Introduction to Food Waste Treatment: The 14001 Standards

**ISO 14001**

* These standards are a part of the more general series of environmental standards ISO 14000.
* **ISO 14000** is a family of standards related to [environmental management](https://en.wikipedia.org/wiki/Environmental_management) that exists to help organizations (a) minimize how their operations (processes, etc.) negatively affect the environment (i.e., cause adverse changes to air, water, or land); (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and (c) continually improve in the above.
* ISO 14001 is the most well-known standard of the series.
* It was first published in 1996.
* This standard can be applied by any organization that wishes to implement, maintain and improve an environmental management system.
* The contents of the ISO 14001 are the following:

**Part 1- Introduction and Background**

Chapter 1 Introduction to integrated management systems

Chapter 2 ISO 14000 and Environmental Management systems

Chapter 3 Third party Registration

Chapter 4 Introducing ISO 14001

**Part 2- Policy and Planning**

Chapter 5 Environmental Policy

Chapter 6 Environmental Aspects

Chapter 7 Legal and other requirements

Chapter 8 Objectives and targets

Chapter 9 Environmental Management Program

**Part 3- Implementation and Operation**

Chapter 10 Structure and Responsibility

Chapter 11 Training, Awareness and Competence

Chapter 12 Communication

Chapter 13 Environmental Management System Documentation

Chapter 14 Document Control

Chapter 15 Operational Control

Chapter 16 Emergency Preparedness and Response

**Part 4- Checking and Corrective Action**

Chapter 17 Monitoring and Measurement

Chapter 18 Non-conformance and Corrective and Preventive Action

Chapter 19 Records

Chapter 20 Environmental Management System Audits

Chapter 21 Management Review

**Part 5- Getting Started**

Chapter 22 Strategic Planning

Chapter 23 Choosing a Registrat

Chapter 24 Implementing Integrated Management Systems

Additional information

References

Appendix: Sample Environmental Policies

**The Food Sector as an Organization**

**1. Inputs**

The entire agro-food sector is considered as an organization. It consists of;

* Primary production
* Post harvesting
* Production
* Packaging

In the input side we have:

* Raw material (should be free from pesticides or contaminants)
* Water (should be free from contaminations)
* Energy (should be from environmental friendly source)

Water is considered separately because of its importance not only in the manufacturing but also for cleaning and hygiene.

**2. Outputs**

There are three kinds of outputs from the food

* The product
* The by-product
* Wastes

**Benefits of ISO 14001**

Organizations using ISO 14001 have found success across a range of areas, including reduced energy and water consumption, a more systematic approach to legal complianceand an improved overall environmental performance.