



EMAS @ SCHOOL - Environmental Management and Audit Scheme implementation at a complex school

LIFE03 ENV/P/000501



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Project description:

Background

The Environmental Management and Audit Scheme - EMAS II, was intended as a voluntary scheme to evaluate the environmental impact of institutions and set targets for improvement. It allows companies and other organizations to evaluate, report and improve their environmental performance. The environmental impact of EMAS II implementation is high, and, despite the costs engendered, it is the most economic and integrated tool available. It has achieved good results with regard to the use of raw materials and energy consumption by the institutions who have taken it on board, as well as a better performance in waste materials production and treatment. Until recently, EMAS was mainly directed at the industrial sector, where there is a wide experience, namely in ISO certification. However, its implementation amongst public sector organisations is extremely rare. Moreover, environmental management systems are usually implemented in institutions with only one productive activity. Consequently, EMAS has not yet been tested as an integrated method for the environmental performance of complex institutions, with multiple sectors of activity.

Objectives

The EMAS@SCHOOL project aimed to implement the EMAS II Regulation to non-industrial activities and in particular to a complex institution involved in several activities, (such as farming, forestry, teaching, laboratories, services, and food industries), which generate significant environmental impacts.

Results

The EMAS@school project achieved, and even surpassed, some of the objectives and expected results. Although the EMAS II registration process was not complete at the end of the project (expected to be achieved during the second EMS cycle), the project's contribution to sustainable development was recognized with the granting of a National Energy Global Award in 2006. The environmental management system was implemented in Escola Superior Agrária de

Coimbra (ESAC), a public university dominated by non-industrial activities. This was the first time that EMAS was implemented in such a complex and non-industrial organisation in Portugal and EMAS@SCHOOL has become a valuable case study for EMAS II implementation. The project produced two widely spread manuals. One on the application of Environmental Management Systems to farms, published by the Portuguese Society for Innovation, and provided examples on the procedures to implement EMAS II published in the Practical Manual of Environmental Management, published by Verlag Dashofer Publishers. Some of the main conclusions/results were as follows: - environmental impact reduction and efficient use of resources through an integrated and systemic approach of a complex reality; - active involvement of all stakeholders (workers, students and citizens); - the project became a pilot project for the implementation of EMAS in SMEs and several economic activity sectors, with the predominance given to non-industrial activities; - production of a EMAS II toolkit to help SMEs attain EMAS registration; - use of EMAS to develop methodologies for the application and auditing of EMS at farm level. Specifically, with regard to environmental benefits, the project has contributed to: - reduce energy consumption (11% less in 2005 than in 2004); - reduce water costs (50% reduction for 2005 compared to 2004); - the rational use of irrigation water (less 4000m³/ha/yr needed to maintain the pastures), reducing also the energy needed to make the pumps work; - the replacement of inorganic fertilisers by composting; - the use of pest control methodologies reducing the application of pesticides, which improve the quality of superficial and groundwater; - the use of ultra, nanofiltration and reverse osmosis technology reducing the concentration of protein in the wastewater. Due to the good results obtained, the beneficiary was very interested in the continuation of the project. It was expected that the EMAS II implementation would continue in the future, with the appointment of an Environmental Manager. At the conclusion of the project, two of the partners were taking the first steps to implement their own EMS.

This project has been selected as one of the 21 "Best" LIFE Environment projects in 2007-2008

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Environmental issues addressed:

Themes

Environmental management - Certification
Services & Commerce - Education and Cultural activities

Keywords

EC regulation on eco-management and audit, educational institution

Target EU Legislation

- Environmental management & assessment
- Regulation 761/2001 - Allowing voluntary participation by organisations in a Community eco-manage ...

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Escola Superior Agrária de Coimbra
Type of organisation	University
Description	The Escola Superior Agrária de Coimbra (ESAC) is a public university (school of agriculture) located within Coimbra's urban area in the Centre Region of Portugal. The university spreads over 140 ha and includes animal breeding facilities, pilot dairy industry, farming land, forest area, school, research and teaching laboratories.
Partners	DRAOT-C - Direcção Regional do Ambiente e do Ordenamento do Território do Centro, Portugal CMC – Câmara Municipal de Coimbra, Portugal DRABL – Direcção Regional de Agricultura da Beira Litoral, Portugal

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Administrative data:

Project reference	LIFE03 ENV/P/000501
Duration	01-OCT-2003 to 30-SEP -2006
Total budget	1,462,380.00 €
EU contribution	691,565.00 €
Project location	Centro(Portugal)

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Read more:

Poster	Title: "Life cycle assessment at ESAC's dairy industry" No of pages: 1
Press article: Article-Paper	Title: "A strategy of fire prevention and suppression in an organization located in the forest/urban interface (extract of Forest Ecology and Management 234S (2006) S137) Author: A.D. Ferreira et al. Year: 2006 Editor: Elsevier No of pages: 1
Publication: After-LIFE Communication Plan	Title: LIFE After-Communication Plan (EN) Year: 2006 No of pages: 4
Publication: Article-Paper	Title: "Environmental management and audit schemes implementation as an educational tool for sustainability" (http://www.sciencedirect.com/science/article/pii/S0959652606000369) Author: A.J.D. Ferreira, M.A.R. Lopes, J.P.F. Morais Year: 2006 Editor: Elsevier No of pages: 10
Publication: Guidelines-Manual	Title: "Key-factors and opportunities in an Environmental Management System implementation at a complex school" Author: Carreiras, M.; Ferreira, A.J.D.; Lopes, M. Editor: CERNAS, Environmental Technology Sector, Departmen No of pages: 25
Publication: Guidelines-Manual	Title: "Gestão ambiental e Economia de Recursos" (2.6 MB) Author: M. Lopes, E. Castanheira, A. Dinis Ferreira Year: 2005 Editor: SPI – Sociedade Portuguesa de Inovação, Porto No of pages: 104

Publication: Guidelines-Manual Title: "The implementation of an EMS at an Agricultural Sciences College: multiple opportunities for sustainability" Author: Lopes, M.A.R. & Ferreira, A.J.D. No of pages: 16

Publication: Layman report Title: Layman report (EN/PT) Year: 2006 No of pages: 14

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