

**Environment, Health and Safety Committee**  
**Note on:**  
**EHSC Note on Environmental Management Systems**

*This note aims to give background information to RSC members on environmental management systems. The Note is not intended to be a full or definitive guide and readers are urged to obtain more detailed information and/or expert advice if this is required.*

## 1. INTRODUCTION

Legislation in the United Kingdom requires that employers have appropriate arrangements systems in place for the management and control of environmental matters. In order to achieve this requirement, employers need to have an effective environmental management system that it is clearly defined and well documented.

The most well known and widely used environmental safety management system that can be applied is described in the British Standard BS EN ISO 14001:2004 "Environmental management systems – Specification with guidance for use". The second system that can be applied is described in the European Union's Regulation on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). A third system that can be applied is described in the British Standard - BS 8555:2003 "Environmental management systems. Guide to the phased implementation of an environmental system including the use of environmental performance evaluation". In addition, a number of industry sectors have published their own guidance on environmental management systems, notably the Chemical Industries Association (CIA) within its Responsible Care Management System. Each of these management systems is based on the "plan-do-check-act" management model and embodies the principle of continual improvement as exemplified in the British Standard for quality assurance systems.

## 2. THE ISO 14001 MODEL

The British Standards Institution published the world's first environmental management standard, BS 7750: Specification for Environmental Management Systems, in 1992. This standard adopted a quality systems approach to environmental management and was aimed to link with existing practices for quality in BS EN ISO 9001. The standard was also compatible with EMAS which was first published in 1993 and last revised in 2009. In 1996, BS 7750 was superseded by BS EN ISO 14001. This standard has been updated and the current version was published in 2004.

ISO 14001 specifies the elements of an environmental management system and gives guidance on its implementation and assessment. The standard is intended to support environmental accreditation schemes and complements EMAS. A number of UK organisations have been approved by the accreditation body, United Kingdom Accreditation Service (UKAS), to award certification against the requirements of ISO 14001.

ISO 14001 sets out five steps for implementing and maintaining an environmental management system leading to continual improvement. These steps are represented in the model at Figure 1 below.

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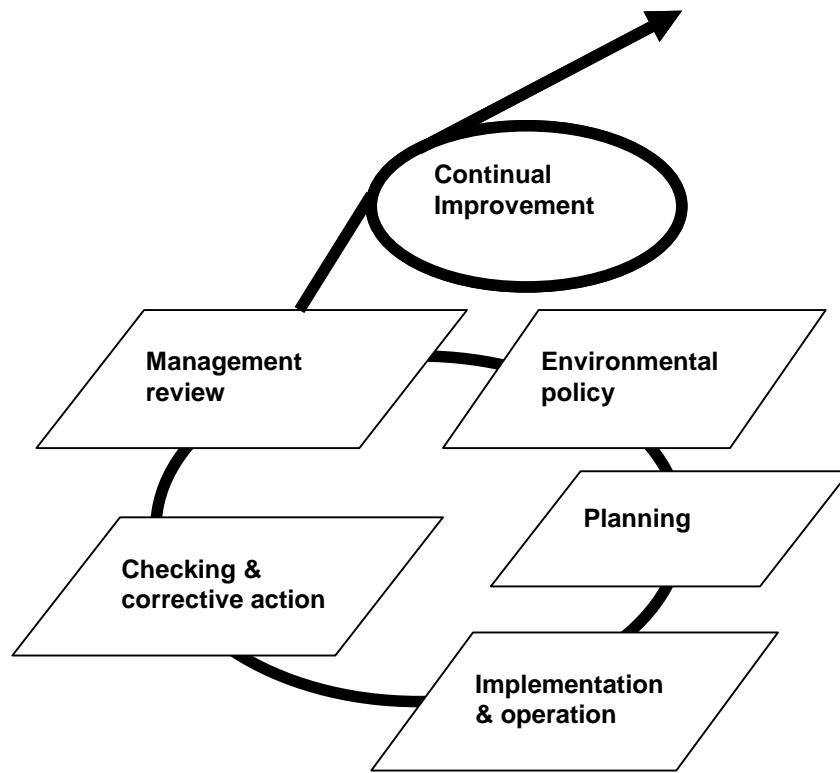
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**Figure 1 - The ISO 14000 model**

In this model the environmental policy must state the overall objectives, in terms of compliance with legislation and pollution prevention, and a commitment to improving performance. The policy must be authorised by senior management.

Planning of the environmental management system should include the identification of environmental aspects and the evaluation of associated environmental impacts, the identification of the relevant legal and regulatory requirements, the development and maintenance of environmental objectives and targets and the establishment and maintenance of a programme to achieve these objectives and targets.

Implementation and operation of the system should involve the establishment of an organised management structure, the training of the workforce and the establishment of effective methods of communication within the workforce, documentation of the management system, operational control of the system to ensure that it is effective and emergency preparedness and response.

Checking and corrective action relates to performance measurement and monitoring of operational activities, including record keeping, and audit procedures.

Management review requires the organisation's senior management to review the management system at fixed intervals to ensure its continuing suitability, adequacy and effectiveness.

### **3. EMAS**

EMAS (EU Eco-Management and Audit Scheme) sets out the requirements for an environmental management system that is equivalent to ISO 14001 but makes an additional requirement relating to a public reporting statement on environmental performance. Organisations adopting EMAS can seek verification (equivalent to certification) for their systems from an accredited verifier approved by the competent body in each member state of the EU. In the UK, the competent body is the United Kingdom Accreditation Service (UKAS).

#### 4. BS 8555 APPROACH

BS 8555 builds on BS EN ISO 14001 and provides guidance to all organisations on the phased implementation, maintenance and improvement of a formal environmental system without necessarily having to obtain certification. It makes particular reference to small and medium-sized enterprises (SMEs) but is applicable to any organisation, irrespective of the nature of the business activity undertaken, location or level of maturity. The standard outlines an implementation process that can be undertaken in up to six separate phases:

- Phase 1 – Commitment and establishing the baseline;
- Phase 2 – Identifying and ensuring compliance with legal and other requirements;
- Phase 3 – Developing objectives, targets and programmes;
- Phase 4 – Implementation and operation of the environmental management system;
- Phase 5 – Checking, audit and review; and
- Phase 6 – Environmental management system acknowledgement.

The standard allows phased acknowledgement of progress towards its full implementation. As a result it can be used by organisations that wish to self-declare or seek voluntary phased recognition throughout the implementation process. Self declaration is based on the results of an internal audit. Voluntary recognition is based on audits either by customers or other third party organisations, such as a certification body. The sixth phase prepares an organisation for either certification to ISO 14001 or registration to the EU's Eco-Management and Audit Scheme.

#### 5. CIA RESPONSIBLE CARE MANAGEMENT SYSTEM

The Chemical Industries Association's (CIA's) Responsible Care Management System is a voluntary initiative that is designed to maintain and demonstrate continual improvement in all aspects health, safety, and environmental performance of chemical industry's operations and products and a commitment to openness in communication about its activities and achievements.

The Responsible Care Management System is an integrated management system that encapsulates health and safety, environmental and quality systems in a common approach using the "plan-do-check-act" management model. The CIA's guidance published on the Responsible Care Management System addresses the requirements of BS EN ISO 14001. The schematic diagram of the Responsible Care Management System is set out below in Figure 2.

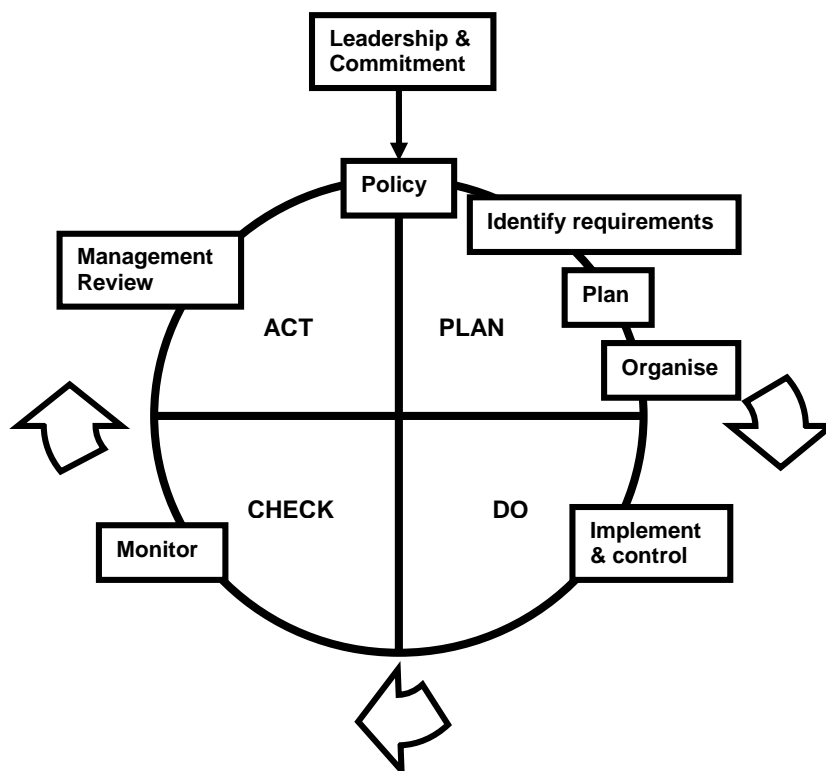


Figure 2 - The CIA's Responsible Care Management System

The main elements of this system are similar to those included in BS EN ISO 14001 outlined above and, therefore, no further explanation is given. The only difference is the extra element “Leadership and Commitment” that is included in order to emphasise the importance of the commitment from senior management to the Responsible Care programme.

Organisations that adopt the CIA’s Responsible Care Management System can obtain third party certification from approved auditors with five certification bodies.

## **6. WHICH SYSTEM TO USE?**

The choice of which system to adopt depends solely on the needs of individual organisations. However, the organisation needs to ensure that their chosen system includes provision for continual improvement, involves stakeholders and auditing and is well documented in order to demonstrate effectiveness.

If an organisation already has accreditation under BS EN ISO 9001 it may wish to consider adopting BS EN ISO 14001 as both standards were designed to be compatible. Organisations may wish to combine their approaches in an integrated system.

## **7. CONCLUSIONS**

By using one of the above environmental management systems organisations will be able to demonstrate legislative compliance, their commitment to environmental issues and the improvement of standards in the management and control of environmental risk and satisfy supply chain requirements. As a direct outcome there should be a reduction in environmental incidents, insurance claims, downtime and associated costs.

RSC believes that environmental incidents can be prevented and environmental standards can be improved if organisations manage environmental issues to the same standard as other core business activities. The adoption of a formalised environmental management system provides a sound basis for achieving these ideals.

## **8. BIBLIOGRAPHY**

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