

EMAS: unfulfilled expectations and challenges associated with the planned publication of the new ISO 14001:2015

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Abstract

The reconciliation of economic growth with environment is currently one of the biggest challenges facing Europe and the world. Demand for natural resources is growing, and global competition in this field causes an increase in pressure on the environment. The necessity of efficient usage of resources entails the need for changes in production models. In this regard, implementing of environmental management systems (EMS) such as international normalized ISO 14001 or European EMAS (Eco-management and Audit Scheme) has enjoyed popularity since the mid-90s and seems to be inevitable. However, some of implemented systems in organisations suffer problems. They are not as effective as was expected and in some points dash companies' hopes. In many cases, management systems are run in the operating level and often they are not sufficiently connected with strategic management and planning. Judging from the number of EMAS registered organisations (compared with ISO 14001) EMAS seems to be a fiasco. A weak system of incentives, insufficient availability of support funds, inadequate information and promotion make the current number of registered organisations not exceed 3000 and it still decreases. Poor knowledge of the society about EMAS and low recognisability of the EMAS logo makes the system a rather useless tool in the communication and marketing fields. The purpose of the considerations contained in the paper is, on the one hand, to describe the unmet expectations of organisations after the implementation of EMAS with regard to the promises made in the strategic documents and on the other hand, to pay attention to challenges that EMAS will face after the publication of the new ISO 14001:2015 standard.



Keywords: environmental aspects, eco-management and audit scheme, environmental management system, environmental reporting, environmental interested parties, environmental risk management, ISO 14001:2015, EMAS.

1 Introduction

Building an eco-friendly image is one of the current trends followed by the largest corporations in the world. Pro-environmental trends are being used to gain consumer favour and build the picture of a company that is aware of environmental issues besides focusing merely on profits. In order to prove environmental involvement, companies implement environmental management system (EMS) such ISO 14001 standard or EMAS regulation.

EMAS is an instrument created by the European Commission, designed for organisations looking to improve their environmental performance [1]. Regulation of the European Parliament and the Council on the voluntary participation by organisations in EMAS indicates that organisations should be encouraged to participate in EMAS [2]. Incentives should cover gains in terms of regulatory control, cost savings and public image improvement. Participation in EMAS should be promoted by facilitating access to information, support funds or tax relief [3].

The object and purpose of the considerations contained in the paper is on the one hand verification if the promises made in the strategic documents of EMAS regulation are respected and whether the expectations of organisations with implemented EMAS are met. On the other hand a synthesis of the unfulfilled expectations and requirements paved the way for an analysis of future challenges that will be faced by EMAS especially after releasing the new ISO 14001 international standard which is planned for the second half of 2015 year.

The paper consists of five parts. In the following section, there is the presentation of the research methodology and materials, which were used during empirical studies and a brief summary of quantity of companies participating in EMAS. In the third part of the paper there is a description of results of the study. Finally in part four we present conclusions. The paper is closed by the acknowledgments.

2 Material and methods of empirical studies

Currently in EMAS system less than 3000 organisations are registered [1], which is a small number compared with the EMS based on the requirements of ISO 14001 standard with more than 300,000 certificates worldwide [4] (despite the fact that the first EMAS regulation was established in 1993 and the first ISO 14001 standard in 1996). EMAS is generally European system but it allows participation of organisations outside the EU (e.g. in EMAS there are registered 9 organisations from Norway). In three EU countries there has been no registration up to now (Croatia, Latvia, Slovenia) [1]. The leaders, in terms of quantity of registered organisations, are Italy (1050 organisations), Spain (907 organisations) and Germany (317 organisations) [1]. The total number of



registrations is decreasing (the peak point of the number of registered organisations was in September 2011 with 4610, at the present moment there are 2952 registered organisations) [1].

The study was conducted in the period of 2013–2015 on a group of companies operating in Poland that have implemented and maintain Eco-management and Audit Scheme according to EMAS. The study involved an analysis of both sources of data: primary and secondary. Secondary data were obtained from companies' environmental statements. Primary data were gathered using survey methods (direct interview and electronic survey – CAWI – Computer-Assisted Web Interview). The surveys and interviews were addressed directly to the EMS representatives or to other competent employees who have the most adequate knowledge about EMS in organisations suitable for the aims and scopes of the study. The study enabled to gain information includes: barriers, motivations, benefits, disappointments, effectiveness and efficiency of the EMAS system. This paper describes only the part of carried researches. In the paper there are described findings from data shared by 28 organisations. Nevertheless these studies are on the qualitative nature and should not be treated quantitatively.

3 Results and discussion

Before describing the research results it is important to understand what encouraged and motivated organisations to implement EMAS system. Most organisations indicated that the care about the environment was the most important motivator (67.9%). 64.3% indicated that EMAS was implemented in order to provide continuous improvement (next step in a mature environmental management), 60.7% point out that they wanted to increase prestige and find themselves in the elite group, 28.6% indicated that they implemented EMAS to increase the possibility of obtaining reductions in taxes or fees.

Almost all organisations involved in the study, before implementing EMAS had already experience with other certified management systems (QMS according to ISO 9001 – 96.2%, EMS according to ISO 14001 – 88.5%). Previous experience with certified management systems has not eliminated all barriers associated with the implementation of EMAS, but allowed to reduce them. The main barriers were associated with the elements characteristic EMAS (identification of indirect environmental aspects – 46.2%, identification of environmental performance indicators – 42.3%, too many administrative documents during registration process and difficulties in developing environmental statement – 30.8%, additional controls law enforcement authorities – 26.9%). None of the organisations indicated that inadequate technical condition of the equipment with the greatest impact on the environment was the barrier. For comparison, a study conducted in 2001 in Poznan University of Economics on EMS according to ISO 14001 has shown that it is one of the main barriers [5]. Differences indicate that organisations have taken experience from the implementation of management systems (especially in time, resource and budget planning). EMAS is implemented by organisations that are mature in



terms of environmental issues and aware of the environmental legal requirements [6].

3.1 Unfulfilled expectations

Organisations participating in the research were asked in open questions to indicate their expectations regarding EMAS and possible recommendations for future updates. The responses concerning unmet expectations were grouped into five clusters. Most unfulfilled expectations were associated with the material and financial sphere (84.6%), prestige and promotion sphere (50.0%), administration and control sphere (42.3%), organisation and management sphere (26.9%) and finally the sphere of green procurement law (26.9%).

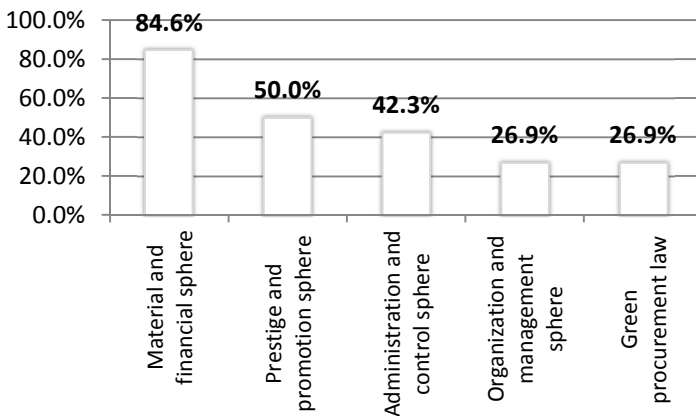


Figure 1: Unfulfilled expectations.

In terms of the *material and financial* sphere organisations expected primarily benefits related with reduction of fees (e.g. tax reliefs, environmental charges, insurance rates, tariffs). The most organisations anticipated some opportunities for acquiring external sources of financing (e.g. co-financing for the implementation of eco-investments and environmental programs, preferences in obtaining grants and subsidies from local government, co-financing projects related to EMAS). In 2009–2013 in Poland six beneficiaries received funding for the introduction of EMAS. The Operational Programme “Infrastructure and Environment National Cohesion Strategy” granted possession of EMS [7], but this criterion was not compulsory, but only optional. In addition also other management systems were additionally scored (e.g. ISO 14001, ISO 50001). Some organisations indicated that implementation of EMAS did not contribute to reduction of environmental performance costs. The majority pointed that actually there is a weak system of incentives from the government and authorities to implement and maintain EMAS.

The second sphere associated with unmet expectations is the sphere of *prestige and promotion*. The respondents acknowledged that the logo EMAS is still not recognisable and the knowledge of EMAS among the society is poor.

Customers do not require EMAS implementation (clients require only ISO 14001, EMAS implementation is not additionally scored). 42.3% of those questioned think that public administration and authorities do not promote strong enough the EMAS system among entrepreneurs and community.

The third group is connected with *administration and control* processes. Organisations hoped that EMAS implementation would contribute to reduction of external environmental controls frequency and would simplify the controlling process. Meanwhile, not only the number of inspections did not decreased, but also before the final decision on registration, organisations often had been a subject of increased inspections. In addition to the reduction in controls, organisations expected that EMAS would have impact on simplifying and accelerating of settling official matters and would facilitate obtaining environmental permits and decisions.

Unfulfilled expectations in the sphere of *organisation and management* are not as exposed as the other above described spheres. Every fourth respondent indicated the answer from this group. The responses indicated that EMAS representatives face the same problems as in the case of other standardized management systems: small commitment of top management, poor involvement of middle-level cadres, little involvement of other employees, problems in internal communication.

In addition to the above-mentioned spheres, respondents also awaited changes in "*green procurement*". Respondents expected establishing criteria in such way that organisations with implemented EMAS would receive higher scores compared to those with the implemented EMS in accordance with the ISO 14001 standard.

Table 1: Expectations of EMAS.

Material and financial sphere <ul style="list-style-type: none"> – reduction of environmental fees – external sources of financing – reduction of environmental performance costs 	84.6%
Prestige and promotion sphere <ul style="list-style-type: none"> – increase recognisability of EMAS logo – increase the knowledge of EMAS among society – stronger promotion of EMAS by the administration 	50.0%
Administration and control sphere <ul style="list-style-type: none"> – reduction of environmental controls – simplification of controlling process – simplification of the process of obtaining permits 	42.3%
Organisation and management sphere <ul style="list-style-type: none"> – increase commitment of staff and top management 	26.9%
Green procurement law <ul style="list-style-type: none"> – establish favorable criteria of green procurement 	26.9%

The goal adopted in the National Environmental Policy for 2009–2012 with a perspective until 2016 was the widest possible accession to EMAS by dissemination of knowledge among the public about EMAS and create economic benefits for organisations participating in EMAS. The report on the implementation of environmental policy indicates that in considered period no progress has been made in creating economic benefits for companies and institutions that are in EMAS system [8]. The report also stated that building system of legislative and financial solutions seems to be the most appropriate and effective tool for encouraging and supporting the implementation of EMAS in organisations. Following this commitment EMAS has been included in the developed by Poland reform program for the implementation of the strategy “Europe 2020” [9]. One of the nine integrated strategies involves dissemination among entrepreneurs’ sustainable models of production, including EMS by simplifying environmental legal requirements and improving cooperation between industrial and service sectors and public administration and building the system of legislative and financial solutions to support the implementation of EMAS in organisations [10].

3.2 Challenges associated with the new ISO 14001

ISO Technical Committee TC 207 is working under the new ISO 14001 standard since 2013 (one of the authors – A. Matuszak-Flejszman is a team member of SC1 subcommittee under ISO/TC 207). The novelisation is aimed to review the standard and check its utility taking into consideration previous experience. The aim is to provide necessary changes in the standard in order to assure that it is up to date and it follows current trends in science, technics and practices. Changes in ISO 14001 will have (earlier or later) impact on EMAS system since EMAS includes requirements of ISO 14001 in one of its annex (annex no 2) [2]. Although the work under ISO 14001 is still in progress the way of main changes is already given (the Final Draft of International Standard – FDIS, is expected to be issued nearly and the ISO standard should be ready in the second half of 2015). It is assumed that modifications, besides the layout and some definitions, will include the incorporation into EMS: life cycle perspectives, performance evaluation, external communication, interested parties requirements, compliance obligations and risk and opportunities assessment [11]. Some of this changes sound familiar since they are actually required by EMAS system (EMAS is being considered as the system, which has higher requirements than ISO 14001, and as the next step into improvement of EMS).

In the revised ISO 14001 standard there will be a requirement to consider *a life-cycle perspective* during identifying and evaluating environmental aspects [11–13]. Although it is not expected that organisations will need to carry out detailed life-cycle assessments, which is defined as “compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle” [13–15] but it means that companies will need to think beyond the areas where they have direct control and take into consideration also their indirect influence. According to revised standard an environmental impact should be considered also during design and development



processes and must be included into an organisation's supply chain with implications for procurement. A new approach to the design and development can help to improve resource utilization and process efficiency [16]. EMAS-registered companies are familiar with those new requirements. EMAS already requires considering not only direct environmental aspects but also indirect aspects, which includes: "product life cycle issues (design, development, packaging, transportation, use and waste recovery/disposal), capital investments, granting loans and insurance services, new markets, choice and composition of services, administrative and planning decisions, product range compositions, the environmental performance and practices of contractors, subcontractors and suppliers" (see annex no 1 to EMAS regulation) [2].

Performance evaluation by using performance indicators has been introduced to the ISO/DIS 14001 [11, 12]. For those familiar with other standard in the ISO family, the definition of environmental performance should be known. Environmental performance is defined as "measurable results of an organisation's management of its environmental aspects" [2, 17–19]. Performance can relate either to quantitative or qualitative findings [11]. Indicators can refer for example to environmental policy, legal requirements, objectives or expectations of stakeholders, but the selection of indicators is at the decision of the organisation. The guidance for setting indicators can be found in ISO 14031 [17] and the guidance for obtaining quantitative environmental information in ISO/TS 14033 [20]. Using performance indicators to track improvement is already well known by those EMAS-registered. EMAS require reporting on the organisations' environmental performance using core indicators given in annex no 4 to EMAS regulations and using sector-specific indicators focusing on key environmental areas at the process and product which enable to compare the performance over different reporting periods and with other organisations [2].

External communication of the environmental aspects has been voluntary in ISO 14001 so far. It seems that in the revised ISO 14001 both (internal and external) communication will be obligatory. Besides that, the new ISO 14001 standard put more emphasis on the *interested parties' requirements* and strategic consideration of the organisation's environmental context including the interests of stakeholders [11, 12, 19]. This approach also applies to EMAS system in which the comprehensive information regarding environmental policy, management system, aspects, impacts, programme and performance must be provided to the public in the form of environmental statement (see annex no 4 to EMAS regulation) [2]. Organisations must demonstrate an open dialogue with the public and interested parties and it is recommended to take into account the views of interested parties, as a criterion for assessing the significance of the environmental impact [2]. Applying open dialogue and environmental statement in accordance with EMAS might be an optimal way to implement the requirement of external communication for those ISO-certified. In this regard also ISO 14063 standard containing guidelines and examples for environmental communication might be used [21].

In the new ISO 14001 standard the term “legal and other requirements” have been changed into “*compliance obligation*” [11]. Basically it means that organisations will be required to demonstrate an understanding of their environmental compliance with the relevant legal requirements at all times. In EMAS regulation, the term “legal compliance” is used and it means, “full implementation of applicable legal requirements, including permit conditions, relating to the environment” [2, 19]. The registration into EMAS may be done under condition that a Competent Body has no evidence of non-compliance by the organisation.

The new approach of *risk and opportunities assessment* in all management standards is also included into ISO 14001. The risk analysis will be intended to identify threats (adverse impacts) and opportunities (beneficial impacts) and take up actions addressed to it [11, 19].

Changes in ISO 14001 that will affect EMAS system may be considered in two dimensions (micro scale – the scale of single EMAS-registered organisation, and macro scale – the scale of global entire EMAS system). Taking into consideration the micro scale, EMAS registered organisations wishing to achieve compliance also with the new ISO 14001 standard will have to focus their attention mainly on issues related to the risk assessment. The macro scale will probably require larger adjustments. The analysis indicates three potential scenarios of modifications and ways of EMAS development. Scenario 1 – EMAS will not change at all, it will operate independently of the ISO 14001:2015. Scenario 2 – European Commission will amend only annex no 2 and the ISO 14001:2004 will be replaced by the ISO 14001:2015. Scenario 3 – the whole EMAS regulation will be changed and requirements will be increased in order to keep the opinion of more demanding system.

4 Conclusions

According to the study there is still a little amount of measurable and objective incentives to implement EMAS. In Poland there is currently a possibility of exemption from excise duty on coal and gas to energy-intensive companies [22]. Besides that EMAS-registered companies are exempted from the registration fee to the registry of waste management and the period of compulsory checks by environmental authorities is extended from 1 to 3 years for enterprises with IPPC (Integrated Pollution Prevention and Control) permit under the Industrial Emissions Directive [23].

Approved by the Polish Council of Ministers “Strategy of energy security and the environment” involves dissemination among entrepreneurs sustainable patterns of production, including environmental management by simplifying the law, improve cooperation with industrial and service sectors with the public administration, build a system of legislative and financial solutions supporting the implementation of EMAS and promotion of sustainable models of production [10]. During the allocation of resources within the New Financial Perspective 2014–2020 it will be possible to obtain additional points for the EMAS [24, 25].



There are also efforts on a law on energy efficiency, in which EMAS could be indicated as a means of improving energy efficiency.

A brief comparison with other countries was made in order to better understand an issue. E-mail inquiries were sent to Competent Bodies. Replies from 7 countries were obtained (Austria, Czech Republic, France, Germany, Netherlands, Portugal, Spain and Italy).

In most countries EMAS-registered companies are not entitled to obtain tax reliefs and reduction of fees. However, Germany has a wide range of refunds (e.g. energy tax, electricity tax, exemption of the compulsory Renewable Energy Allocation, reduction of fees for groundwater extraction, reduction of fees for some permit procedures). In Italy in some provinces companies can take advantage for example of a reduction of a regional fee on the production activities. In Spain there were tax reliefs during the years 2000–2013, but due to the economic crisis, in the last years these allowances have disappeared. In France EMAS-registered companies benefit from a reduced fee for the general tax on polluting activities. Portugal a strategy to promote EMAS and to evaluate a set of benefits for EMAS organisations, such as: reduction of environmental fees, reduction controls and inspections is under development.

As for the opportunities for acquiring external sources of financing, primarily Spain and Italy have incentives in this field. Spain indicated to receive many grants and subsidies to companies for assistance in registration in the EMAS. In Italy during the last years, several local governments and chambers of commerce have granted funds for the implementation of an EMS into small and medium enterprises. Moreover, the national and the regional operational programme under European Structural Fund, gives funds for green technologies (additional points to EMAS-registered organisations).

EMAS-registered companies in some countries take advantage of the reduction in frequency of external controls and inspections (e.g. reduced frequency of inspections for installations under Industrial Emissions Directive – IPPC). Besides that, some countries are simplifying the process of settling official matters and obtaining environmental permits and decisions (e.g. in Spain the permitting process is easier for those EMAS-registered, in Austria there are some regulatory reliefs and simplified lawsuit concerning amending of industrial plants, in France EMAS-registered organisations are exempted from publishing additional non-financial reports, in Italy the scheduled time for obtaining the environmental permits is reduced).

Upcoming changes in ISO 14001 are moving in towards the EMAS, which can be an opportunity for this European system [26]. Currently, EMAS is regarded as more difficult and more rigorous. Decreasing differences in the requirements of both systems can contribute to the growth of interest in EMAS – providing support for an appropriate system of incentives. The role of the European Commission and the Competent Bodies will be to develop such strategy and legislative and legal solutions, which will constitute as an incentive for EMAS registration. Developing appropriate incentives and legal amendments requires a lot of time. Nevertheless, everything must be done to take advantage of this chance.



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