Food and Agriculture Organization of the United Nations

Organisation des Nations Unies pour l'alimentation et l'agriculture

Organización de las Naciones Unidas para la Alimentación y la Agricultura

Centre for Environment Fisheries & Aquaculture Science

International Launch Webinar Bivalve mollusc sanitation for growing areas

11 July 2024

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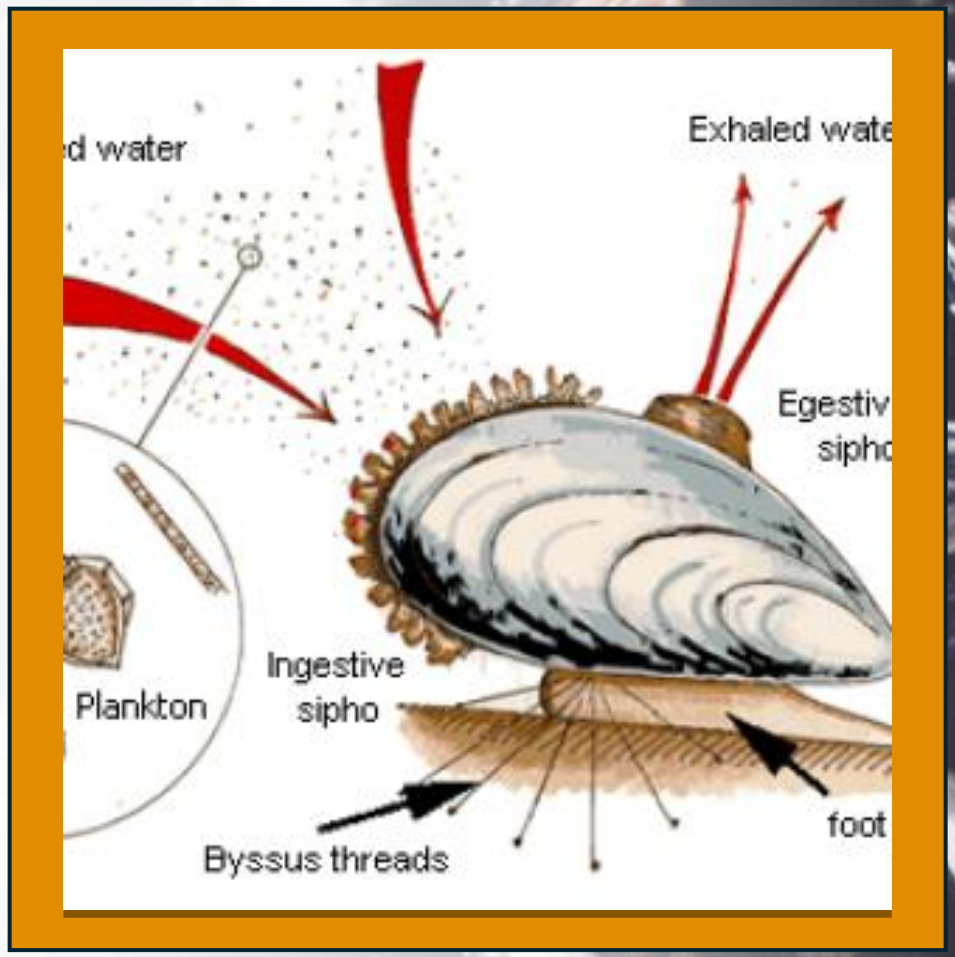
BIVALVE MOLLUSCS - A SUSTAINABLE FOODSTUFF

- Extractive, **unfed**
- **Low industry costs, gender** opportunities in **rural communities**
- No **antimicrobial** or **chemical** usage
- **Low carbon footprint** compared to other forms of protein production
- **Substantial interest globally** to **develop commercial production** for **food security** and **trade**

BIVALVE MOLLUSCS – PRODUCT SAFETY, THE CHALLENGES

- As **filter feeders** – bivalves take on the **characteristics** of their **environment**
- Bivalves can **concentrate microbial pathogens >100 times** compared with overlying waters
- An **established route of transmission** for a range of important of illnesses.
- **Outbreaks** can be very **large**: Hepatitis A outbreak in China in 1988 responsible for almost **300,000 cases** – one of the **largest foodborne outbreaks** ever reported

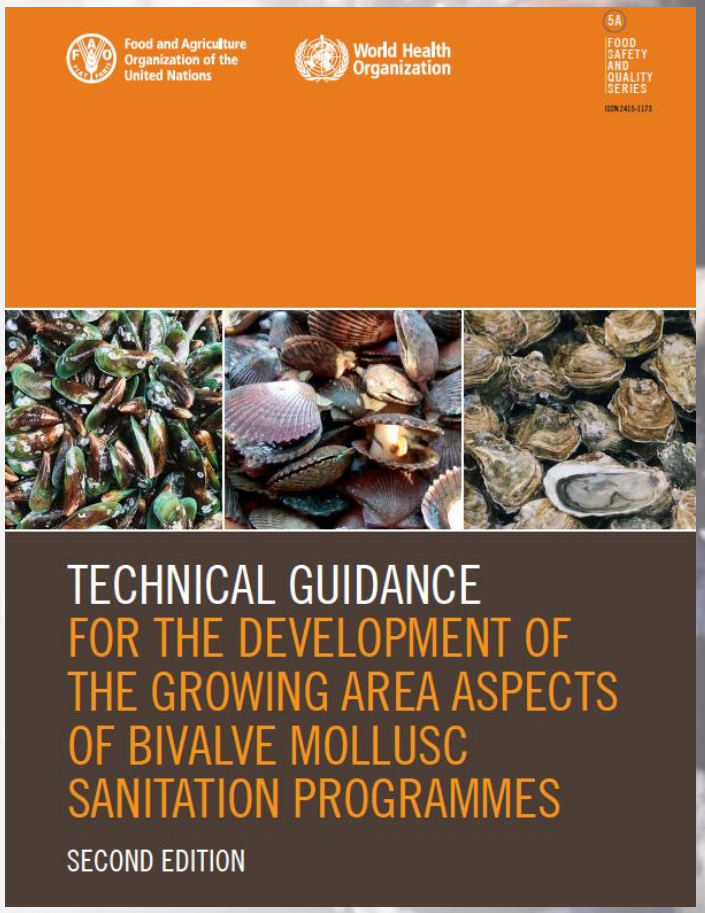


FAO REFERENCE CENTRE FOR BIVALVE MOLLUSC SANITATION

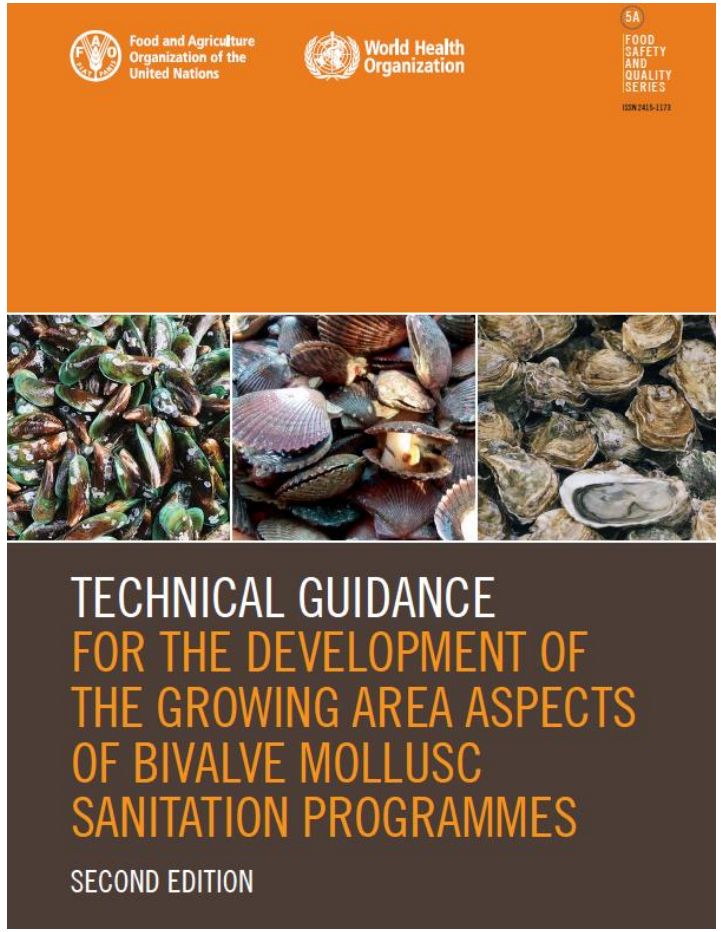
- FAO designated Cefas as a **Reference Centre** in 2019 to support **Member Countries** in **developing** and **enhancing** bivalve mollusc production

- Our work is funded by UK Government

Further information: FAO Reference Centre for Bivalve Mollusc Sanitation - Cefas (Centre for Environment, Fisheries and Aquaculture Science)



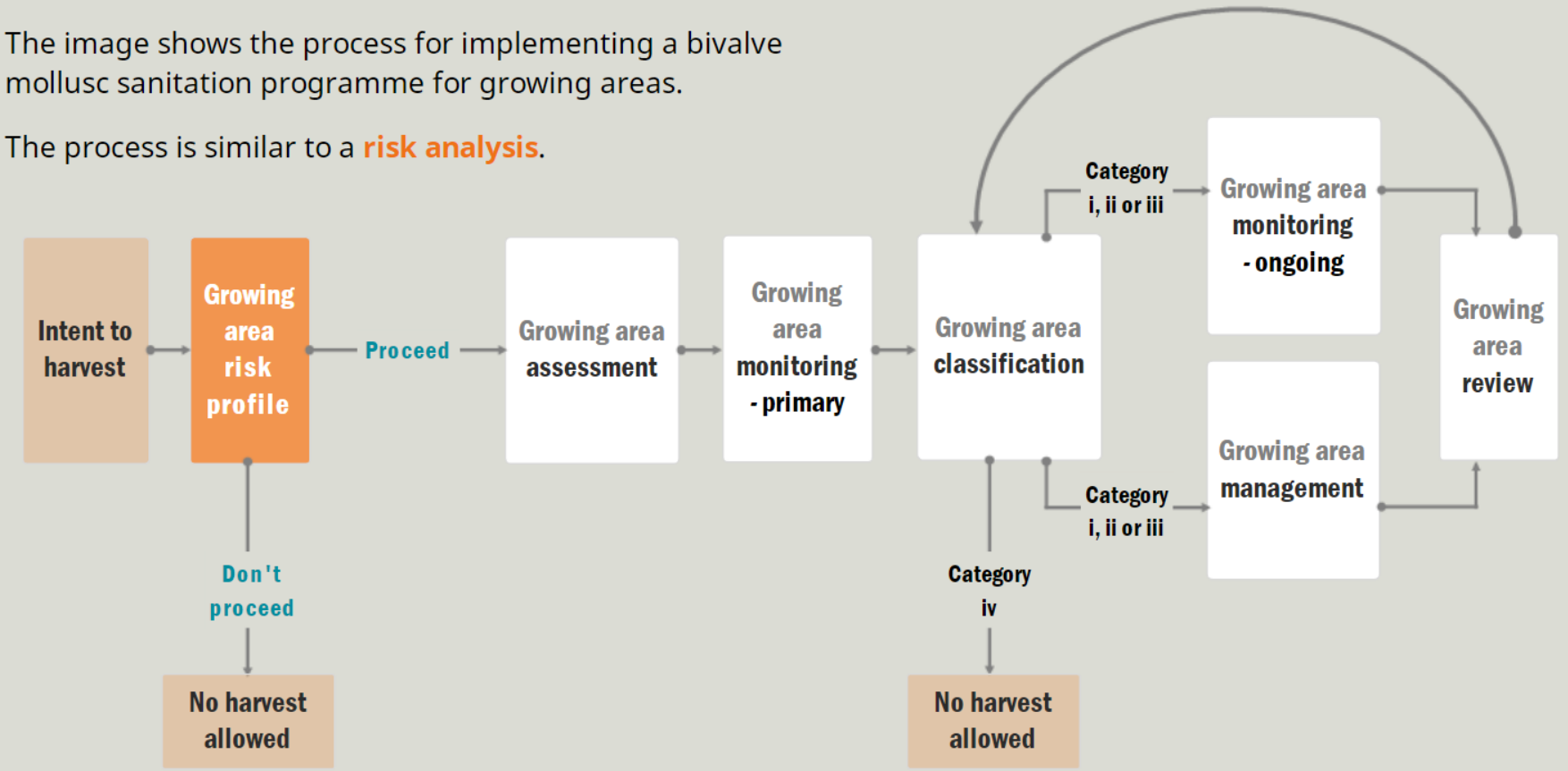
TRANSLATING THE TECHNICAL GUIDANCE ON RISK ANALYSIS TO eLEARNING



Growing area programme process

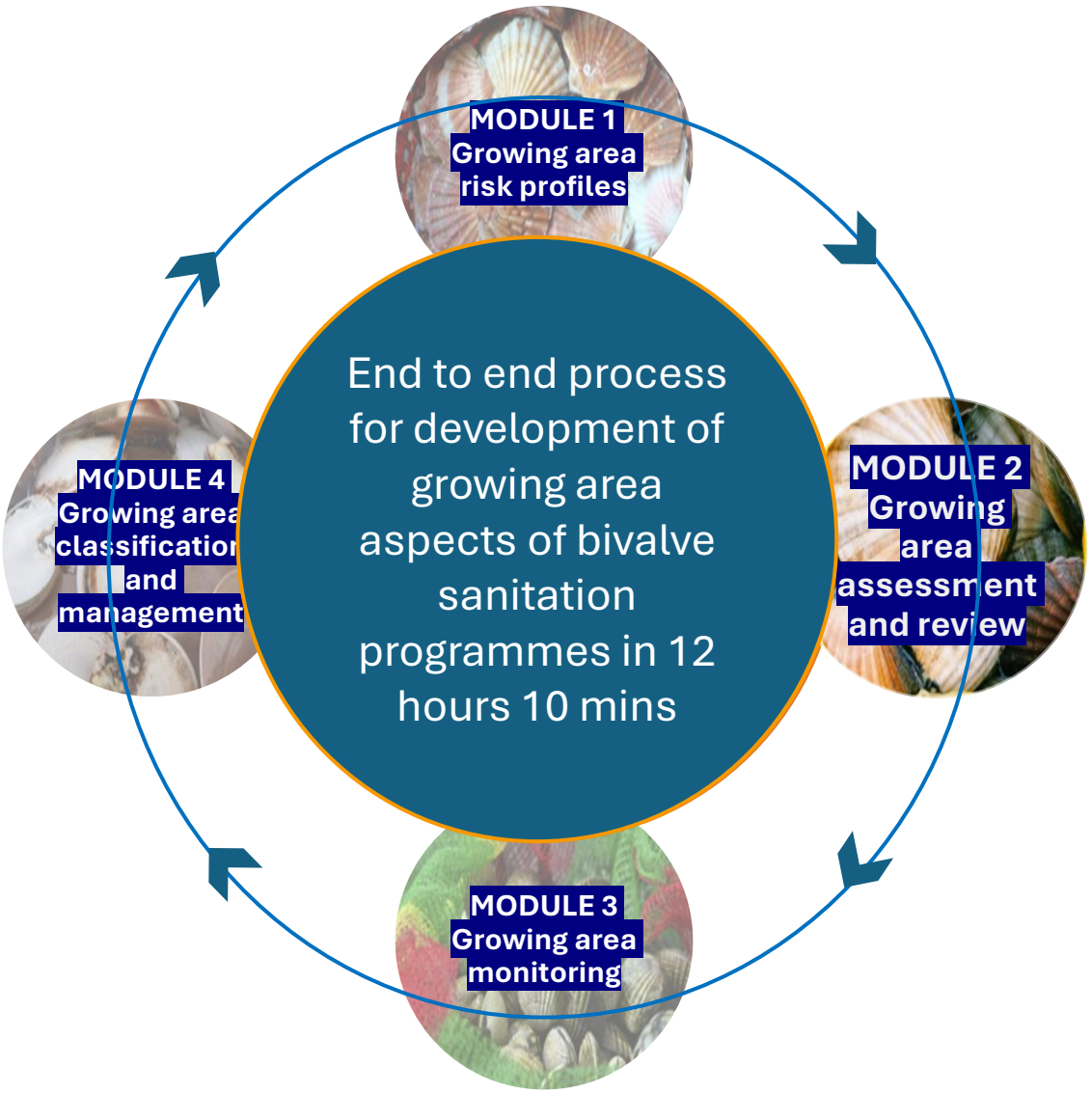
The image shows the process for implementing a bivalve mollusc sanitation programme for growing areas.

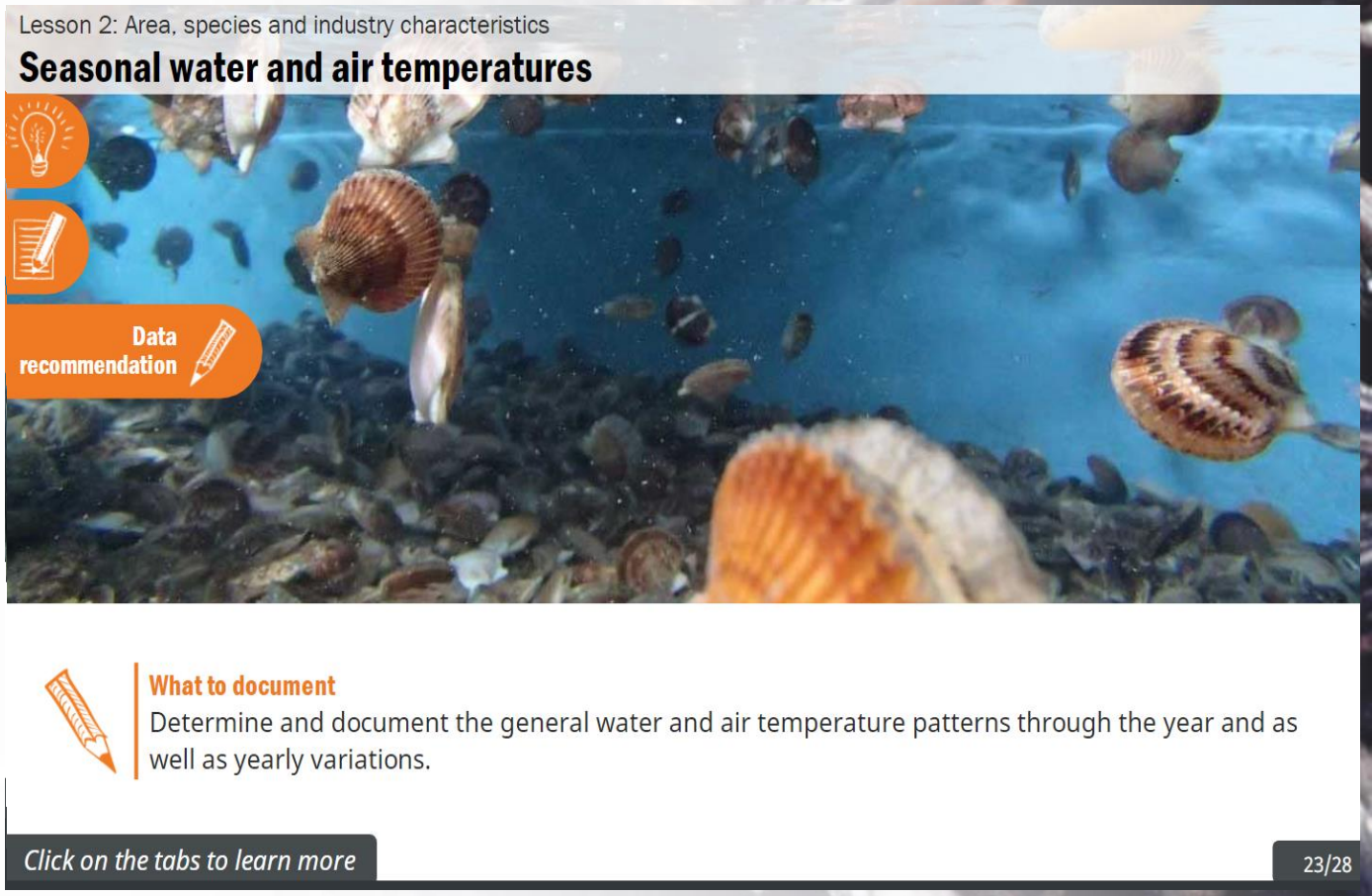
The process is similar to a risk analysis.



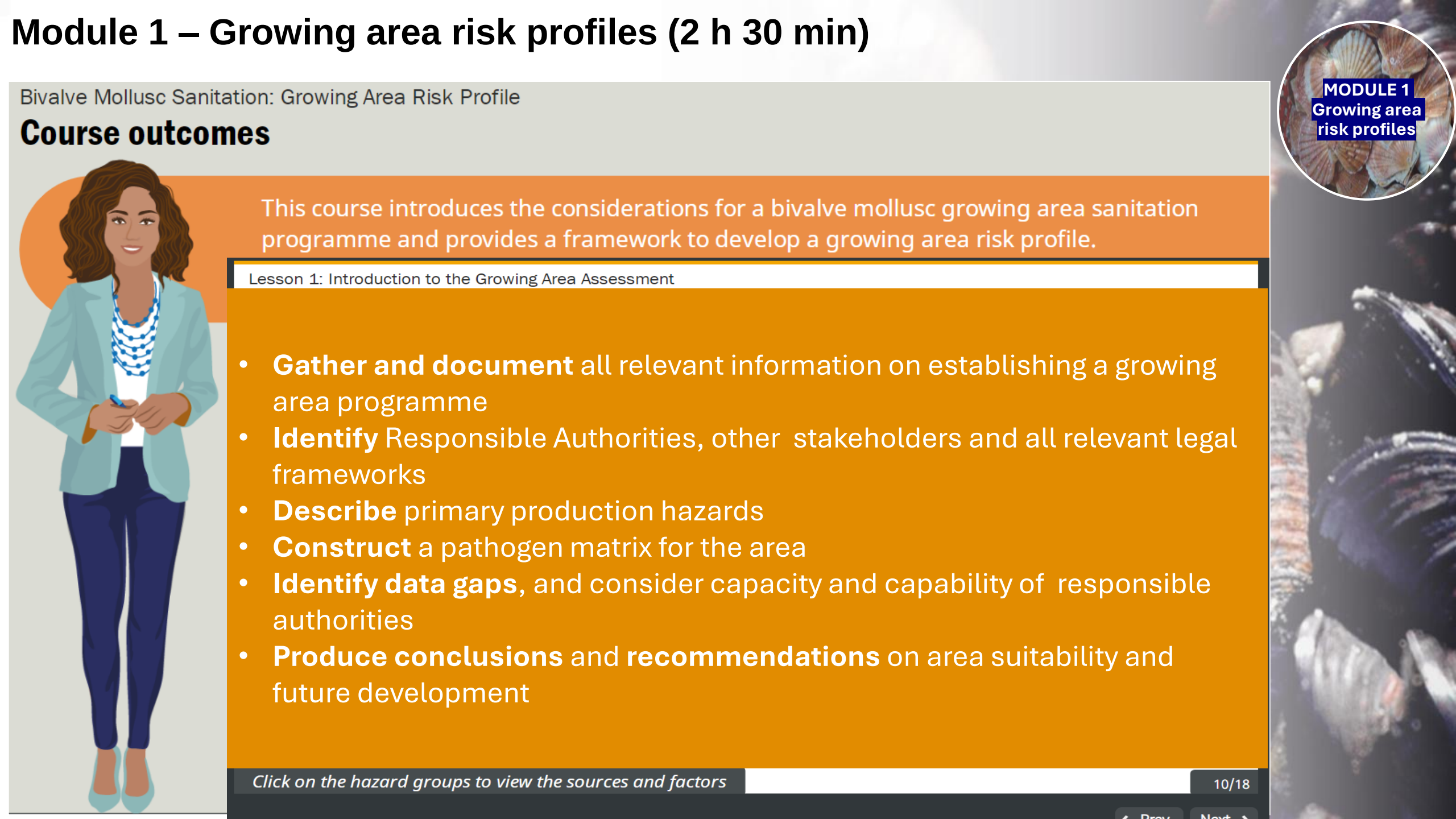
Training and e-Learning - Cefas (Centre for Environment, Fisheries and Aquaculture Science)

FOUR INTERACTIVE MODULES WITH STANDARDISED FORMAT WITH EXPLANATIONS, HOW TO RECORD DATA WHAT TO RECORD, AND RECOMMENDATIONS





Module 1 – Growing area risk profiles (2 h 30 min)



Bivalve Mollusc Sanitation: Growing Area Risk Profile

Course outcomes

This course introduces the considerations for a bivalve mollusc growing area sanitation programme and provides a framework to develop a growing area risk profile.

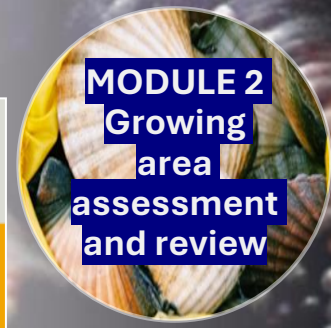
Lesson 1: Introduction to the Growing Area Assessment

- **Gather and document** all relevant information on establishing a growing area programme
- **Identify** Responsible Authorities, other stakeholders and all relevant legal frameworks
- **Describe** primary production hazards
- **Construct** a pathogen matrix for the area
- **Identify data gaps**, and consider capacity and capability of responsible authorities
- **Produce conclusions** and **recommendations** on area suitability and future development

Click on the hazard groups to view the sources and factors

10/18

Module 2 – Growing area assessment and review (5 hours)



Bivalve Mollusc Sanitation: Growing Area Assessment & Review

Course outcomes

This course has been designed to support the completion of a Growing Area Assessment and review for a bivalve mollusc sanitation programme.

Lesson 2: Data gathering on contamination sources

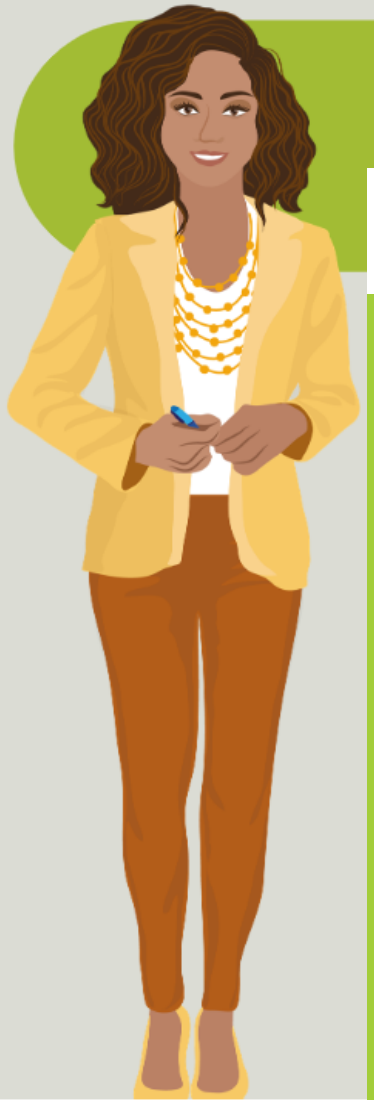
Private faecal waste collection systems/handling facilities

- **Define the scope** of the growing area in terms of the hazards
- **Document the sources** of contamination and environmental conditions that may affect contamination
- **Undertake a shoreline survey** and test for indicators or pathogens
- **Analyse data**, and evaluate presence of hazards in the growing area
- **Set** the frequency for review
- **Document conclusions** in a logical and traceable format

Module 3 – Growing area assessment and review (2h 30 min)

Bivalve Mollusc Sanitation: Growing Area Monitoring

Course outcomes



This course has been designed to support the establishment of a **growing area monitoring programme.**

Lesson 2: Sampling plans

Four components of a sampling plan

- **Describe** primary and ongoing monitoring requirements
- **Generate and document** sampling plans for monitoring
- **Describe** the requirements for sampling and sample transport to the laboratories for bivalves and/or water
- **Understand capability** factors and recommended quality management frameworks for laboratories
- **Outline** the microbiological methods for the determination of faecal indicators or pathogens in bivalves or water

Module 4 – Growing area classification and management (2h 10 min)

MODULE 4
Growing area classification and management

Bivalve mollusc sanitation: Growing area classification and management

Course outcomes

This course has been designed to support the establishment of a **growing area monitoring programme.**

- **Understand** the purpose and methodology behind classification of growing areas, including delineation of boundaries and areas unsuitable for harvest
- **Describe** the components of the classification process, and the standardised criteria used
- **Determine** classification for growing areas, using internationally recognised approaches
- **Outline** effective growing area management strategies
- **Define** plans for expected and unexpected events
- **Develop** surveillance plans and communication strategies

Test your knowledge, access to supporting material and course certification

Tests throughout the course – to consolidate learning

Lesson 1: Classification principles

Test your knowledge

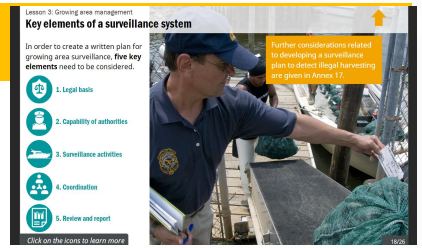
Choose the statements below that are true with regards to the **purpose** of classification:

- [ ] Provides information on the sanitary status of a new potential growing area.
- [x] Enables common risk management procedures.
- [ ] Defines the extent of the growing area.
- [x] Allows common processing requirements to be satisfied.
- [x] Enables an estimate of near- to mid-term risk based upon past performance.

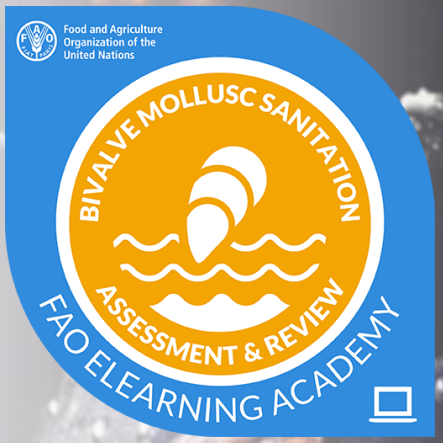
This is the correct answer! Classification enables harmonised response to risk management, including processing requirements for harvested products and time limited estimation of risk.

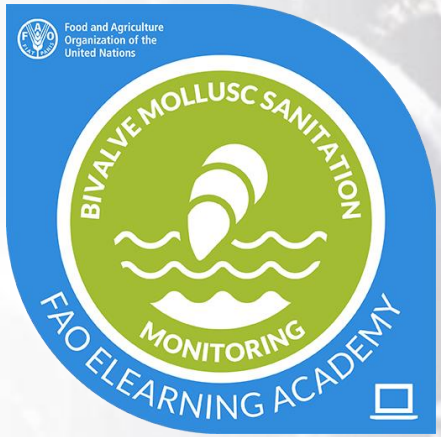
Signposting to additional resources

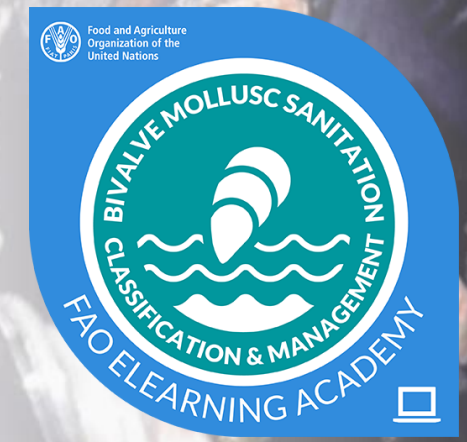
Resources



Digital badging for Continuous Professional Development







Course

Bivalve Mollusc Sanitation: Growing Area Risk Profile

This first course in the e-learning series introduces the technical guidance framework for the development of growing areas for bivalve mollusc sanitation programmes. It describes the potential hazards present with live or raw consumption of bivalve molluscs and provides guidance on the completion of a Growing Area Risk Profile (GARP).

2 h 30 m

Course

Bivalve Mollusc Sanitation: Growing Area Assessment and Review

This second course in the e-learning series details the Growing Area Assessment and review process for establishing a bivalve mollusc growing area sanitation programme. The course provides a framework for data gathering, analysis, assessment and review of potential hazards in the growing area for bivalves intended for human consumption.

5 h

Course

Bivalve Mollusc Sanitation: Growing Area Monitoring

This third course in the e-learning series details the Growing Area Monitoring activity in a bivalve mollusc sanitation programme. The course describes sample plans, how to conduct sampling and the laboratory analysis of microbiological hazards in a growing area for bivalve molluscs intended for human consumption.

2 h 30 m

Course

Bivalve mollusc sanitation: Growing area classification and management

The fourth course in the e-learning series details "Growing area classification" and "Growing area management" in a bivalve mollusc sanitation programme. The course describes the process of risk categorization for a growing area as well as the overall management of a growing area in a bivalve mollusc sanitation programme.

2 h 10 m

Bivalve Mollusc Sanitation eLearning

- Comprehensive coverage of **FAO/WHO Technical Guidance** for development of growing areas
- **Open access** and available in 3 **languages**
- **Covers all aspects** of programmes from decisions to develop areas, laboratories, classification and management plans
- Integrated test your knowledge consolidates learning, with formal **FAO course certification**
- Can **assist Policy Makers, Responsible Authorities, Laboratories, Producers** and **Academics**
- Overall aim is **assisting** in the **development** of **safe bivalve production globally improving food security** and **access** to **trade**