ISO 14000 family of international standards, which was developed in order to help organizations take a more proactive approach to the management of environmental issues. The Eco-Management and Audit Scheme (EMAS), developed by the European Union, previously unknown in Poland, is now becoming increasingly popular.

Our research revealed that big and medium-sized companies, more often than small enterprises, get involved in environmental protection undertakings. Therefore, micro- and small enterprises should be encouraged to take a more active role in environmental protection. Support provided by regional and local authorities as well as the promotion of socially responsible behaviors are the main contrib-

utors to the fact that the Lublin region still features a clean environment and undamaged natural conditions.

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