

## Environment Management System

An Environmental Management System (EMS) is a **framework** that helps an organization achieve its environmental goals through consistent **review, evaluation, and improvement of its environmental performance**. The EMS itself does not dictate a level of environmental performance that must be achieved; each organization's EMS is tailored to the its own individual objectives and targets.

It should:

1. Review the organization's environmental goals
2. Analyze its environmental impacts and legal requirements
3. Set environmental objectives and targets to reduce environmental impacts and comply with legal requirements
4. Establish programs to meet these objectives and targets
5. Monitor and measure the progress in achieving the objectives
6. Ensure employees' environmental awareness and competence
7. Review the progress of the EMS and make improvements

The most commonly used framework for an EMS is the one developed by the International Organization for Standardization (ISO) for the [ISO 14001 standard](#)

### **The ISO 14000 family – Environmental management**

The ISO 14000 family of standards provides practical tools for companies and organizations of all kinds looking to manage their environmental responsibilities.

ISO 14001:2015 and its supporting standards such as ISO 14006:2011 focus on environmental systems to achieve this.

**ISO/TC 207/SC1: Environmental management systems →**  
<https://committee.iso.org/home/tc207sc1>

Main stages of an EMS, according to the ISO 14001 standard:

1. **Commitment and Policy** - Top management commits to environmental improvement and establishes the organization's environmental policy. The policy is the foundation of the EMS.

2. **Planning** - An organization 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. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, an organization 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 1998). 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 organization 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 the organization's 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. <sup>1</sup>

(not accessible to the public → you have to contact them to get an overview)

Environmental data management system: <http://esdat.net/Default.aspx>

Environmental data management system: <http://ehsdata.com/>

EMS Platform: <https://www.emisoft.com/applications/#energy-management>

EMS Software: <https://www.cority.com/solutions/environmental-management/>

EMS Software: <https://www.era-environmental.com/>

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<sup>1</sup> United States Environmental Protection Agency, <https://www.epa.gov/ems/learn-about-environmental-management-systems#what-is-an-EMS>

Further reading

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-management-system>