WOAH Collaborating Centre for Epidemiology and Risk Assessment of Aquatic Animals (Europe)

Reference Centre

World Organisation for Animal Health
Founded as OIE

Scenario 2
Aquatic

Norwegian Veterinary Institute

Scenario 2 : Trade in aquatic animal commodities

Objectives: use WOAH standards + risk-based decision-making

Roadmap: 3 stages

- Preparation stage -- Before negotiation (35 mins)
- During negotiation (50 mins)
- After negotiation (30 mins)

Clarify rule:

- It’s allowed to discuss and assume additional information to cover gaps

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Introduction to Rainbow trout production systems

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Broodstock & egg production

Egg incubation and hatching

Juveniles (Fry& Fingerlings)

Grow-out

Harvest

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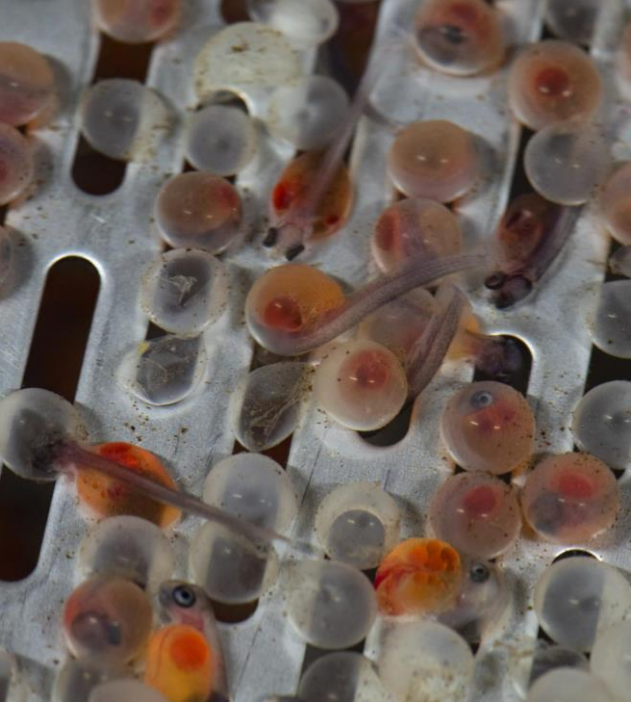
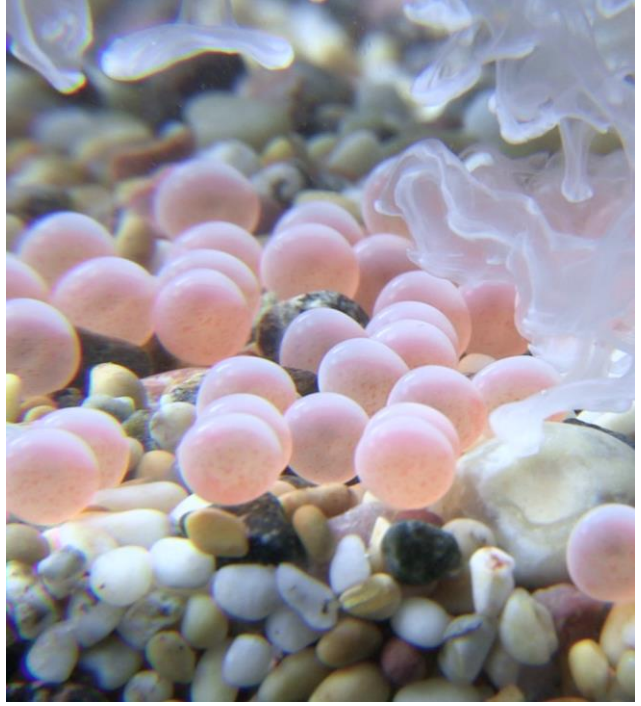
Broodstock & Egg Production

Broodstock are the parent fish, maintained in high-biosecurity facilities where conditions such as water temperature and feeding are strictly controlled.

They typically weigh 2–4 kg and are selected for desirable traits, including growth, disease resistance, and reproductive performance.

When mature, eggs and milt are collected, fertilized, and transferred to incubation systems.





Egg Incubation & Hatching

Once fertilized, eggs are incubated for 3–5 weeks (temperature-dependent) in vertical-tray or upwelling systems with gentle flow and stable oxygen. Eggs hatch into alevins, reared under controlled conditions before progressing to fry and fingerlings.

Fertilized trout eggs, a key traded commodity, are produced from pathogen-screened broodstock. Eggs are manually fertilized, disinfected, and incubated under controlled conditions until the “eyed egg” stage. For transport, eggs are sorted, packaged moist with oxygen, and chilled (not frozen) for delivery within 24–48 hours.

Juvenile Stage

Juveniles (yolk is gone, start feeding) are reared 6–12 weeks in nursery tanks until 5–10 g, feeding on starter feeds before transfer to larger flow-through or RAS systems.

Growth is optimized with controlled oxygen, temperature, proper stocking, feed quality, pathogen monitoring, and stress reduction.

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Grow-out Stage

Fish are reared in grow-out systems to reach the market size (500 g–1–2 kg) in 6–12 months before harvest and processing.

Common systems include freshwater flow-through raceways, earthen ponds, and cages in lakes or reservoirs.

Trout require cold (8–15 °C), fast-flowing, oxygen-rich water; raceways offer optimal control, while ponds are used where flow is limited or production intensity is

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Categories of aquaculture production systems Chapter 4.1 WOAH Aquatic Code

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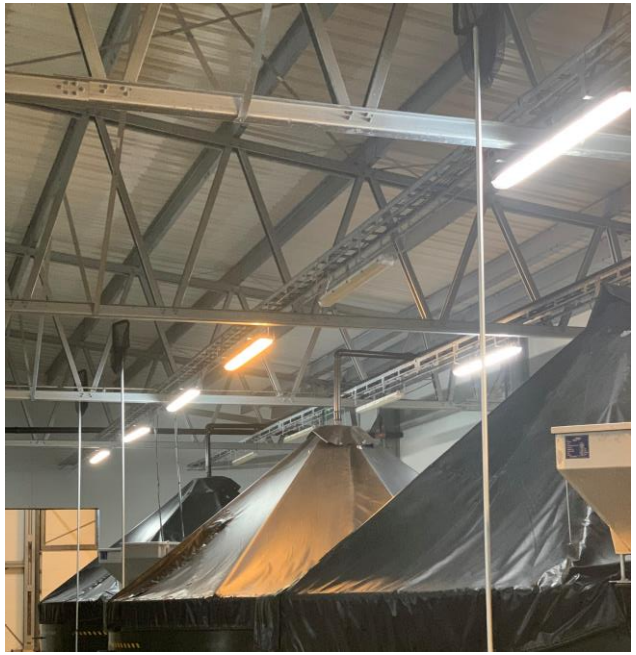
Closed system



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Semi-closed system

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Semi-open system

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Roadmap: 3 stages

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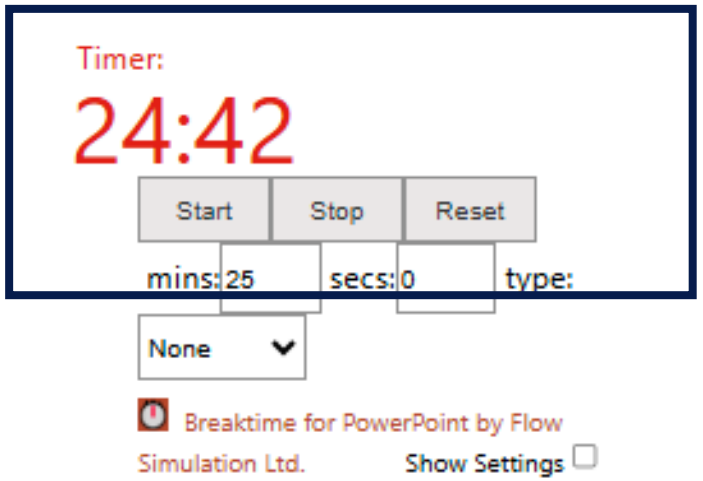
Preparatory Stage – Before negotiation (35 min)



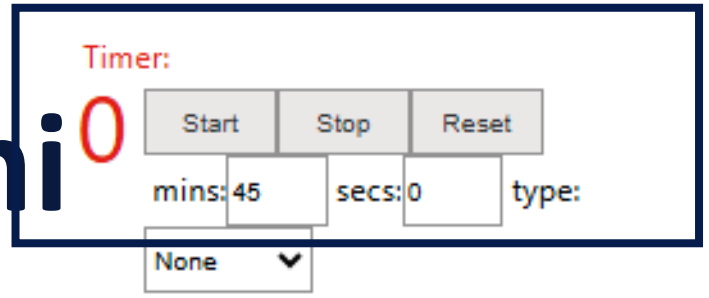
Review:

- Country context (geography, production, trade priorities)
- Disease situation, control programme
- Veterinary Services (structure, surveillance, notification)
- Relevant information

Output expected:

- List of relevant aquatic diseases for the commodity

Negotiation Stage (50 mi



Step 1: Internal preparation

(Importer vs Exporter)

- Importer
  - Define import requirements
  - Build table of sanitary measures (based on Code + own status)
- Exporter
  - Define what they can guarantee
  - Build table of sanitary measures + certification

Step 2: Bilateral negotiation

- Compare requirements vs quarantees
- Identify gaps and request clarification
- Agree on
  - Sanitary measures
  - Certification requirements
  - Risk mitigation
- Output
  - Agreed trade conditions
  - Draft Certificate

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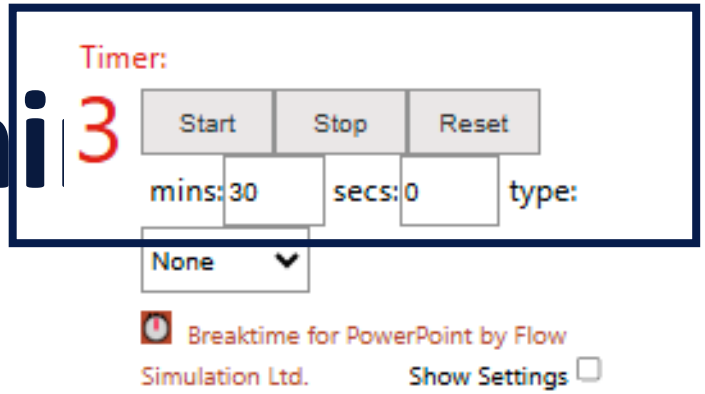
Sustainability Stage – (30 mi



Key concept: maintaining safe trade

Focus on:

- Surveillance in aquaculture systems
- Biosecurity and movement control
- Ongoing compliance
- Notification obligations

Discuss

- How to maintain safe trade over time
- How to respond to aquatic disease events

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Debrief & Closing (30 min)

Reflect on

- Difference vs terrestrial
- Specific challenges in aquatic trade
- Importance of zoning, compartments, water systems

Discuss

-

Scientifically ambitious, forward-looking and collaborative – for One Health

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