Food and Agriculture Organization of the United Nations

Cefas

VIRTUAL REGIONAL WORKSHOP ON BIVALVE MOLLUSCS SANITATION

9, 10, 11 December 2020

Cefas – FAO Reference Centre for Bivalve Mollusc Sanitation

Welcome introductions, Cefas and Bivalve Molluscs

Rachel Hartnell

How the workshop will run

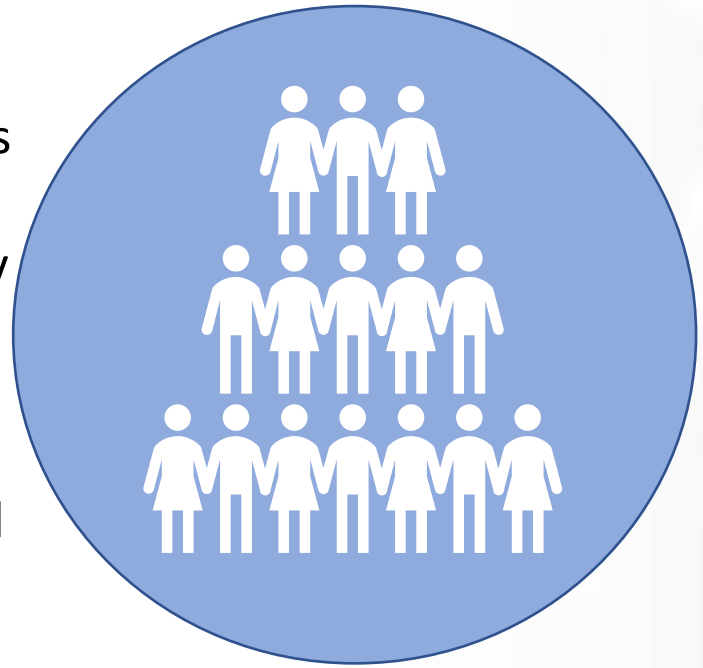
- Three, three hour sessions, today, tomorrow and on Friday – all virtual using Zoom – you should all have an agenda
- Workshop language is English – if we are speaking to quickly and if there is anything that you do not understand please tell us
- Please respect the start times and breaks
- Tomorrow there are some group sessions, you have all been assigned a group. Either red, yellow or blue, this is next to your name in the delegate list
- There will be a bivalve mollusc quiz on the final day, and a certificate of attendance which may count towards your Continuous Professional Development
- We want this workshop to be both useful and help us develop lasting relationships but we also want it to be FUN!

Welcome introductions

Welcome from the **FAO Rome**, **Cefas FAO Reference Centre for Bivalve Mollusc Sanitation** and the **University of Nitte**.

Participants

- Department of Fisheries (DoF), **Bangladesh**
- Coastal Aquaculture Authority (CAA), Ministry of Fisheries, Animal Husbandry and Dairying, **India**
- Ministry of Marine Affairs and Fisheries, **Indonesia**
- Fisheries Development Authority of Malaysia, **Malaysia**
- Centre for Coastal and Deltaic Studies, University of Sindh, **Pakistan**



Participants

- Department of Agriculture - Bureau of Fisheries and Aquatic Resources, **The Philippines**
- Fisheries Commodity Standard System and Traceability Division, Department of Fisheries, **Thailand**
- General Directorate for Fisheries and Aquaculture, Ministry of Agriculture and Forestry of the Republic of Turkey, **Turkey**

Food and Agriculture Organization of the United Nations

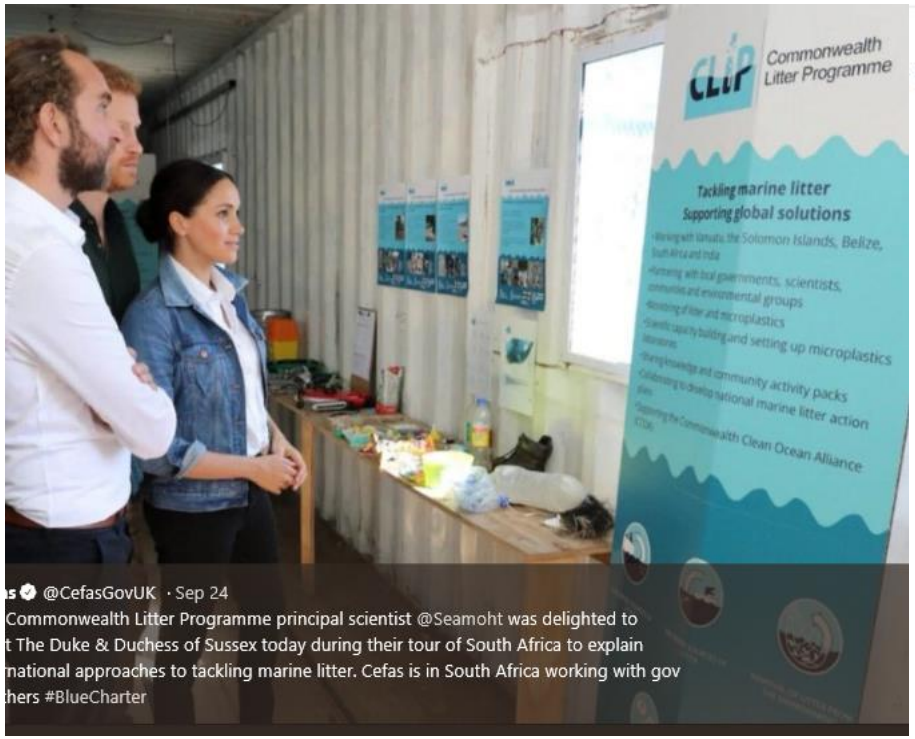
Cefas

NITTE DEEMED TO BE UNIVERSITY

Helping to achieve **enhanced production** of **safe bivalve molluscs**

Overview

1. Cefas – Centre for Environment, Fisheries and Aquaculture Science
2. The global importance of fish as a foodstuff
3. The role of bivalve shellfish within the sector



Who we are…

Cefas is an Executive Agency of Defra (Department of Environment, Food and Rural Affairs), part of UK government, 100 years of history.

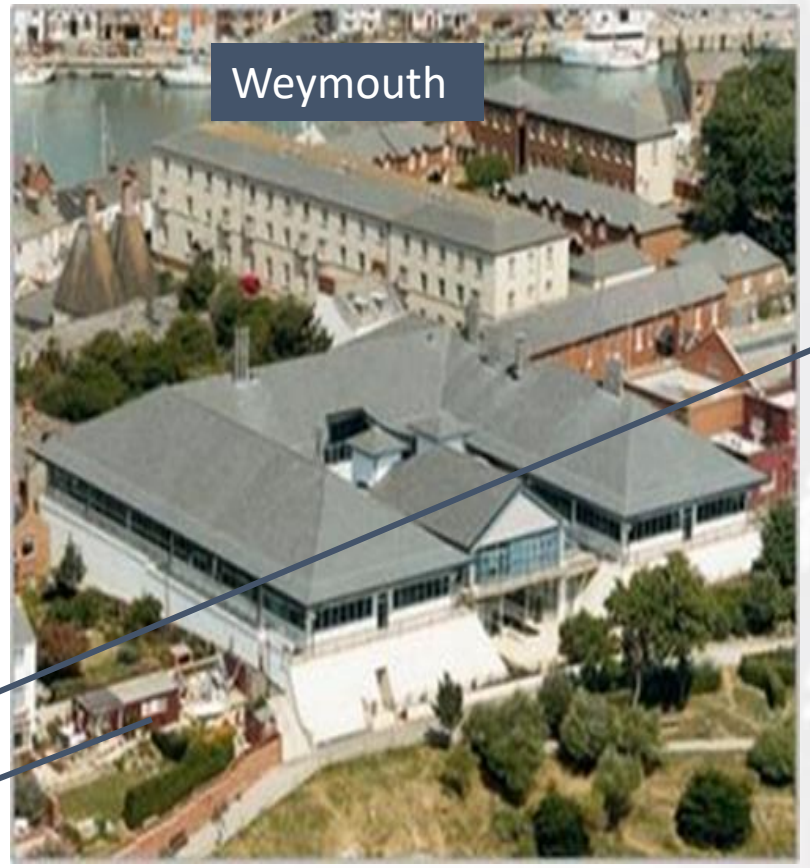
Marine and Freshwater Science – main evidence, advice and services for UK Government.

600 staff: (500 scientists 120+ PhD; 80+ PhD students)

Top 5% of 2,500 International scientific institutes (leading citation score in EU)

Strong Partnerships and University alliances

Where we are….. Weymouth, Lowestoft, Cefas ENDEAVOUR and Kuwait



https://www.cefas.co.uk/icoe/aquatic-animal-health/designations/

https://www.cefas.co.uk/icoe/seafood-safety/designations/

Where we are…….

Working in over 50 countries mainly with governments, on 100’s of projects, supporting animal and human health, healthy ecosystems and fisheries and aquaculture

Fish consumption

Globally fish contribute 15-20% of animal protein to the diet, trebled since the 1960s.

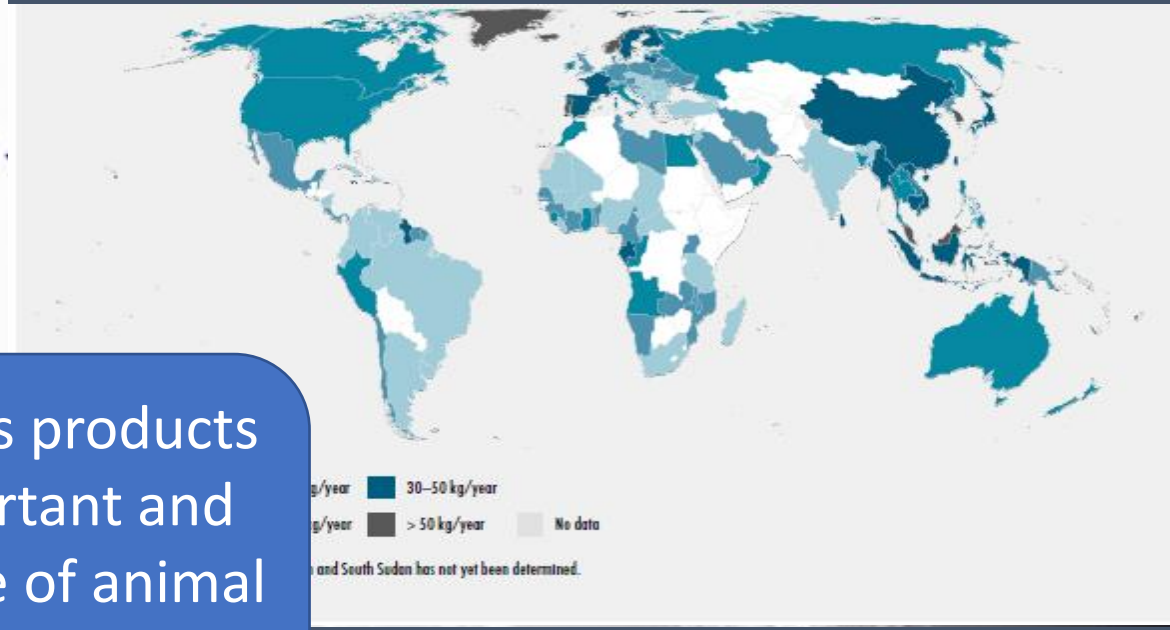
Seafood per capita consumption c
– average annual growth since 19
(population growth 1.6%), outpaci
commodities (meat, eggs and milk

Global per capita fish consumptio
above 20.3 kg/yr (2017). In Asia and P
Region approx. 24 kg/yr *cf* 8.5 kg/yr UK

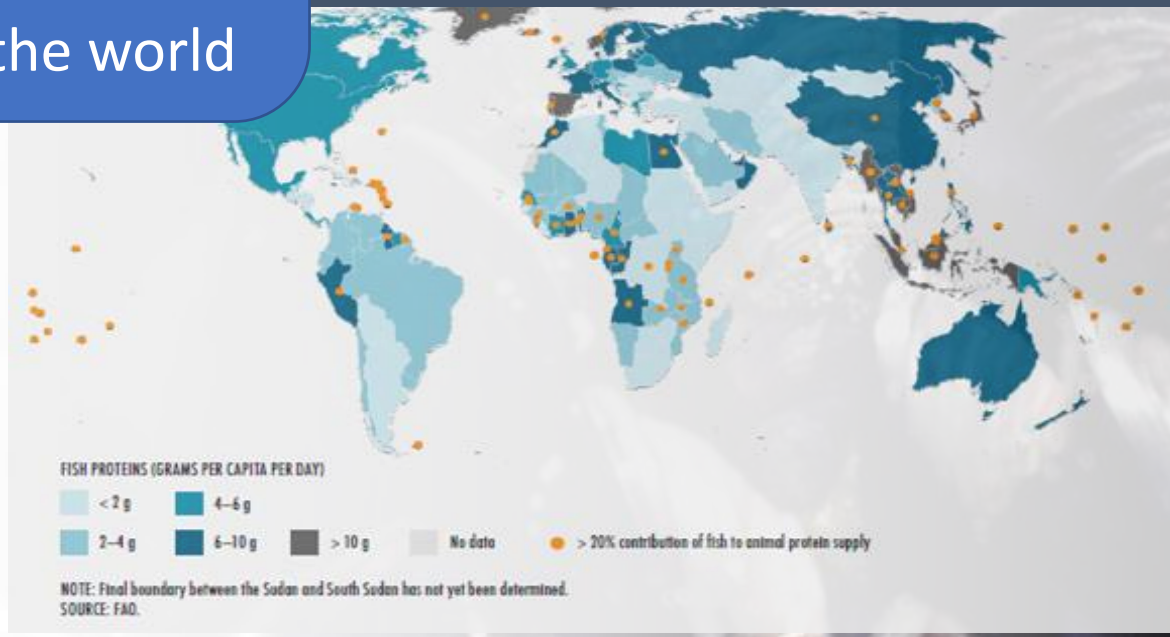
Provides over 3 billion people with >20% of daily animal protein intake, with 50%+ in some countries (Bangladesh, Indonesia)

Fish and fisheries products are a very important and increasing source of animal protein for billions of people around the world

Apparent fish consumption per capita (2015-2017) source FAO



fish to animal protein supply (2015-2017) source FAO



Fish production

Growth in demand is driven by increased population wealth, availability (aquaculture), improved fisheries management, improved distribution networks and health benefits

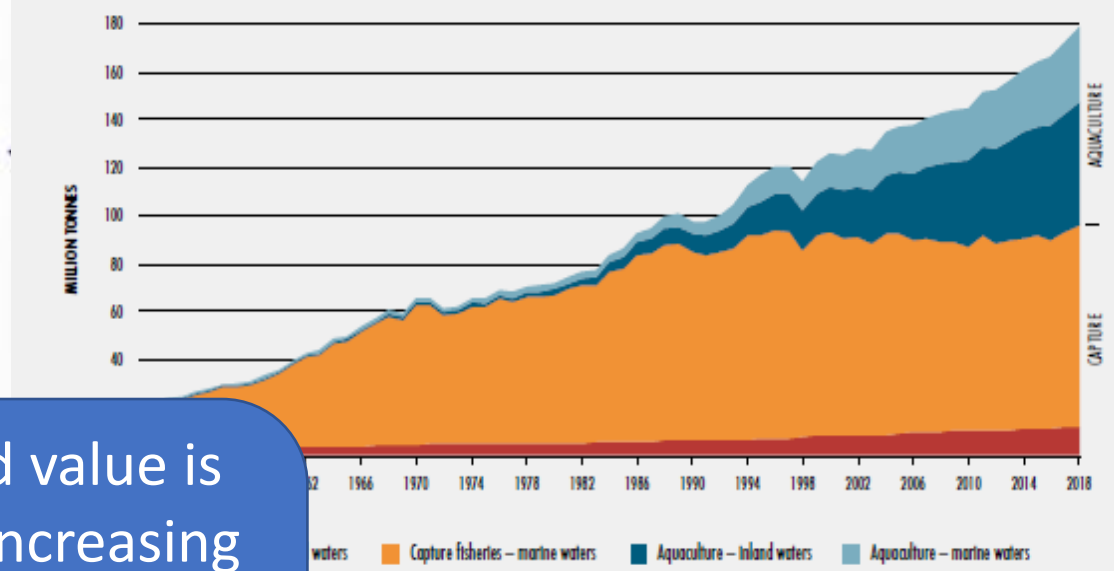
Global fish production approx.1
2018, with a first sale value of
around 156 million tonnes was
consumption

Aquaculture accounted for app
production

China is the largest fish producer (35%), Asia (excluding China) (34%), fish production in Asia has doubled in the last 20 years, but has a very long history of aquaculture

Fish production and value is increasing to meet increasing global demand, aquaculture is increasing in many world regions to offset flatlining of capture fisheries

World capture fisheries and aquaculture production – source FAO



in Thailand, 100 year old technique – source Alamy

Trade of fish and fishery products

Highly traded product, 38% of production (67 million tonnes) enters the international market, export value of USD 143 bn

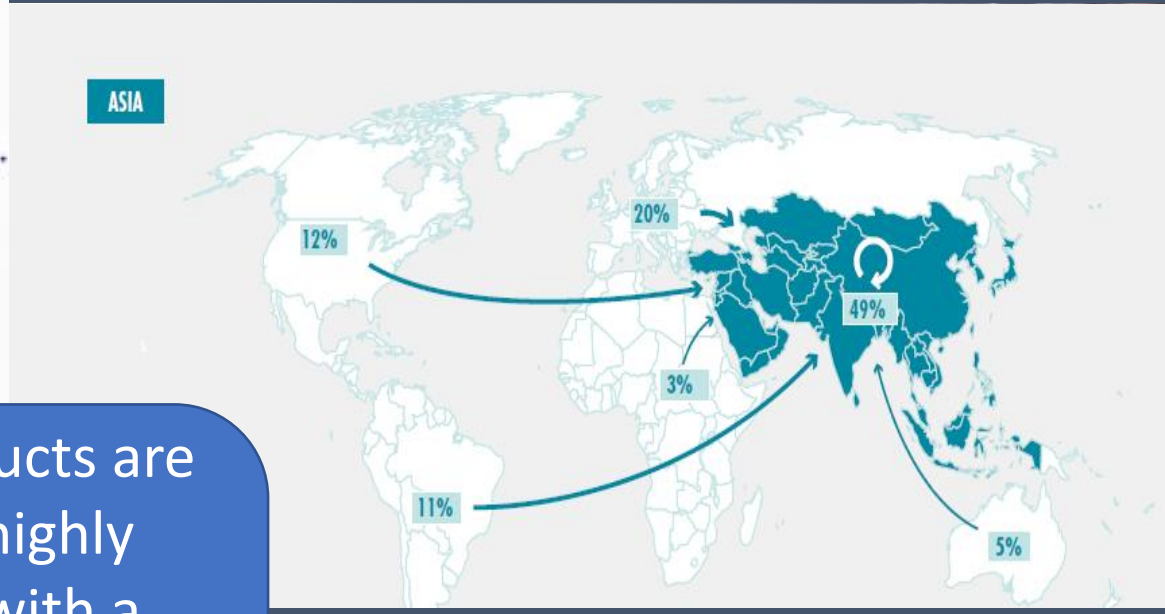
EU (34%), US (14%) and Ja
markets (total value). LMIC
bn. More than meat, tobacc

Globally there are complex
imbalanced import and expo

CoP for fish and fishery products helps to protect consumers and ensure fair practices in trade

Fish and fishery products are some of the most highly traded foodstuffs, with a global export value in excess of 140 billion US dollars. Europe, North America and Japan the largest importers

Imports and intraregional trade flows



tarius, Code of Practice for Fish and Fishery products

Bivalve mollusc production

Increase in production in the last 50 years -1m tonne in 1950, 17.7m tonnes in 2018, approx. 80% of bivalve production aquaculture

Value of aquaculture production app
2018

Production dominated by China (90
but also Japan, Republic of Korea a
production

Environmental benefits,

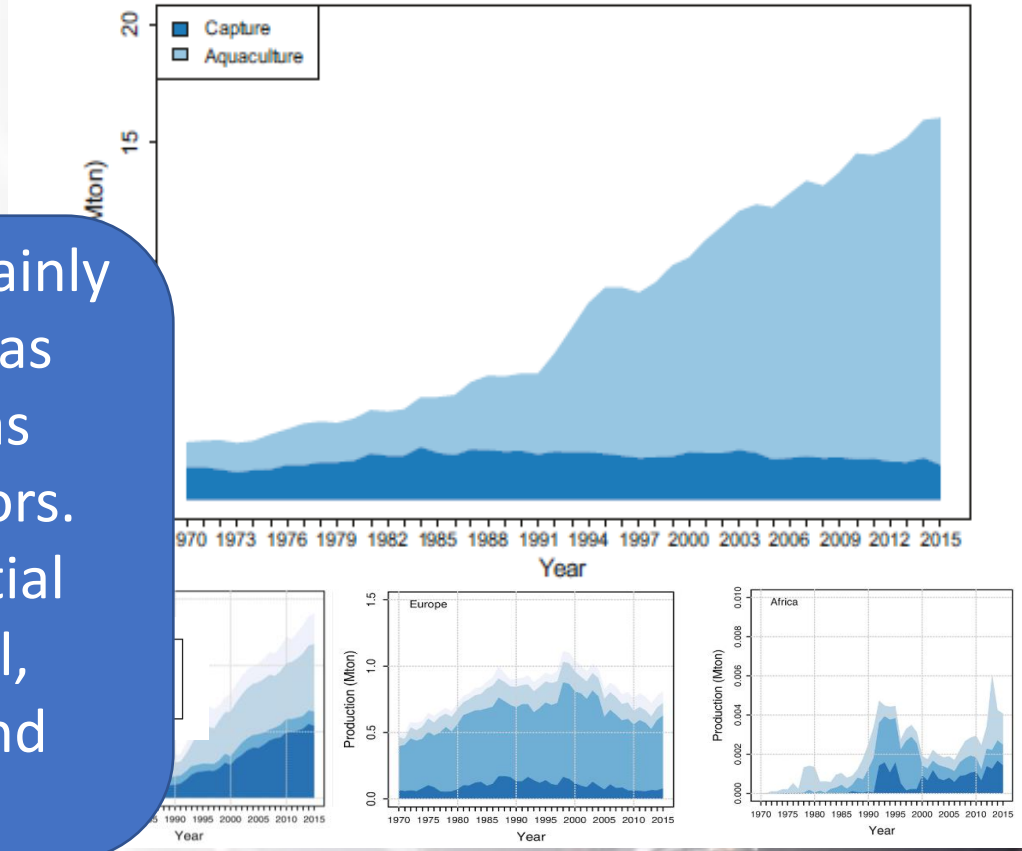
- Unfed
- No antimicrobial or chemicals
- Extractive species (multitrophic systems)

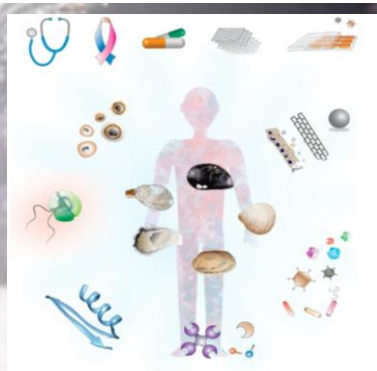
Offers other benefits,

- Health benefits to the consumer
- Employment for women
- Low infrastructure requirements

Bivalve production, mainly from aquaculture, has increased but not as rapidly as some sectors. There is huge potential with environmental, economic, health and societal benefits.

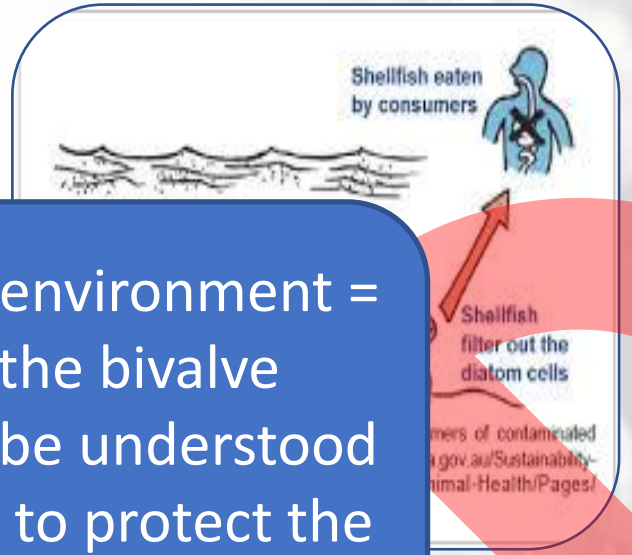
Total global production of bivalve molluscs (fishery and aquaculture) – source Wiseman *et al* 2019





From the raw bar to the bench: bivalves as models for human health. Fernandez-Robledo *et al* 2019

But safety of bivalve molluscs is not certain



Hazard in the environment =
Hazard in the bivalve
Risks need to be understood and managed to protect the consumer

How are these potential risks managed?

WTO requires that countries base their **sanitary and phytosanitary (SPS)** measures on **international standards**

Under SPS agreements for food safety (including bivalve molluscs) is **Codex Alimentarius Commission** (CAC)

Codex **Code of Practice for Fish and Fishery** products includes a section on live and raw bivalve molluscs – lacks details

Separate trading blocks (e.g. EU, US, Japan, Russia) all have different additional Food Hygiene Law

Only around 3% of the total bivalve mollusc production (raw or processed) is **traded** outside of the **country of production** (500,000 tonnes)

Over the next three days we'd like to introduce to ways that FAO and Cefas can assist

Thank you for listening