

# New Developments in EMAS: Best Environmental Management Practices

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The EU Eco-Management and Audit Scheme (EMAS), from the beginning, has evolved over time. In its last updates, it promotes the best environmental management practices through the development of the Sectoral Reference Documents (SRDs) that have to be taken into consideration by the EMAS-registered organizations in assessing their environmental performance. Many organizations and companies have a wide margin to improve their environmental performance. With the aim to improve their eco-efficiency and thus its reputation and the sustainability of their business, many companies want to lower their impact on the environment. To help organizations achieve this goal, the CCR identifies, evaluates, and documents best environmental management practices (BEMPs) for the different sectors, in collaboration with stakeholders. The results of this work are the Sectoral Reference Documents (SRDs) on best practices in environmental management. This activity is part of the European Commission's work to implement the system of EU Eco-management and Audit Scheme (EMAS), a voluntary framework for enterprises and other organizations to evaluate, report, and improve their environmental performance. In this context, the EU decided in 2009 to promote best environmental management practices through the development of the Sectoral Reference Documents (SRDs).

*Keywords:* EMAS, environmental, BEMPs

## Introduction

In short, sustainable development (Bianchi, 2000) is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs (Gamboni, 2003). Social, economic, and environmental issues are inseparable and interdependent (Battaglia & Daddi, 2006).

The EU has integrated sustainable development policies through the European Union Strategy for Sustainable Development (SDS), as well as the action plan for environmental technologies prioritizing sustainable consumption and production (SCP), also highlighted in Europe as a strategy for 2020. SCP in this context aimed at promoting economic growth and social cohesion without compromising the quality of the environment. A key feature of this strategy is to identify best environmental management practices (BEMPs) within the processes and areas under investigation by EMAS (Amodeo, Jirillo, & Rocchi, 2007).

The JRC (Joint Research Centre) sustains this objective through the analysis of the relationship between technological change, scientific developments, the environment, the economy, and political approaches. For

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this reason, it produces technical and economic analyses of technological options and socio-economic analyses based on analytic modeling.

### **Sustainable Production: Best Available Techniques**

Industrial production processes account for a considerable share of overall pollution in Europe. The EU has a common set of rules for the control of industrial plants, described in the Industrial Emissions Directive 2010/75/EU (IED). The JRC manages the European Integrated Pollution Prevention Control (IPPC) Bureau that produces Sectoral Reference Documents on best available techniques, used by the competent authorities in the EU Member States for issuing operating permits.

Product consumption and production are responsible for a large number of environmental problems, ranging from air, water, and soil pollution to an increase in resource consumption as well as negative impacts on health.

The JRC manages the European Office to support this work through the ability to scientifically assess the environmental performance of a wide range of product groups, and through operational management of the policies' implementation process for the promotion of Ecolabel Regulation EC 66/2010, the Green Public Procurement Communication COM (2008) 400, the ERP 125/2009/EC (Eco-design requirements for energy-related products), and Energy labelling directive 2010/30/EU.

### **Best Environmental Management Practices (BEMPs)**

To help organizations achieve this goal, the JRC identifies, evaluates, and produces the documents and necessary guidelines to promote best environmental management practices (BEMPs) for different sectors while in close cooperation with stakeholders. To do this, the JRC follows the so-called leader approach, namely, studying the techniques, measures, or actions which are implemented by the most advanced sector organizations in terms of environmental performance in each of the various areas such as energy efficiency, resource efficiency, emissions, but also Supply Chain Management. The results of this work are the Sectoral Reference Documents (SRDs) on the best environmental management practices.

This activity is part of the European Commission's work towards the implementation of the Eco-Management and Audit Scheme of the EU (EMAS), a voluntary framework for companies and other organizations to evaluate, report, and improve their environmental performance. Within this framework, in 2009 the EU decided to promote best environmental management practices through the development of the Sectoral Reference Documents (SRDs).

### **EMAS in Numbers**

EMAS has evolved over time (Laskuraina, Heras-Saizarbitoria, & Casadesúsc, 2015): its most recent revision promotes the best environmental management practices through the development of the Sectoral Reference Documents (SRDs) considered by EMAS-registered organizations upon their environmental performance evaluation. Since 2001 EMAS has been open to all economic sectors including public and private services.

In 2009 the EMAS Regulation (ANPA, 1998) was revised and modified for the second time with Regulation (EC) No. 1221/2009 of the European Parliament and Council of 25 November 2009, allowing voluntary participation by organizations in a Community Eco-Management and Audit Scheme (EMAS), being

published on 22 December 2009 and entering into force on 11 January 2010. The SRDs contain detailed information on techniques that describe the best environmental management practices to improve environmental performance such as specific environmental indicators by sector and benchmarks of excellence.

EMAS-registered organizations must take the relevant Sectoral Reference Documents into account to assess their environmental performance. The same goes for EMAS environmental auditors during the audit of the requirements under Article 18 of the EMAS Regulation.

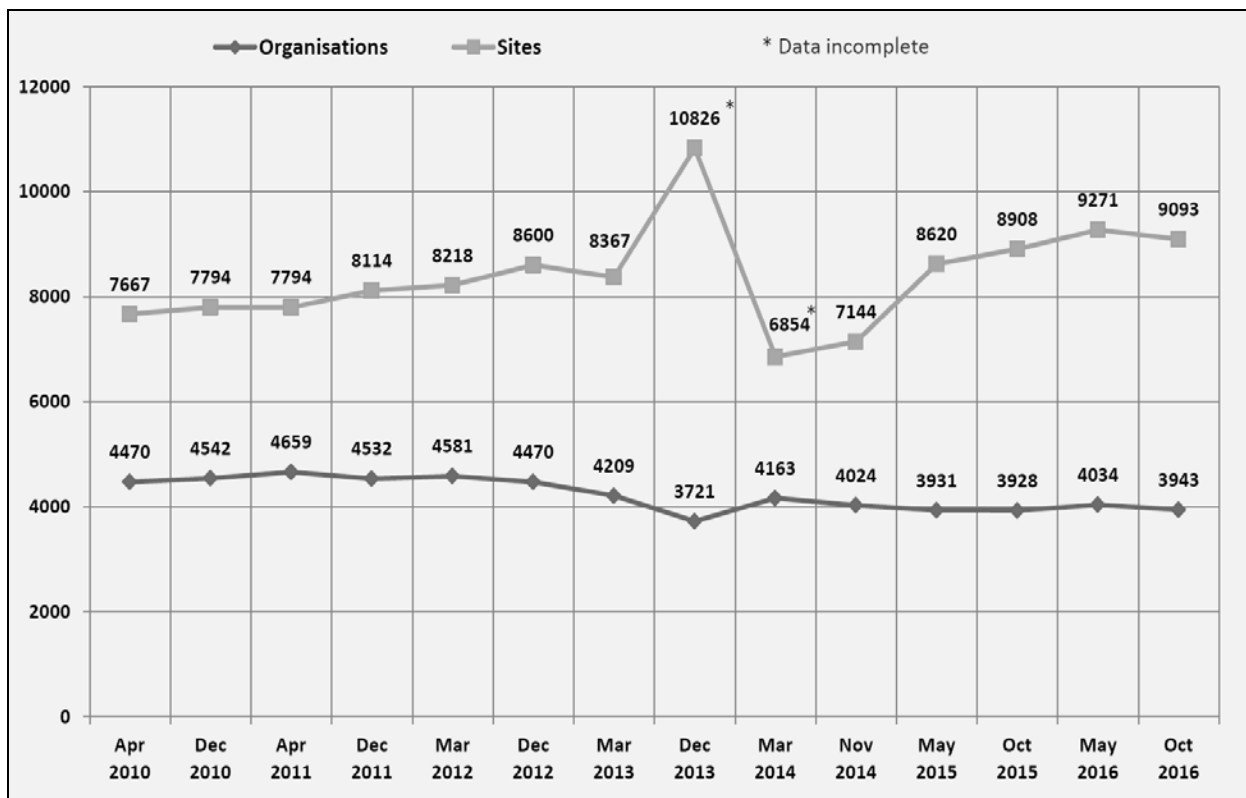


Figure 1. Emas trends.

### Priority Areas

The Sectoral Reference Documents on best environmental management practices are being studied and will be developed for a list of priority sectors. The first sectors being considered are: retail trade, tourism, construction, public administration, agriculture crops and animal production, and food and beverage production. The European Commission has set an indicative list of priority sectors for which sectoral reference documents should be developed.

The prioritised sectors are retail trade, tourism, construction, public administration, agriculture crops and animal production, food and beverage production, automobile manufacturing, electrical and electronic equipment manufacturing, waste management, and metal products manufacturing, except machinery, equipment, and telecommunications.

So far, sectoral projects related to the Sectoral Reference Documents have been developed in the areas of trade, tourism, and construction retail sales. The work is in the final phase for the sectors of public administration, agriculture crops and animal production, and for the food and beverage industry. The work is at

an advanced stage instead for the automobile manufacturing and electrical and electronic equipment manufacturing sectors. In addition, the Committee has recently set operating procedures under way to define the following three sectors: waste management, metal products, and telecommunications. For the development of Sectoral Reference Documents (SRDs), the JRC set up a Technical Working Group (TWG) of field experts to collect and review information on sectoral BEMPs. The TWG includes a number of experts with extensive industry knowledge from different perspectives (industry, Member States, research institutes, technology suppliers, environmental NGOs and so on) and must be representative and balanced for the whole sector. The JRC organizes the Technical Working Group's work, promotes the exchange of information, conducts scientific and technical analyses on the vast amount of information exchanged, and processes the Sectoral Reference Documents (SRDs).

### **The Sectoral Reference Documents (SRDs)**

The JRC is currently producing two documents describing each sector's BEMPs: a sectoral overview of the Sectoral Reference Documents (SRDs), and a detailed technical report. The first is the document referring to Article 46.1 of the EMAS Regulation, which needs to be approved by representatives of the EU countries in the EMAS Committee and then officially adopted by the European Commission. This document briefly describes all identified BEMPs for a given sector and the conditions in which they can be applied. For each BEMP, it also lists which environmental indicators can be used to monitor its implementation and the benchmarks of excellence. The shared resources database will be officially published by the European Commission shortly. This synopsis of SRDs (Arinas, 2016) is based on a much more complete and detailed technical report, which is the direct result of all the research work carried out by the JRC for the SRDs; this document is published by the JRC as the JRC Scientific and Policy Report.

The technical report follows the same general structure, but provides a more detailed description of the different BEMPs according to the following common structure:

- description
- environmental benefits achieved
- cross media effects
- applicability
- implementation
- reference literature

### **BEMP Impact in Tourism Sector**

Tourism is an important economic sector in Europe. In the EU alone there are 1.7 million companies classified as hotels and restaurants, employing more than nine million people and generating an annual turnover of 430 billion euro. Europe is the largest tourist region in the world, which hosts 53% of international tourist arrivals. Five European countries enter the top 10 in the world for international arrivals: France, Spain, Italy, the UK, and Germany. The average long-term growth rate of the European tourism sector is 2.8%.

All these data reflect this sector's economic and social importance and from this, the tourism sector is recognized as having a high potential for environmental improvement. The consumption of resources per guest is high in accommodations and establishments, food and beverages, and often the eco-efficiency of such structures is quite variable, indicating a high potential for improvement through the dissemination of best

practices. Through a targeted and conscious choice, green facilities management, and a change in offered services, tourist business management can produce a positive environmental influence on a broader scope, and well-managed tourism is able to generate income from natural resources in a truly sustainable way.

In its work identifying the best environmental management practices and the EMAS Sectoral Reference Documents for different sectors, the JRC has developed a sectoral reference document on good environmental management practices for the tourism sector. The main recipients of these documents are tour operators, location and residential facilities and establishments for the production of food and beverages, as well as destination managers such as local authorities.

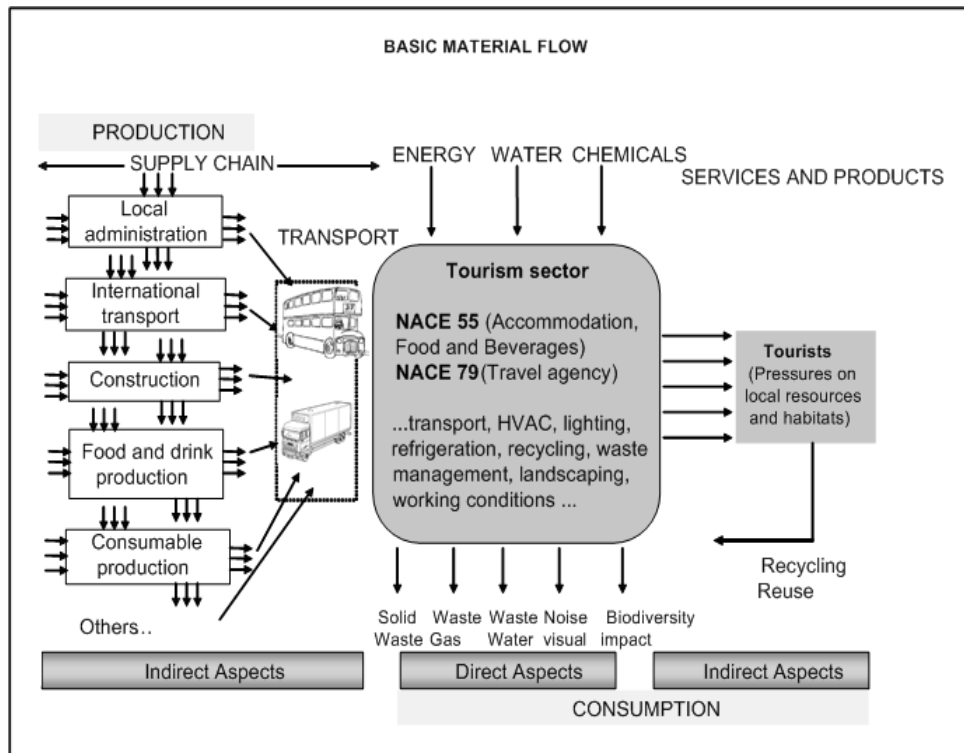


Figure 2. Flow chart.

The main direct and indirect environmental aspects of the sector are described in Figure 2 above.

Best environmental management practices (BEMPs) are the best practices identified at the process level, targeting key stakeholders to address the most significant environmental aspects:

- BEMPs for destination management. These include development planning and conservation measures, and the provision of adequate services to meet tourist's high season needs (e.g. modular, high capacity water treatment plants).
- BEMPs for tour operators and travel agencies. These include cooperation with destination managers to improve destinations' environmental conditions, optimize transport to reduce emissions, taking advantage of eco-efficiency improvements by accommodation providers, and marketing more sustainable tours and visits.
- BEMPs to minimize energy use in accommodations. These include improving building envelope thermal insulation, optimization of HVAC systems, lighting and improved efficiency and use of renewable energy sources.

- BEMPs to minimize water consumption in tourist accommodations. These include system monitoring and maintenance and installation of efficient plants, optimization of laundering processes, landscaping that is compatible with the environment and irrigation, efficient swimming pool management as well as in water tanks and in wastewater treatment.
- BEMPs to minimize and manage waste in accommodations. These include waste minimization through green procurement, on-site sorting, recycling, and wastewater treatment.
- BEMPs for food and drink suppliers. These include the procurement and efficient management of food products, optimized waste management, efficient washing and cleaning processes, and highly efficient cooking processes.
- BEMPs for campsites. These include the site's environmentally friendly management, efficient hygienic services, the use of renewable energy sources, and the provision of waste management services.

For each BEMP, key indicators of environmental performance have also been identified (for measuring the environmental performance in each area), as well as benchmarks of excellence (for level of environmental performance achieved by the best players in the industry). In addition, the work looked closely at the potential application of best practices by summarizing and indexing techniques relevant to SMEs.

### Conclusions

At present in Europe there are less than 10,000 registered companies, of which about 20% are public administrations, and the growth rate remains very low. The problem of low uptake could be partly solved with the spread of BEMP. In light of the above and of the environmental improvements implemented by the Commission and the various European organizations towards a process of implementation of best practices and performances in the environmental field, we can see that EMAS has entered a phase of refinement and finalization of processes and objectives. All are taking place in a clear and straightforward path, even if long and complex, giving more body and substance to a scheme with voluntary membership, which is precisely EMAS, but that has long ago become a full part of the technical rules in the environmental field.

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