



SSPICE IT! Sustainability Skills Program for International Catering operators and Entrepreneurs through Integrated Training



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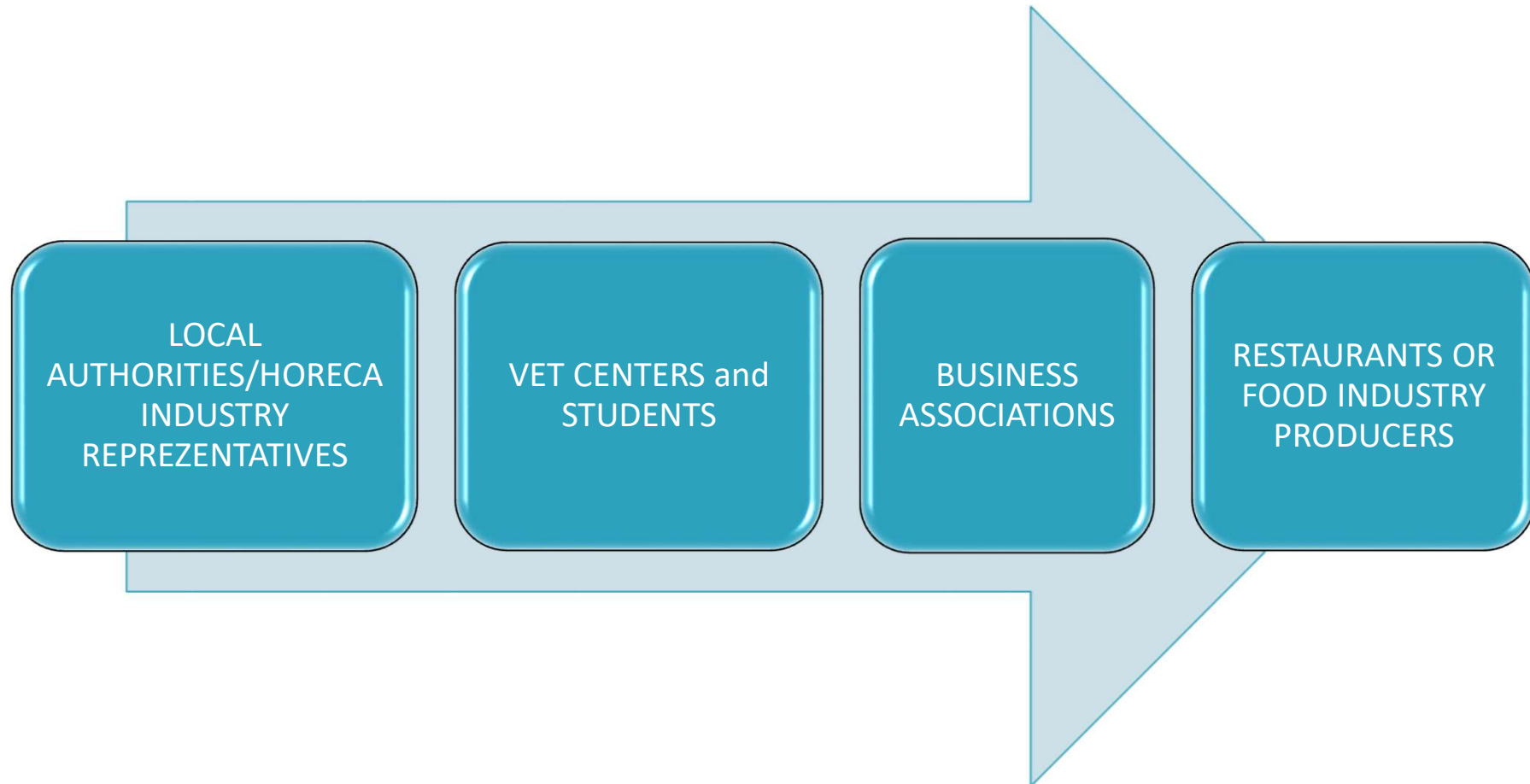
WEBINAR NO.1 – organized by Work's Quality ZOOM - 15th of June 2023

Food Safety and Environment Rules in conformity with HACCP, ISO 14001, ISO 9001 applied in the Food Industry with focus on the critical controlling points (CCP), phases in which the loss can be prevent





Main involved stakeholders





WHAT WILL YOU RECEIVE ? Approval of the Agenda



- ❑ Sustainable, green and antreprenorial skills in the food catering sector
- ❑ The importance of knowing some general Environmental and Food Safety rules
- ❑ HACCP Principles
- ❑ CCP points
- ❑ How to obtain a quality, environmental, food safety certification



OBJECTIVES OF THE WEBINAR



Environmental aspects related to the food sector

Understand the environmental impact of food

Correlation between health and sustainable food

Environmental rules and certification criteria in the food service industry (ISO 9001, 14001 and HACCP)

HACCP Plan and CCP Points / supply chain

Practices coherent with a sustainable management of waste

How to use Food safety and environmental knowledges



I. PROJECT PRESENTATION



▶ *Programme: Erasmus + VET / Action type: KA220-VET - Cooperation partnerships in vocational education and training*

▶ *Lead applicant: CMRC ; Duration: 28 months, starting 01/11/2022*

▶ *Total budget: 400.000€*



SSPICE IT!
Sustainability Skills Program for International Catering
operators and Entrepreneurs through
Integrated Training



Co-funded by the Erasmus+ Programme of the European Union

PROJECT PRESENTATION



SSPICEIT!

Sustainability Skills Program for Innovation, Learning and Entrepreneurship

7 Partners



1. Lead partner: CMRC - Italy



Città metropolitana di Roma Capitale

2. CFP - Spain



ESCUELA DE HOSTELERIA & TURISMO DE LA RIOJA

3. CFP - Portugua



Escola Profissional AMAR TERRA VERDE

4. CFP - Greece



5. Pour la solidarité Belgium



6. Institute of Entrepreneurship Developknt - Greec



institute of Entrepreneurship Development

7. Work's Quality



WORK'S Retail Business Management



WORK'S Retail Business Management



PRIORITIES

**1. Adapting
vocational education
and training
to labour markets
needs**

**2. Environment
and fight against
climate change**

**3. Increasing
attractiveness of
VET**



DESCRIPTION OF PRIORITIES



PRIORITY 1

- **Update and adapt VET courses in the food and catering sector to the changed labour market scenario**, introducing training modules and learning moments centred on the acquisition of green and digital skills, as well as of entrepreneurial skills.

PRIORITY 2

- **Raise awareness among educators and learners of the centrality that sustainability has assumed** also in the food sector and the implications this has in terms of new skills required at different professional levels;
- **Promote the acquisition of useful all-round green skills in the food and catering sector;**
- **Foster the experimentation of innovative sustainable practices in the management of VET centres.**

PRIORITY 3

- **Support the further training and professional development of teachers/trainers** on sustainability in the food and catering sector;
- **Facilitate the assessment and recognition of acquired competences** through the use of an innovative assessment tool enabling a more comprehensive assessment of acquired skills using gamification;
- **Create a community of practice that fosters stable cooperation** between VET centres, research centres, enterprises, agencies/authorities responsible for programming and agencies/authorities responsible for curriculum planning and updating;
- **Provide guidelines to VET providers and planning authorities on how to update VET curricula** with modules and learning moments aimed at the acquisition of skills green and digital skills required in the sector



Expected results



Development of a **European sustainability training programme** designed specifically for future operators/entrepreneurs of the food/restaurant sector



Development of the **profile and competence of trainers on sustainability**



Development of the **green, digital and entrepreneurial skills of the learners in the pilot classes**



Increased **employability and vocational specialisation of learners** in the VET centres involved



Improved capacity for **assessment and self-assessment of pre- and post-training green skills**



Launch of a **community of practice among the various stakeholders**



Provision of guidelines for the **integration into VET courses of the tested training modules**

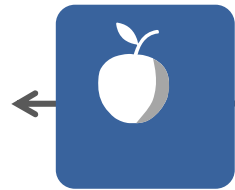


PROJECT TARGET GROUPS

- 1** | STUDENTS
- 2** | VET TEACHERS / VET SCHOOLS
- 3** | COMPANIES – FOOD SECTOR
- 4** | PUBLIC BODIES RESPONSIBLE FOR VET CURRICULA



5 WORK PACKAGES



Project management

- First meeting in Rome
- Semester on-line meetings
- Final meeting in Romania

WP1



Game-based skill assessment e career guidance tool

- Research & review
- Beta version of the app
- Experimentation & Peer Review
- Final version and publication

WP2



Co-design and experimentation of the training programme on sustainability

- Definition of key competences and learning results
- Co-design & experimentation of the training programme
- Adaptation of the programme to the VET centres' curriculum
- Experimentation & Peer Review
- Publication & final version

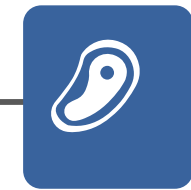
WP3



Living Lab on green, digital and entrepreneurial skills in the food and catering sector

- Community of practice on the future of skills in the catering/food sector
- Learning mobility
- Guidelines on how to integrate sustainability modules in VET courses

WP4



Communication & dissemination

- Communication plan,
- Web site,
- Social media,
- Relations with media,
- Dissemination events

WP5





Training Programme description

About 120 hours to develop key competences in sustainability

The programme will be delivered partly in presence and part online, in both synchronous and asynchronous mode, through the use of ACCADE, the platform developed by CMRC.



Sustainability of supply chain

E.g.: food preservation techniques to avoid food loss and preserve the food heritage; Risks and opportunities of new and innovative ingredients



Circular economy

E.g.: less energy-intensive cooking processes; food reuse, recycling and composting; packaging reduction; sustainable technologies, etc.



Sustainable business models

E.g.: social economy as a business model for developing sustainable activities; concept of green social entrepreneurs; digitisation as a strategy to increase sustainability



WP4 - Living Lab on green, digital and entrepreneurial skills in the food and catering sector

Objectives

- To create a community of practice fostering a stable and continuous cooperation between VET, research, businesses, PA;
- To foster work-based learning opportunities and direct contact with enterprises;
- To elaborate guidelines for VET providers.



WP4.1 Community of practice on the future of skills in the catering/food sector

- Online meetings and webinars on specific aspects of sustainability with experts (14 webinars, 6 hours each)
- Meetings with testimonies and/or businesses in VET centres



WP4.2 Learning mobility

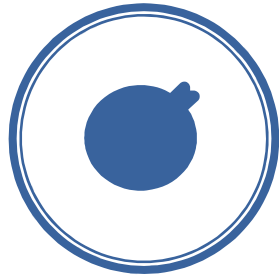
- Four days learning mobility for 5 students x VET center in another center, with visits to local stakeholders.
- Realisation of "Inspiring stories" (video interview + material) to share the experience with other students



WP4.3 Guidelines on how to integrate sustainability modules in VET courses

For local and national administrations.
In English and national languages

WP4 Indicators



Activities and participants

- Nb and hours of webinars and meetings;
- Nb and type of stakeholders involved in the community of practice



Integration in enterprises

- Nb of new apprenticeships/traineeships and collaborations initiated with sustainable companies in the sector;
- Nb of companies interested in including people trained in sustainability issues in dual courses



Adoption of training programme and tools

- Nb of realities (training centers and other organisations operating in the catering sector) interested in adopting the training programme and tools developed by the project



Integration in school curriculum








- Nb of public authorities interested in integrating the training produced in the programming of VET centers for the hotel and catering sector



Satisfaction

- Level of satisfaction of the students who participated in the mobility experience abroad

WP4 – Role of partners

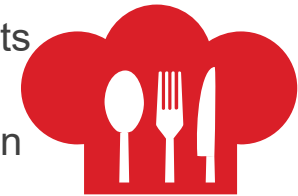
 WORK'S	 CMRC	 EPATV	 EHOJA	 PLS	 IED	 AKMI
<p>Coordinator WP4</p> <p>Coordination of the community of practice</p> <p>Organisation of 2 webinars</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Students learning mobility</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Students learning mobility</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Students learning mobility</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Students learning mobility</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Elaboration of guidelines and translation</p>	<p>Organisation of 2 webinars + face-to-face meetings</p> <p>Students learning mobility</p> <p>Elaboration of guidelines and translation</p>



Teachers involvement

Teachers involved in the activities:

- ✓ **1 contact person** per VET center, responsible for the contact with the projects partners
- ✓ **8 teachers in each VET center** involved in the co-design and experimentation of the training programme and the test of the evaluation app
- ✓ **2 teachers** per VET center participating in the training mobility
- ✓ **All teachers** involved in the Community of practices



Nov. 2022/Feb. 2025

Nov. 2022 / Oct.2023



Participation in the definition of the training programme and the evaluation tool

Oct.2023



Training of teachers in Belgium
(3 days x 2 teachers per VET center)

Nov.2023



Training of teachers
Training of the other teachers on the programmes and tools developed by the project

Jan./Jul. 2024



Experimentation of the training programme and evaluation tools with the students

Adaptation and translation of training programme



Participation in the community of practices

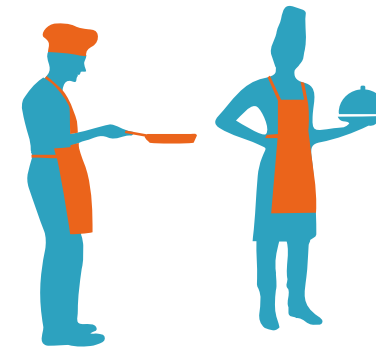
Seminars on sustainability issues for all teachers an exchange of best practices



Students involvement

Students involved in the activities:

- ✓ **40 students in each VET center** involved in experimentation of the training programme and the test of the app
- ✓ **5 students + 1 adult** per VET center participating in the training mobility
- ✓ **All students** involved in the Community of practices



Dic. 2022 / Feb. 2025

May 2023 – Jun 2024

May 2024



Participation in the community of practices

Participation in training and guidance seminars held by experts and professionals of the sector coming from the partners countries



Participation in the training programme and use of the evaluation tool

Students are the final beneficiaries of the training programme on sustainability in the food and catering sector and will use the app developed for the evaluation of the acquired skills



Participation in the learning mobility

5 students + 1 adult per VET center



Co-funded by the
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of the European Union

Short presentation of Work's Quality



Fields of expertise:

- *Training courses for companies, with a special focus in the food and catering sector regarding hygiene, food safety, environmental sustainability corroborated with digital innovation.*
- *Implementation and certification of quality management systems – Food Safety ISO 22000 (HACCP), IFS, 9001, 14001, EMAS, Health & Safety, Environmental Assessment*
- *Legal & financial Advisory - project management, market study and business strategy, LCA AND LLCA*

The company has a **professional multidisciplinary staff** and business collaborators with proven experience in delivering training solutions and project management. We have important partners between the Patronage and private and public Business communities in Romania.





WORK'S QUALITY FOOD SAFETY QUALIFICATIONS

- **QUALITY & ENVIRONMENT**

- Design, implementation and monitorization of European standards
 - SR EN ISO 9001: 2015 – Quality management
 - SR EN ISO 14001: 2015 – Environmental management

Environmental Impact Assessment – Risks Evaluation and preventive plan

- EMAS – Eco-Management and Audit Scheme(EMAS)
- OHSAS 18001: 2005 – Occupational health and safety
- **HACCP 22000:2005 – Food Safety (HACCP) - GMP – Good Manufacturing Practices**
- **IFS – International Food Standard SI BRC Global Standards for Food / Packaging**
- **ISO / IEC 27001: 2005** – Management System for Information Security
- SA 8000: 2008 – Social responsibility
- **Product certifications. CE mark. Own trademark registration**





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SSPICEIT!

Sustainability Skills | Organizational Learning
Partnership for Innovation and Business Transformation



What is sustainability?

In general, the term sustainability refers to a capability to maintain something at a certain rate or level. Most of the time, we use the term in reference to the balance between the environment, equity, and economy.

UN World Commission on Environment and Development defines sustainable development as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*”

What is sustainable catering?

It is essentially about taking into account the origin, the quality and the non-monetary cost of the products we consume, with a focus on their impacts on the environment and society.

The goal of sustainable catering is, when possible, to:

- Minimize environmental impacts eg. land degradation, loss of biodiversity, water pollution, climate change*
- Contribute to local economies and sustainable livelihoods of workers*
- Provide social benefits, eg. assisting people to make healthy and nutritious food choices*



Let's break down the 6 main principles of sustainable catering

1. Favor produce that is locally grown and seasonal

The first benefit of going as local as possible is a reduction in carbon emissions. On average, produce that is transported over long distances will, of course, create more carbon emissions than food that is transported over a shorter distance.

A good indicator to ensure that food is not travelling further than it needs to, is to favor produce that are in-season in your area. A local farmer's market can be a great source of wealth for local and in-season produce.

The second benefit of favoring local produce is that you are supporting your local farmers and economy - whether that be your community, your state or your country

2. Choose food produced by eco-friendly production methods

The sustainable choice here is to favor food that has been produced by environmentally friendly production methods, for example, organic farming.

3. Minimize animal products

Sustainability is all about making sure that we are not senselessly overusing the environmental resources that we have been given. The necessary huge amounts of water, farming and land used to produce beef make it the least sustainable animal product, as the graphs below will illustrate.



4. Minimize as much waste as possible

5. Choose sustainable seafood

When it comes to purchasing sustainable seafood the things that should be taken into account are the level of overfishing of that type of seafood or species, and environmental impacts of the methods that the brand or fishery caught the seafood.

A MSC blue fish label on a seafood product means that the amount of seafood that was caught does not threaten the long-term health of the population, and any negative effects to the surrounding wildlife and ecosystem were minimized.

6. Choose fair trade products

If a product has a food safety certification, it indicates that its production or the ingredients used have been measured against a mix of social, economic and environmental criteria.

The main goal is to support the ethical sustainable development of small producer organizations and prevent foreign exploitation of agricultural workers in lower-income countries. The global farming industry is the largest employer in the world and Fairtrade ensures a fair deal for the farmers and workers who provide the food, the ingredients and the materials that go into products we buy.

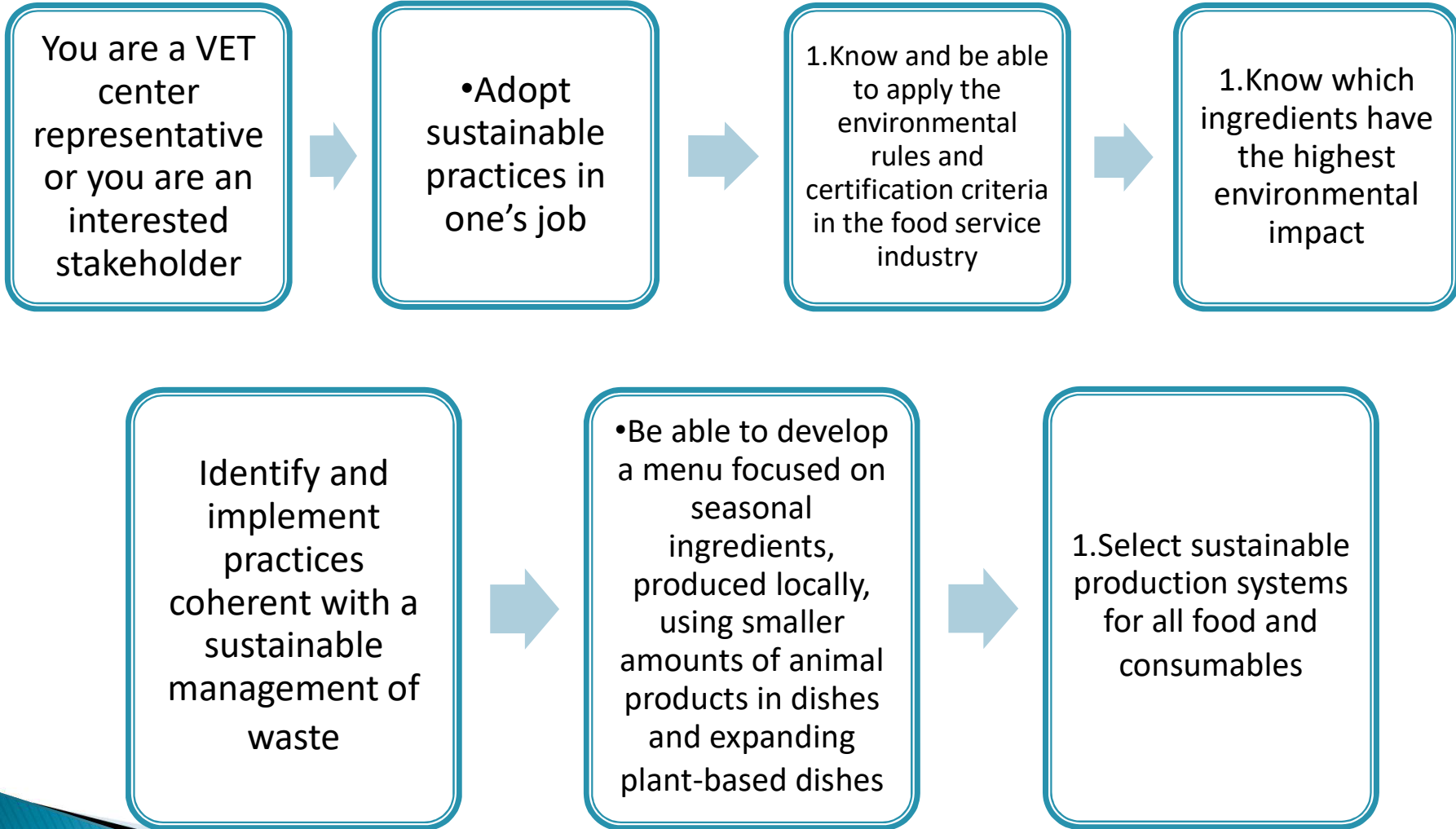
Common foods to look out for a Fairtrade certification is: **Chocolate, Coffee, Tea, Fruit, Vegetables, Ice Cream, Wine**



Green, digital and antreprenorial skills in the food catering sector



Why is this information interesting for you ?





THE CONNECTION BETWEEN SUSTAINABILITY AND HACCP & 14001 PRINCIPLES



DEFINITION OF HACCP AND ISO 22000 FOOD SAFETY

ISO 22000 is a **standard** designed to help augment HACCP on issues related to food safety. Although several companies, especially big ones, have either implemented or are on the point of implementing ISO 22000, there are many others which are hesitant to do so.

ISO 22000 references the **Codex Alimentarius** General Principles of Food Hygiene, and includes **HACCP** principles.

Hazard analysis and critical control points, or **HACCP** is a systematic preventive approach to **food safety** from **biological**, **chemical**, and physical **hazards** in production processes that can cause the finished product to be unsafe and designs measures to reduce these risks to a safe level.

The HACCP system can be used at all stages of a **food chain**, from **food production** and preparation processes including packaging, distribution.

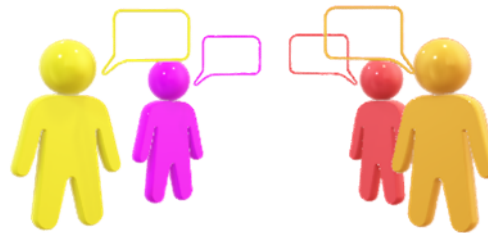


THE CONNECTION BETWEEN SUSTAINABILITY AND HACCP & 14001 PRINCIPLES

Both the HACCP system and ISO 14001 principles have connections to sustainability.

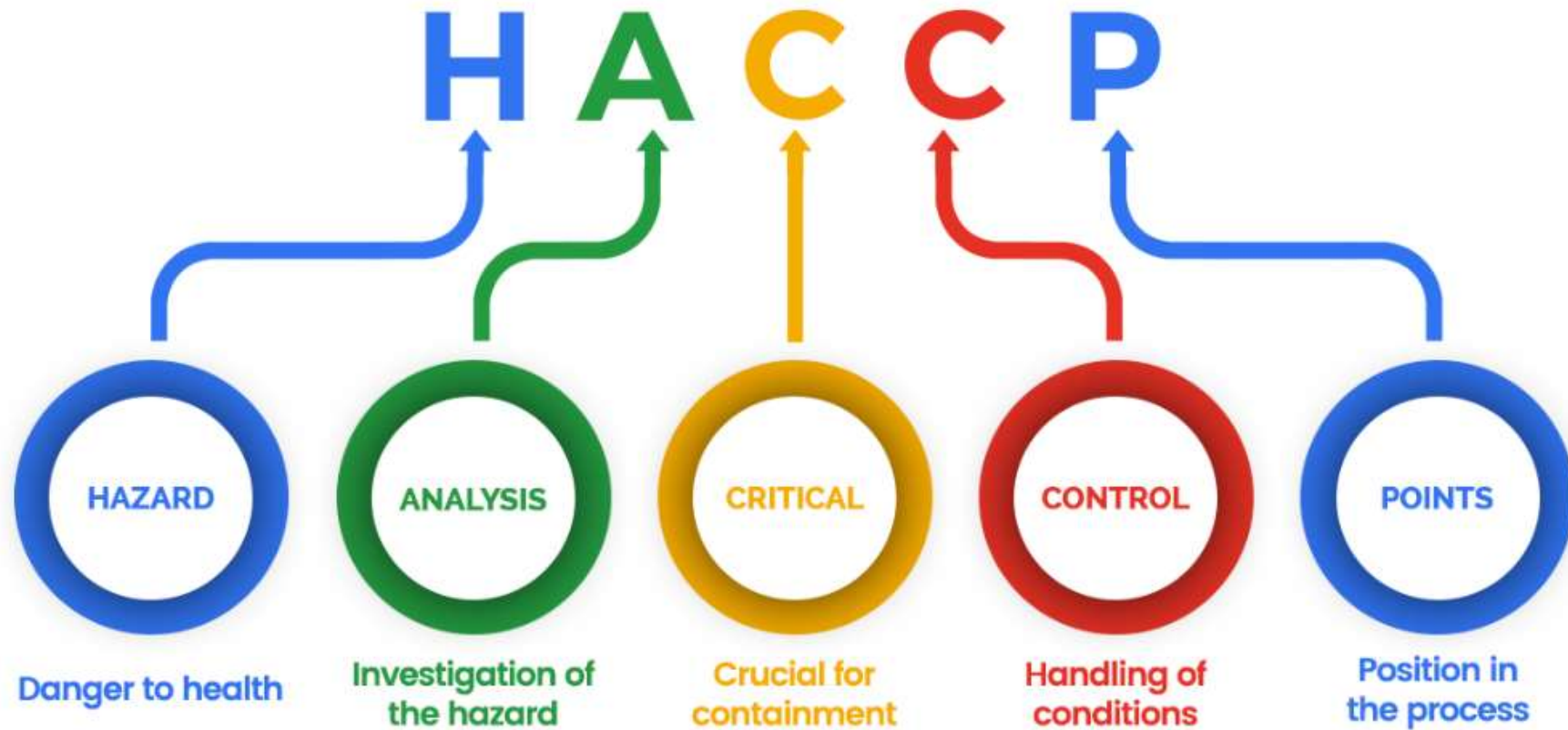
- HACCP can contribute to sustainability by reducing food waste and implementing resource-efficient practices, while ISO 14001 provides a framework for organizations to manage their environmental impact, comply with regulations, and drive continuous improvement in sustainability performance.

Together, **these approaches support the broader goal of creating a more sustainable food industry.**





What means HACCP ?



What is HACCP ?

Hazard Analysis Critical Control Points (HACCP) is an internationally recognized method of identifying and managing food safety related risk and, when central to an active food safety program, can provide your customers, the public, and regulatory agencies assurance that a food safety program is well managed.

Whom is addressed to?

HACCP is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, **to manufacturing, distribution and consumption of the finished product.**

Today, many of the world's best manufacturers and vendors use the system as a basis for their food safety management programs and for compliance with GFSI audit schemes. A food safety program, however, does not just stop with HACCP. To be effective, prerequisite programs such as pest control, traceability & recall, hygiene and sanitation need to be developed and implemented. Additionally, the issue of ensuring that suppliers and distributors also have a food safety program needs to be addressed through development of ingredient specifications and a vendor assurance system.



7 Principles of HACCP

1. Conduct a hazard analysis
2. Identify critical control points (CCPs)
3. Establish critical limits
4. Establish monitoring procedures
5. Establish corrective actions
6. Establish verification procedures
7. Establish record-keeping procedures



ACCREDITATION STEPS

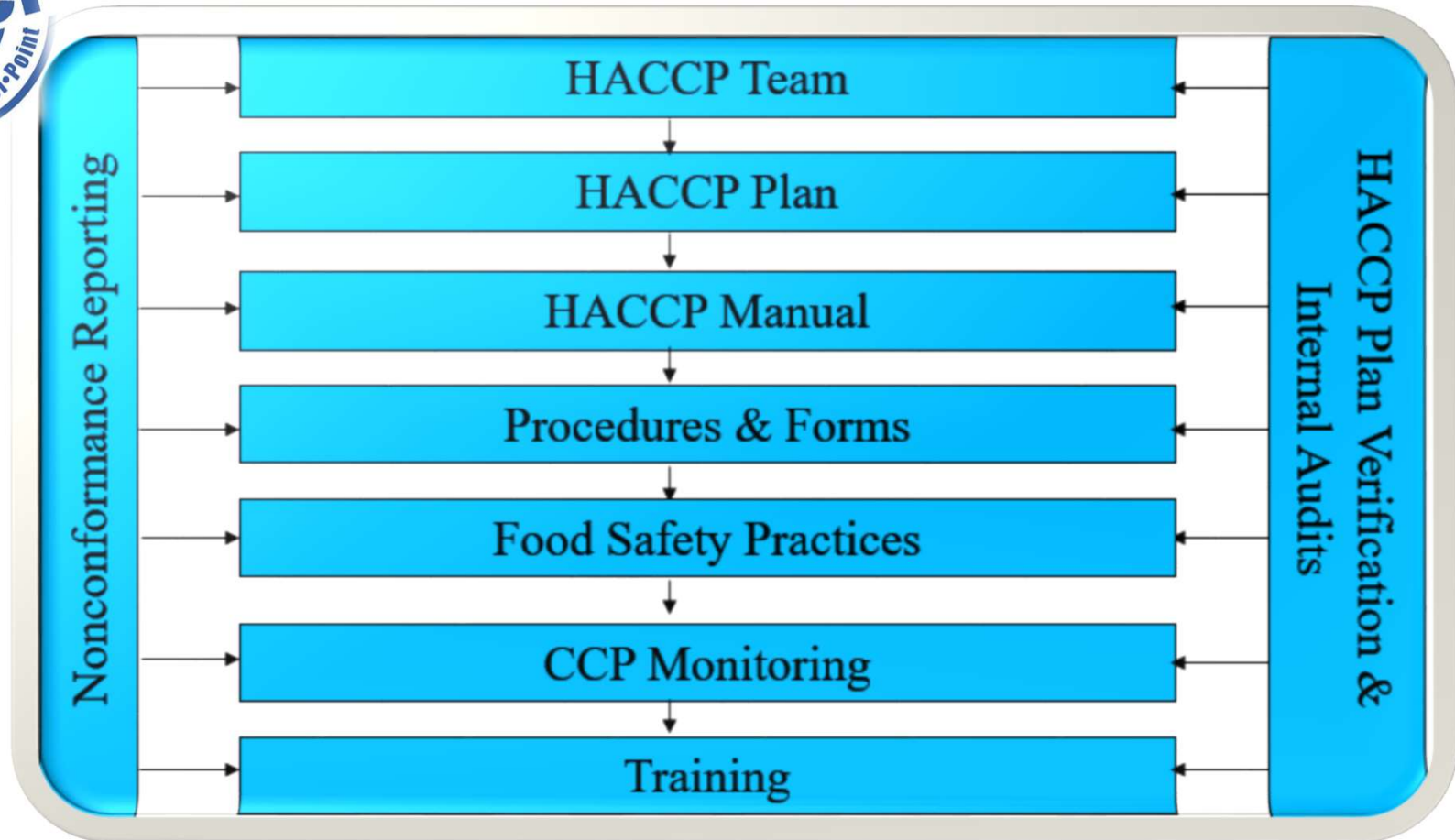
Accreditation Bodies: Accreditation bodies are organizations that are responsible for accrediting certification bodies. These accreditation bodies evaluate the competence, impartiality, and performance of certification bodies that offer HACCP certification services. They ensure that the certification bodies operate in accordance with international standards and guidelines.

Certification Bodies: Accredited certification bodies are responsible for assessing and certifying organizations' compliance with HACCP standards. These certification bodies must be accredited by a recognized accreditation body to provide credible and trustworthy HACCP certifications. They have the expertise to evaluate whether a company's HACCP system is implemented effectively and meets the requirements of HACCP principles.

Accreditation Process: The accreditation process for HACCP certification bodies involves rigorous evaluation and assessment. The accreditation body examines various factors such as the certification body's competence, staff qualifications, audit procedures, and adherence to international standards, such as ISO/IEC 17065 (Conformity assessment - Requirements for bodies certifying products, processes, and services)

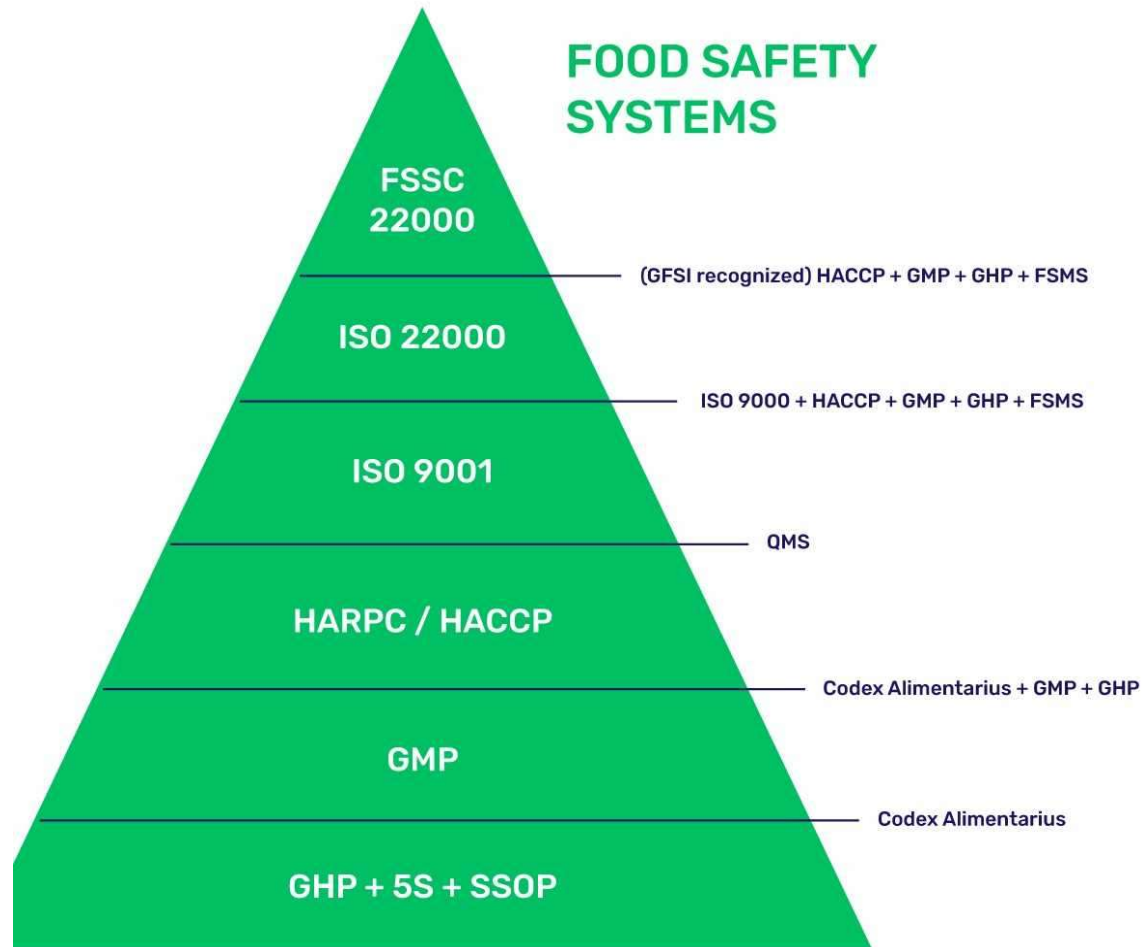


What can you implement HACCP ?





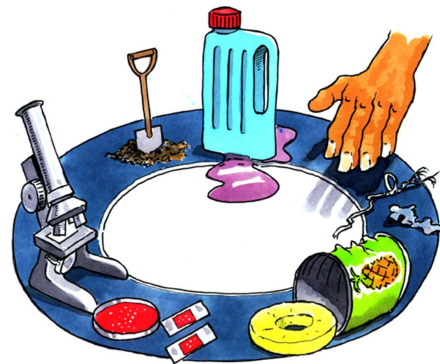
FOOD SAFETY SYSTEMS





Benefits of Good Food Safety

- ▶ **Satisfied customers**
- ▶ **Loyal and confident customers**
- ▶ **Good reputation – customer recommendations**
- ▶ **Operating costs under control**
- ▶ **Profit**
- ▶ **Legal compliance – no criminal prosecutions or civil lawsuits**
- ▶ **Pleasant working environment**
- ▶ **Healthy employees**
- ▶ **Motivated employees**
- ▶ **Better job security**



Costs of Poor Food Safety

- ▶ **Consumer complaints and loss of custom**
- ▶ **Loss of income**
- ▶ **Operating costs increase – employee absenteeism, reduced productivity, food wasted**
- ▶ **Increased insurance premiums**
- ▶ **Lost profit**
- ▶ **Court cases and bad publicity**
- ▶ **Legal fees and possible lawsuit damages**
- ▶ **Personal pain and suffering**
- ▶ **Hospitalizations and even death**
- ▶ **Possible bad impact on loved-ones**
- ▶ **Low employee morale**



HACCP

(Hazard Analysis and Critical Control Point)

Employees and food safety

- ✓ Formal, documented system of hazard analysis and hazard control
- ✓ Designed to protect food from the problems that cause illness
- ✓ Involves:
 - identifying possible problems
 - stopping them (or reducing their impact) before they happen
 - identifying corrective action, if a problem has already developed

Also involves checking all stages of delivery, storage, preparation, presentation and service

To avoid endangering the safety of food, **employees must:**

- ❑ keep themselves and their workplace clean
- ❑ protect food from anything that could harm consumers
- ❑ follow good habits, such as washing their hands before preparing food
- ❑ stay alert to food safety hazards
- ❑ follow the rules for food safety in their workplace



Biological hazards

- Bacteria
- Viruses
- Parasites
- Naturally occurring chemicals in some fungi, plants, fish and shellfish
- Mycotoxins
- Food allergens

Chemical hazards

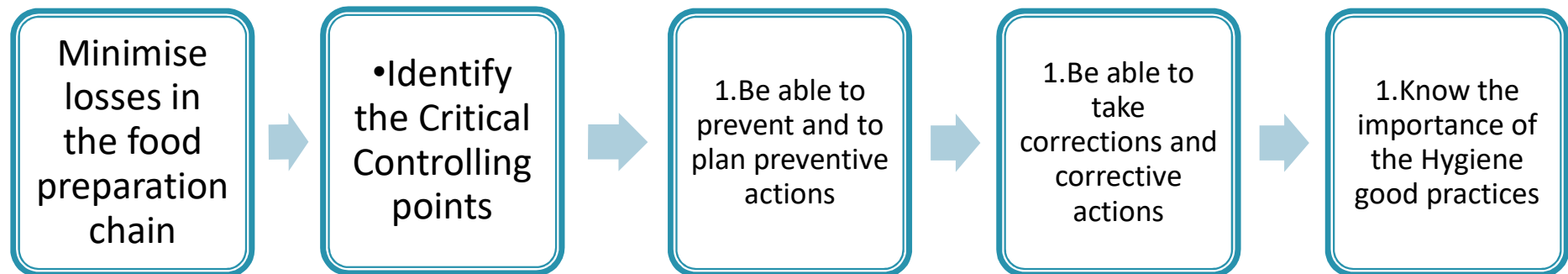
- Cleaning and sanitizing products
- Pesticides
- Unsuitable metal containers
- Excessive food additives

Physical hazards

- Broken glass, nuts and bolts
- Hair, fingernails, pens and dressings
- Stones and leaves
- Paper and packaging
- Pest bodies, eggs and nesting materials



Why is important to have knowlages about FOOD SAFETY & Hygiene Issues ?



Why is important to have knowledges about FOOD SAFETY & Hygiene Issues ?

- **Protecting Public Health:** By understanding food safety principles and implementing proper hygiene practices, individuals can prevent the spread of harmful bacteria, viruses, parasites, and other contaminants. This knowledge helps in maintaining the safety and well-being of consumers.
- **Preventing Food Contamination:** Knowledge of food safety and hygiene helps prevent contamination by ensuring proper handling, storage, and preparation techniques. This includes maintaining appropriate temperatures, preventing cross-contamination between raw and cooked foods, and practicing good personal hygiene while handling food.
- **Compliance with Regulations**
- **Reputation and Customer Confidence:** Food safety and hygiene practices directly impact a business's reputation and customer confidence. Poor hygiene practices, foodborne illnesses, or contamination incidents can lead to negative publicity, loss of customers, and damage to the brand's image. Conversely, businesses that prioritize food safety and hygiene can build a positive reputation and gain customer trust, leading to increased patronage and loyalty.



Receiving food – How to minimise the food losses

- ▶ Inspect supplies right away
- ▶ Check the condition and, if appropriate, the temperature of the delivery vehicle
- ▶ Check code dates
- ▶ Measure the temperature of refrigerated and frozen food
- ▶ Check quantities, grades and the condition of all food
- ▶ Reject unacceptable supplies, following the workplace procedures
- ▶ Complete appropriate documentation
- ▶ Store supplies in appropriate storage right away



Reasons for rejecting food

- Wrong temperature or evidence of temperature abuse
- Packaging damaged, dirty or inappropriate
- Cans dented or bulging
- Visible contamination or adulteration, such as mold or slime
- Unusual odor
- Sour flavor
- Wrinkling, drying or softening of fruit or vegetables
- Expired code date
- No inspection seal or tag for foods such as meat, poultry, eggs and shellfish
- Inadequate documentation





Cooking principles

- ▶ Plan work so that hot food is not prepared too far ahead of service
- ▶ Rotate large food items part way through cooking and stir liquid foods frequently
- ▶ Allow food cooked in a microwave oven to stand for two minutes after cooking
- ▶ Measure the internal temperature at the center or the thickest part of the food
- ▶ Be certain the food reaches at least the minimum temperature required for the required time





Green, digital and antreprenorial skills in the food catering sector

Preliminary operational programs
What to sanitize: examples

Food-contact surfaces

- knives and utensils
- slicers and mincers
- mixers
- containers
- cutting boards
- work surfaces

Hand-contact surfaces

- handles
 - doors
 - refrigeration units
 - freezers
 - cupboards
 - utensils
- faucets

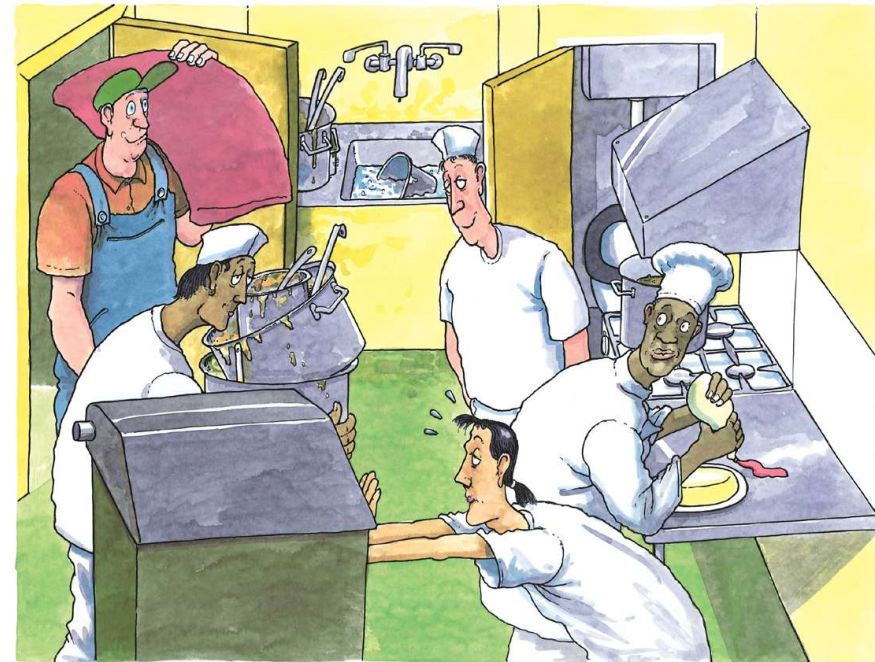
Contamination hazards

- trash containers
- cleaning cloths



Principles of layout and location

- ▶ Contamination prevention
- ▶ Pest prevention
- ▶ Ease of cleaning
- ▶ Temperature control
- ▶ Fire safety
- ▶ Potable water
- ▶ Access for people with disabilities





Examples of topics covered by food safety legislation, including HACCP standards

- ▶ Safeguarding public health by providing consumers with food that is safe, unadulterated and honestly presented
- ▶ Control of contamination, adulteration and foodborne illness
- ▶ Composition and labeling of food (honestly presented)
- ▶ Permits to operate
- ▶ Sanitation of food premises and equipment
- ▶ Occupational health and safety
- ▶ Provision of sanitary accommodation, water supplies and washing facilities
- ▶ Safe and non-toxic materials
- ▶ Personal hygiene, including the reporting of certain diseases
- ▶ Temperature and time control
- ▶ Inspections and corrective actions
- ▶ Education and training of food employees



What is inspected by local authorities and institutions

- ▶ Employee and management food practices
- ▶ Personal hygiene, including restrictions of infected employees
- ▶ Time and temperature control
- ▶ Food flows
- ▶ Measures to prevent contamination and cross-contamination
- ▶ Cleaning and sanitizing methods
- ▶ Equipment and utensils
- ▶ Storage conditions
- ▶ Pest control
- ▶ Water supplies and waste disposal
- ▶ Handling of toxic materials
- ▶ Conformance with the HACCP plan, if appropriate



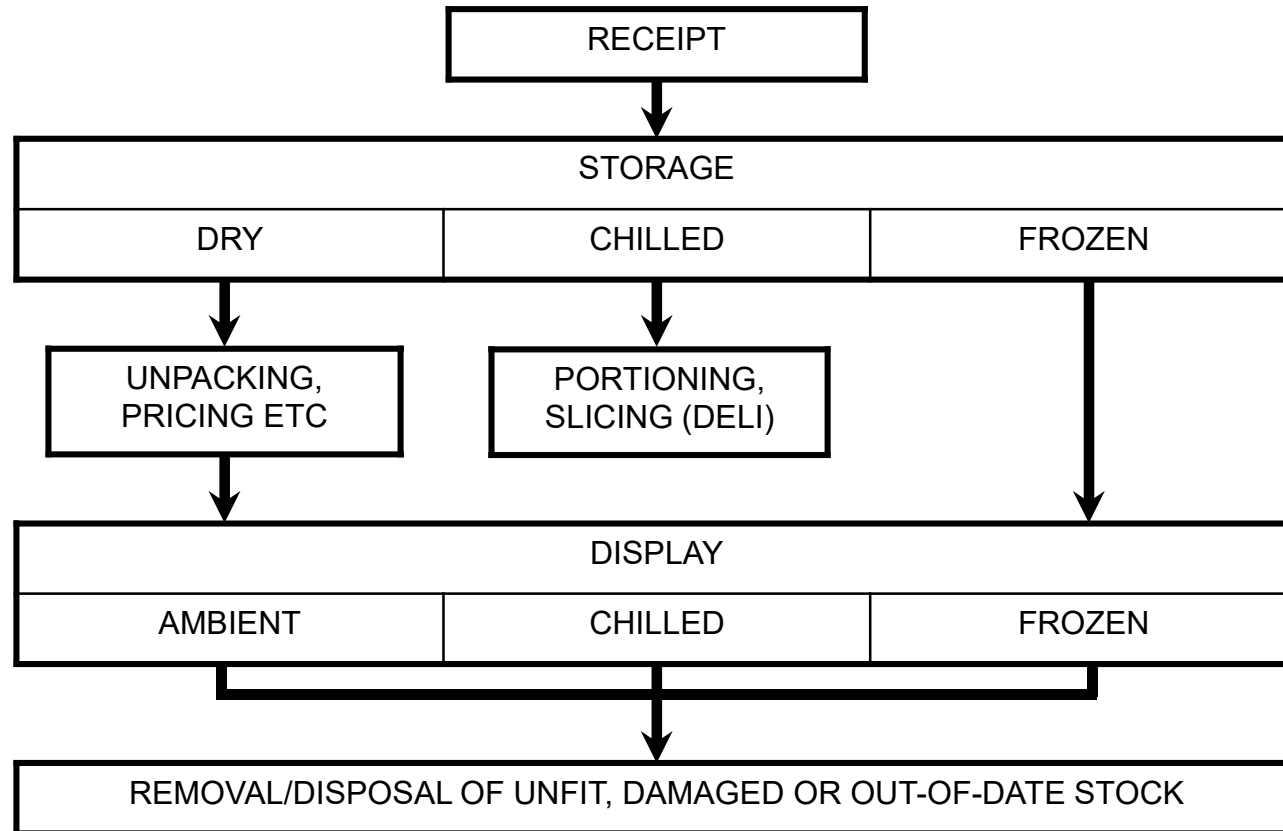
Imminent health hazard

A significant threat or danger to human health, based on evidence sufficient to show that a product, practice, circumstance or event creates a situation that requires immediate correction or cessation of operation to prevent injury.

A permit holder shall immediately discontinue operations and notify the regulatory authority if an imminent health hazard may exist because of an emergency such as a fire, flood, extended interruption of electrical or water service, sewage backup, misuse of poisonous or toxic materials, onset of apparent foodborne illness outbreak, gross insanitary occurrence or condition, or other circumstances that could endanger public health.

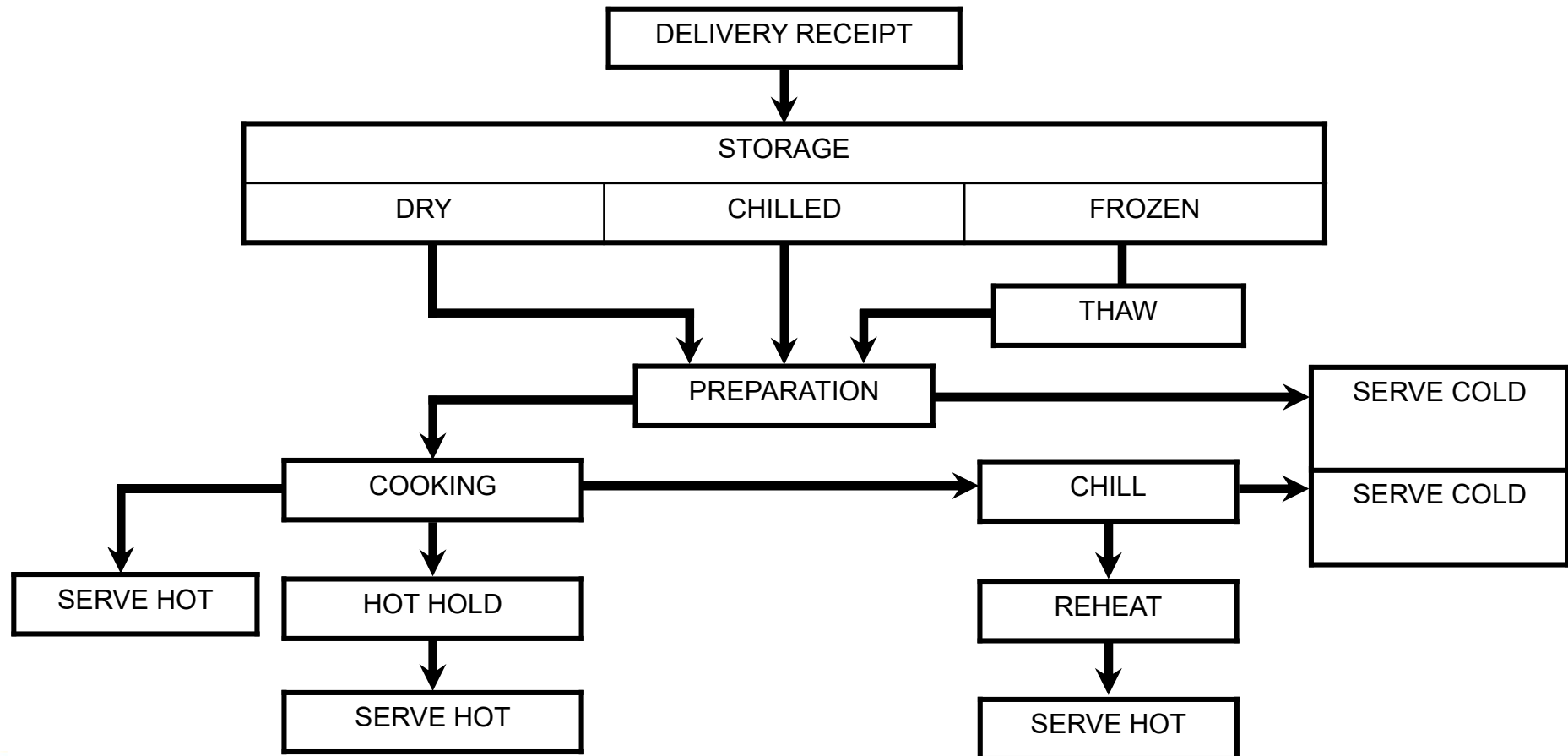


Food flow diagram – retail operation



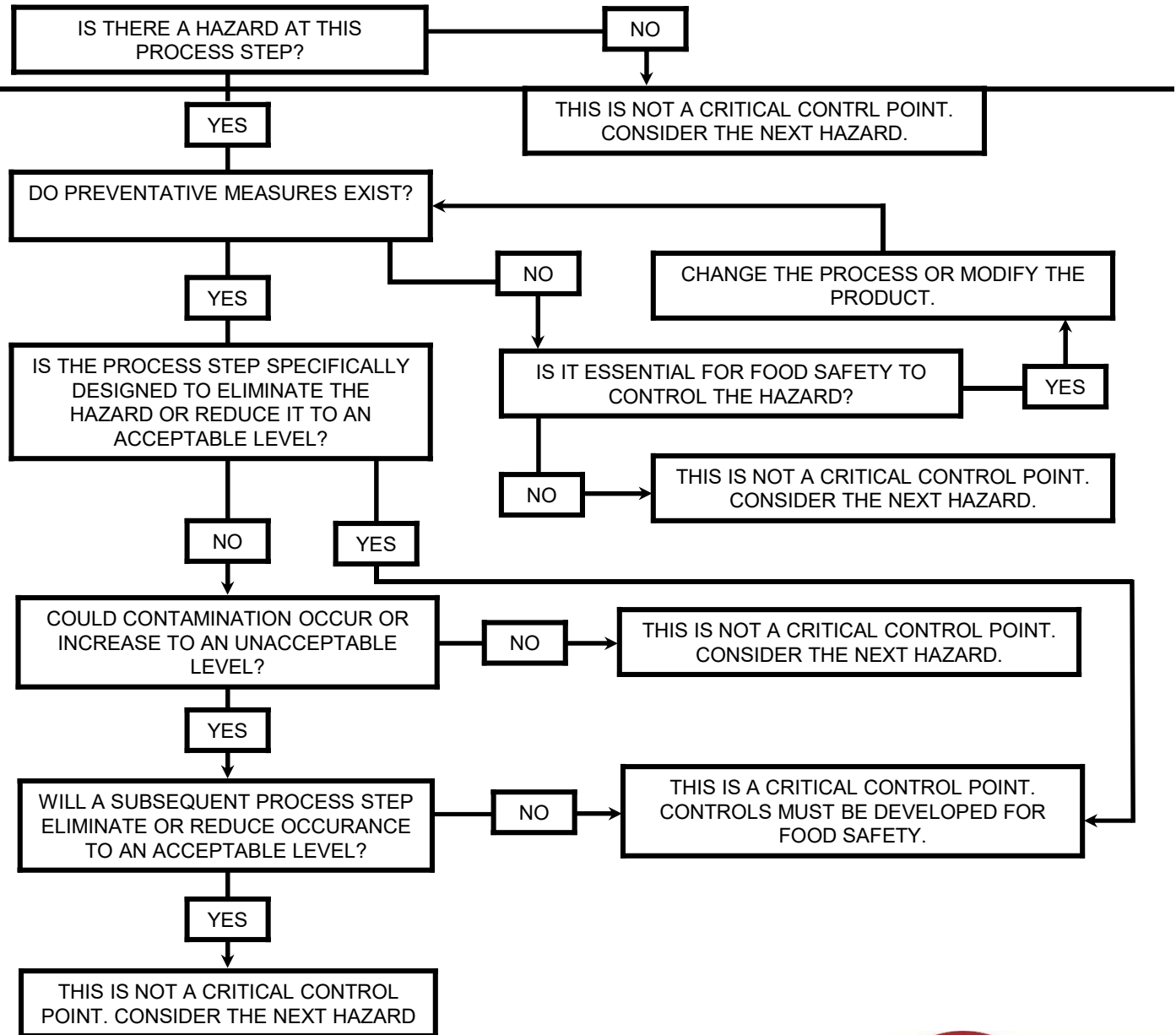


Food flow diagram - catering operation





Decision tree





Some supervisory management skills

- ▶ Listening
- ▶ Observing
- ▶ Explaining
- ▶ Advising
- ▶ Demonstrating
- ▶ Training
- ▶ Setting a good example
- ▶ Motivating
- ▶ Supporting
- ▶ Trouble-shooting and problem-solving
- ▶ Analyzing
- ▶ Creating (standards and procedures)
- ▶ Monitoring
- ▶ Testing
- ▶ Controlling and enforcing
- ▶ Correcting
- ▶ Reviewing
- ▶ Documenting
- ▶ Ensuring food is safe to eat
- ▶ Ensuring food quality
- ▶ Ensuring legal compliance



Duties of the person in charge

- ▶ Ensure that employees:
 - clean hands effectively
 - check foods as they are received
 - Cook foods properly
 - use approved methods to cool foods rapidly
 - sanitize multi-use equipment and utensils after cleaning and before reuse
 - prevent the cross-contamination of ready-to-eat food from bare hands by using suitable utensils, dispensing equipment, deli paper or gloves
 - receive proper training in food safety relevant to duties
- ▶ Ensure that consumers are:
 - advised that orders of raw or partially cooked ready-to-eat foods of animal origin are not cooked sufficiently to ensure it is safe to eat
 - notified that they should use clean tableware if they return to self-service areas such as salad bars and buffets.



Duties of the person in charge

- ▶ Ensure that:
 - persons who are not essential to the operation of the food establishment should not normally be allowed into food preparation, food storage or warewashing areas (brief visits may be authorized by the person in charge if steps are taken to prevent contamination of food, food equipment, utensils etc)
 - employees and delivery, maintenance and pest control personnel and any others who enter food preparation, food storage or warewashing areas comply with the appropriate food code



Training

- ▶ Orientation (or induction) training
- ▶ Basic/employee
- ▶ Supervisory and management
- ▶ Refresher/review



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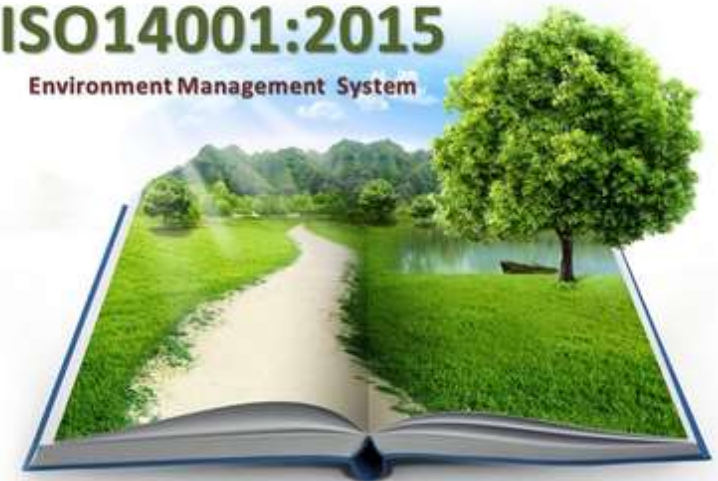
Interactive Q&A



DEFINITION OF ISO 14001 ENVIRONMENTAL

ISO 14000 is a family of 'standards' - the standard (14001) + guidelines (see list of 14000 standards below) - related to **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.

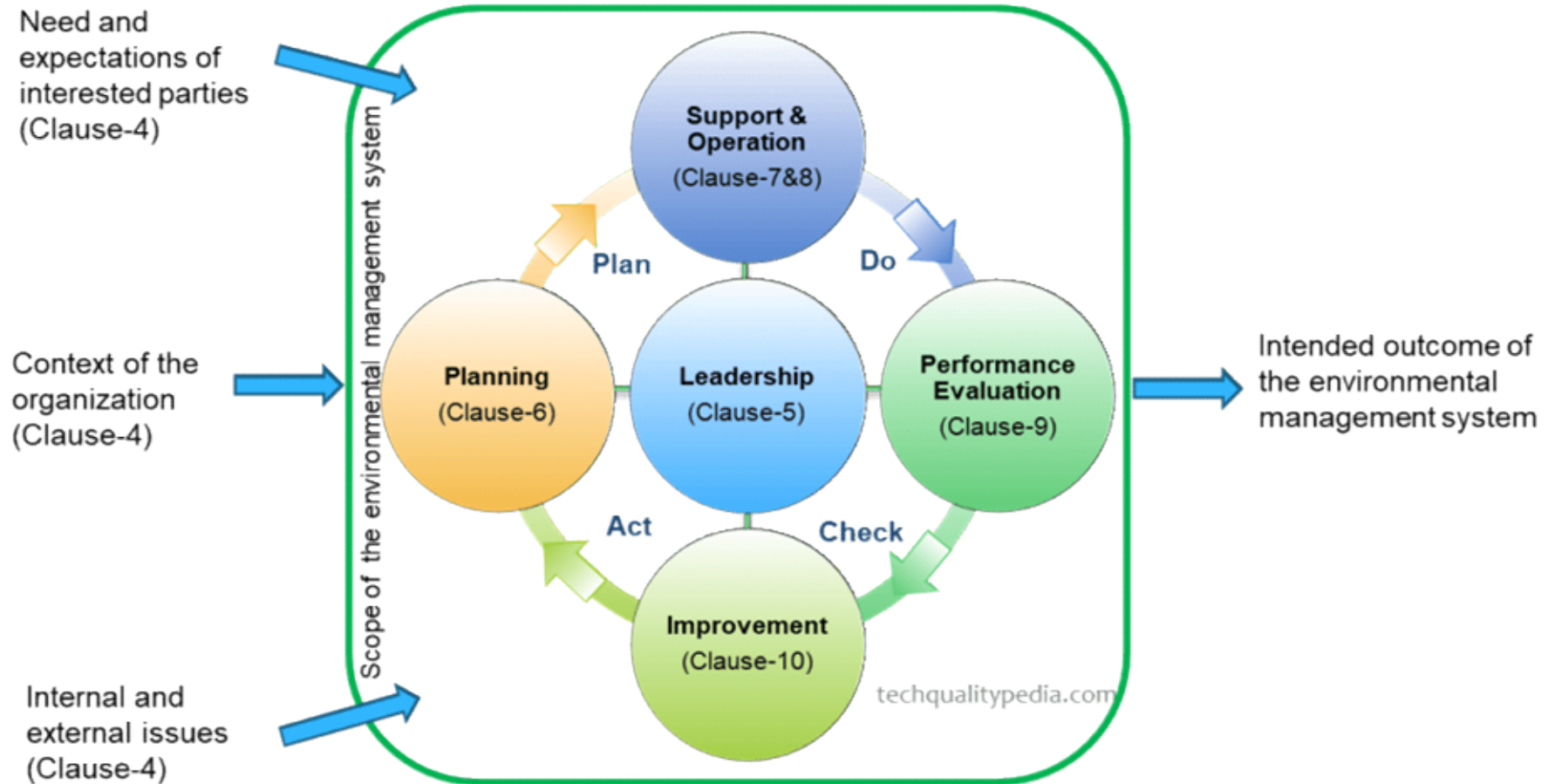
ISO14001:2015 Environment Management System



ISO 14000 is similar to **ISO 9000 quality management** in that both pertain to the process of how a service/product is rendered, rather than to the service/product itself. As with ISO 9001, certification is performed by third-party organizations rather than being awarded by ISO directly.



Environmental Management System (PDCA Model)



Here are some environmental rules and practices commonly aligned with HACCP in the food industry:

- 1. Waste Management:** Proper waste management is crucial for maintaining a hygienic and safe environment. Food establishments should have procedures in place for the safe disposal of food waste, packaging materials, and other waste products. This may include separating different types of waste, ensuring proper storage, and following local waste disposal regulations to prevent pollution and contamination.
- 2. Water Management:** Water is a critical resource in the food industry, and its quality and usage can impact food safety. HACCP encourages the implementation of water management practices, such as regular testing of water sources, maintaining appropriate water temperatures, and preventing cross-contamination with pathogens or chemicals. Conserving water through efficient usage and reducing water pollution is also an environmentally responsible practice.
- 3. Energy Efficiency:** While HACCP doesn't explicitly address energy efficiency, many food businesses strive to minimize energy consumption as part of their sustainability efforts. Implementing energy-saving measures, such as using energy-efficient equipment, optimizing processes to reduce energy waste, and promoting energy-conscious behaviors among staff, aligns with environmental goals and can result in cost savings.

4. Chemical Handling and Storage: HACCP emphasizes the proper handling, storage, and use of chemicals in food processing to prevent contamination. This includes following appropriate procedures for storing chemicals in designated areas, ensuring their secure containment to prevent spills or leaks, and adhering to regulations for the disposal of hazardous chemicals. Responsible chemical management reduces the risk of environmental pollution and protects employees' health and safety.

5. Pest Control: Effective pest control is an integral part of maintaining food safety. HACCP guidelines emphasize the implementation of pest management programs, which typically involve regular inspections, appropriate sanitation practices, and the use of safe pest control measures. These practices aim to prevent pest infestations while minimizing the use of harmful pesticides that could impact the environment.

6. Sustainable Sourcing: While not directly related to HACCP, many food businesses prioritize sustainable sourcing practices as part of their overall commitment to environmental responsibility. This may involve sourcing ingredients from local suppliers, using organic or eco-friendly products, promoting fair trade practices, and supporting sustainable agriculture and fisheries. Sustainable sourcing helps reduce the environmental impact associated with food production and supports a more sustainable food system.

By minimizing hazards and ensuring safe processes, food businesses can contribute to a healthier environment and demonstrate their commitment to sustainability.



Definitions of cleaning and sanitizing

- ▶ Clean: free from dirt and soil
- ▶ Cleaning: removing dirt by use of energy
 - heat
 - detergent
 - physical effort
- ▶ Sanitary: safe for health/free from dangerous levels of pathogens and spoilage organisms
- ▶ Sanitizing: reduction of bacteria to a safe level
 - very hot water
 - steam
 - chemicals
- ▶ Sterilizing: elimination of all bacteria and their spores





Why is important to have knowledge about Environmental Principles ?

- 1. Sustainable Resource Management:** Environmental principles provide guidance on sustainable resource management. Understanding concepts such as renewable resources, conservation, and minimizing waste helps individuals and organizations make informed decisions about resource utilization. This knowledge is crucial for promoting long-term environmental sustainability and preventing the depletion of natural resources.
- 2. Environmental Conservation:** Environmental principles emphasize the importance of preserving biodiversity, ecosystems, and natural habitats. By understanding these principles, individuals can make choices that minimize their impact on the environment, such as reducing pollution, protecting endangered species, conserving water and energy, and practicing responsible waste management. This knowledge is essential for maintaining a healthy and balanced environment for current and future generations.
- 3. Climate Change Mitigation:** Climate change is a pressing global issue that requires collective action. Understanding environmental principles related to climate change, such as greenhouse gas emissions, carbon footprint, and renewable energy, empowers individuals and organizations to take proactive measures to reduce their impact. This can include adopting energy-efficient practices, promoting renewable energy sources, supporting carbon offset initiatives, and advocating for sustainable policies.



Why is important to have knowledge about Environmental Principles ?

- 4. Environmental Regulations and Compliance:** Governments and regulatory bodies establish environmental regulations to protect ecosystems, wildlife, and human health. Knowledge of environmental principles helps individuals and organizations understand and comply with these regulations.
- 5. Environmental Stewardship and Responsibility:** Environmental principles foster a sense of stewardship and responsibility towards the environment. By understanding the interconnectedness of ecosystems and the impact of human activities, individuals can take actions to minimize harm and promote positive environmental change. This can include engaging in conservation efforts, participating in environmental initiatives, supporting sustainable practices, and advocating for environmental protection.
- 6. Public Health and Well-being:** The environment plays a crucial role in public health and well-being. Environmental principles address factors such as air and water quality, exposure to hazardous substances, and the overall health of ecosystems. By having knowledge about these principles, individuals can make informed choices that contribute to a healthier environment, reduce the risk of pollution-related health issues, and improve overall quality of life.



Why is important to have knowledge about Environmental Principles ?

7. Corporate Social Responsibility: In the business world, environmental principles are integral to corporate social responsibility (CSR). Companies that prioritize environmental sustainability can enhance their reputation, attract environmentally conscious customers, and contribute to the overall well-being of communities. Knowledge of environmental principles helps businesses incorporate sustainability into their operations, supply chains, and decision-making processes.

Overall, knowledge about environmental principles is crucial for individuals, businesses, and society as a whole. It enables informed decision-making, promotes sustainable practices, and contributes to the preservation of natural resources, biodiversity, and the well-being of both present and future generations.



How to use FOOD SAFETY and Environmental principles in food industry ?

Using food safety and environmental principles in the food industry involves integrating both sets of principles into daily operations and decision-making processes. Here are some key steps to follow:

- 1. Educate Staff:** Provide comprehensive training and education to all staff members regarding food safety and environmental principles. This includes understanding proper hygiene practices, safe food handling procedures, waste management techniques, and the importance of sustainability.
- 2. Establish Food Safety Protocols:** Develop and implement robust food safety protocols based on recognized standards such as HACCP (Hazard Analysis and Critical Control Points). These protocols should cover all aspects of food handling, storage, preparation, and service to ensure the prevention of foodborne illnesses and contamination.
- 3. Monitor and Control Hazards:** Continuously monitor and control hazards throughout the food production process. Conduct regular inspections, maintain proper sanitation, and adhere to strict quality control measures.
- 4. Optimize Waste Management:** Implement effective waste management practices to minimize the environmental impact.



How to use FOOD SAFETY and Environmental principles in food industry ?

1. Conserve Water and Energy: Implement water and energy conservation measures throughout the facility. This can involve installing water-efficient fixtures, optimizing water usage during food preparation and cleaning, and using energy-efficient appliances and lighting. Regularly monitor and track water and energy consumption to identify areas for improvement.

2. Sustainable Sourcing: Embrace sustainable sourcing practices by prioritizing suppliers that adhere to environmentally friendly and socially responsible practices. Look for suppliers who prioritize organic, locally sourced, and sustainably produced ingredients.

3. Reduce Packaging Waste: Minimize packaging waste by opting for eco-friendly packaging materials that are recyclable or biodegradable. Encourage customers to bring reusable containers or bags, and offer incentives for doing so. Additionally, work with suppliers to minimize unnecessary packaging and explore options for bulk purchasing.



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TEAM SC WORK'S QUALITY SRL

loredanawks@gmail.com - 00 40 757 085 146

melaniawks@gmail.com – 00 40 727 671 407

Thanks for your attention!

