# Environmental Management System (EMS)

An EMS is a set of processes and practices that enable a company to reduce its environmental impacts and increase its operating efficiency. The EMS framework helps a company achieve its environmental goals through consistent control of its operations. The assumption is that this increased control will improve the environmental performance of the company. The EMS itself does not dictate a level of environmental performance that must be achieved; each company's EMS is tailored to the company's business and goals.

An EMS helps a company address its regulatory demands in a systematic and cost-effective manner. This proactive approach can help reduce the risk of non-compliance and improve health and safety practices for employees and the public. An EMS can also help address non-regulated issues, such as energy conservation, waste reduction, water preservation, and can promote stronger operational control and employee stewardship, demonstrates robust governance and provides outputs to be used for CSR and marketing opportunities.

Basic Elements of an EMS:

- Reviewing the company's environmental goals
- Analysing its environmental aspects, impacts and legal requirements
- Setting environmental objectives and targets to reduce environmental impacts and comply with legal requirements
- Establishing programmes to meet these objectives and targets
- Monitoring and measuring progress in achieving the objectives
- Ensuring employees' environmental awareness and competence
- Reviewing progress of the EMS and making improvements
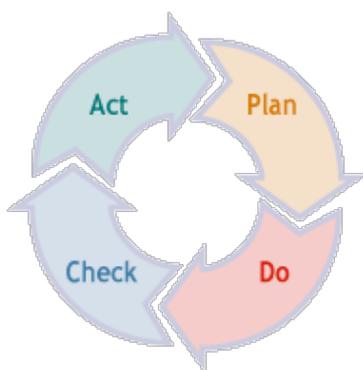
EMS Under ISO 14001

The most commonly used framework for an EMS is the one developed by the International Organisation for Standardisation (ISO) for the ISO 14001 standard. Established in 1996, this framework is the official international standard for an EMS. The five main stages of an EMS, as defined by the ISO 14001 standard, are described below: and represented in figure 1. Nb Following implementation of an EMS, a company may choose to be formally audited and certified to ISO14001 standard. It is not, however, a requirement to do so.

Figure 1: The continuous improvement cycle
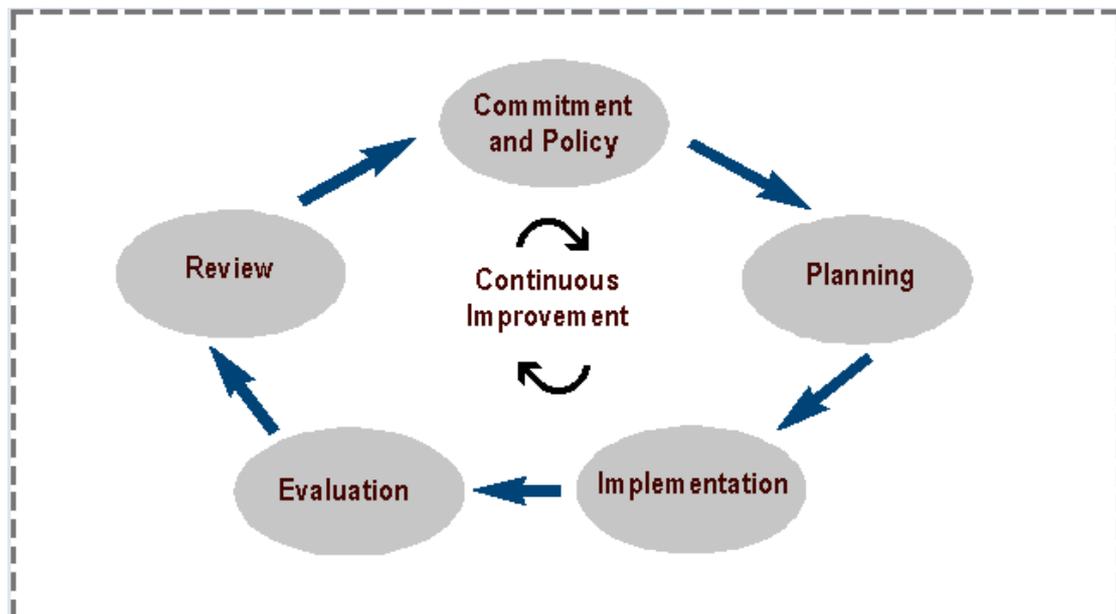
1. Commitment and Policy

Top management commits to environmental improvement and establishes a company environmental policy. The policy is the foundation of the EMS.

2. Planning

A company first identifies environmental aspects of its operations. Environmental aspects are those items, such as air pollutants or hazardous waste that can have negative impacts on people and/or the environment. A company then determines which aspects are significant by choosing

criteria considered most important by the company. For example, a company may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, a company sets objectives and targets. An objective is an overall environmental goal (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., reduce use of chemical X by 25% by September 2015). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities, establishing a schedule, and outlining clearly defined steps to meet the targets.

3. Implementation

A company follows through with the action plan using the necessary resources (human, financial, etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures, and setting up internal and external communication lines.

4. Evaluation

A company monitors its operations to evaluate whether targets are being met. If not, the company takes corrective action.

5. Review

Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with company values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

5a. Reporting

The reporting and communicating of improvements and certification to internal and external stakeholders offers robust stakeholder, governance, and CSR & marketing opportunities.

Costs and Benefits of an EMS

Potential Costs	Potential Benefits
Internal • Staff (manager) time • Other employee time External • Consulting guidance • Outside training of personnel Cost neutrality (ie EMS implementation & operational costs versus operational savings made) is usually achievable within one-year	• Improved environmental performance • Enhanced compliance • Pollution prevention • Resource conservation • New customers/markets • Increased efficiency/reduced costs • Enhanced employee morale • Enhanced image with stakeholders i.e community, regulators, lenders, investors • Employee awareness of environmental issues and responsibilities

Case Study – one of many hundreds

ISO 14001 delivers 'a ten-fold payback' for ALcontrol Laboratories

Measures, combined with good servicing schedules and staff awareness of energy usage, saw a reduction in energy consumption by 17 per cent for over a two-year period. This equates to more than 1.5 million kWh saved over the two years which is a cost saving of more than £100,000.

http://www.lr.org/sectors/built_env/News/200104-iso-14001-delivers-a-tenfold-payback-for-alcontrol-laboratories.aspx

Contact:

Gordon Miller

BREEAM International Assessor: gormilSU

T: 020 7754 5557

M: 07771 790299