

Compartmentalisation for Avian Influenza

Use, benefits and challenges of compartmentalisation for avian influenza

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PART 1

Context and concept

Why / What it is / Compartmentalisation vs zoning



Why Compartmentalisation

Recurrent, widespread avian influenza outbreaks and highly integrated poultry value chains limit the effectiveness of purely geographic disease control.

Compartmentalisation offers a complementary, functional approach - built on biosecurity and management rather than borders - to protect animal health and support safe trade.

Recurrent outbreaks

Integrated value chains

Functional, not geographic

What Is Compartmentalisation?

A functional unit sharing a common biosecurity and management system.

- 01 Health status defined by management, not geography
- 02 Built on biosecurity, surveillance and traceability
- 03 Overseen and certified by Veterinary Services
- 04 Complementary to zoning, not a substitute
- 05 Applied mainly to poultry, at upstream production stages

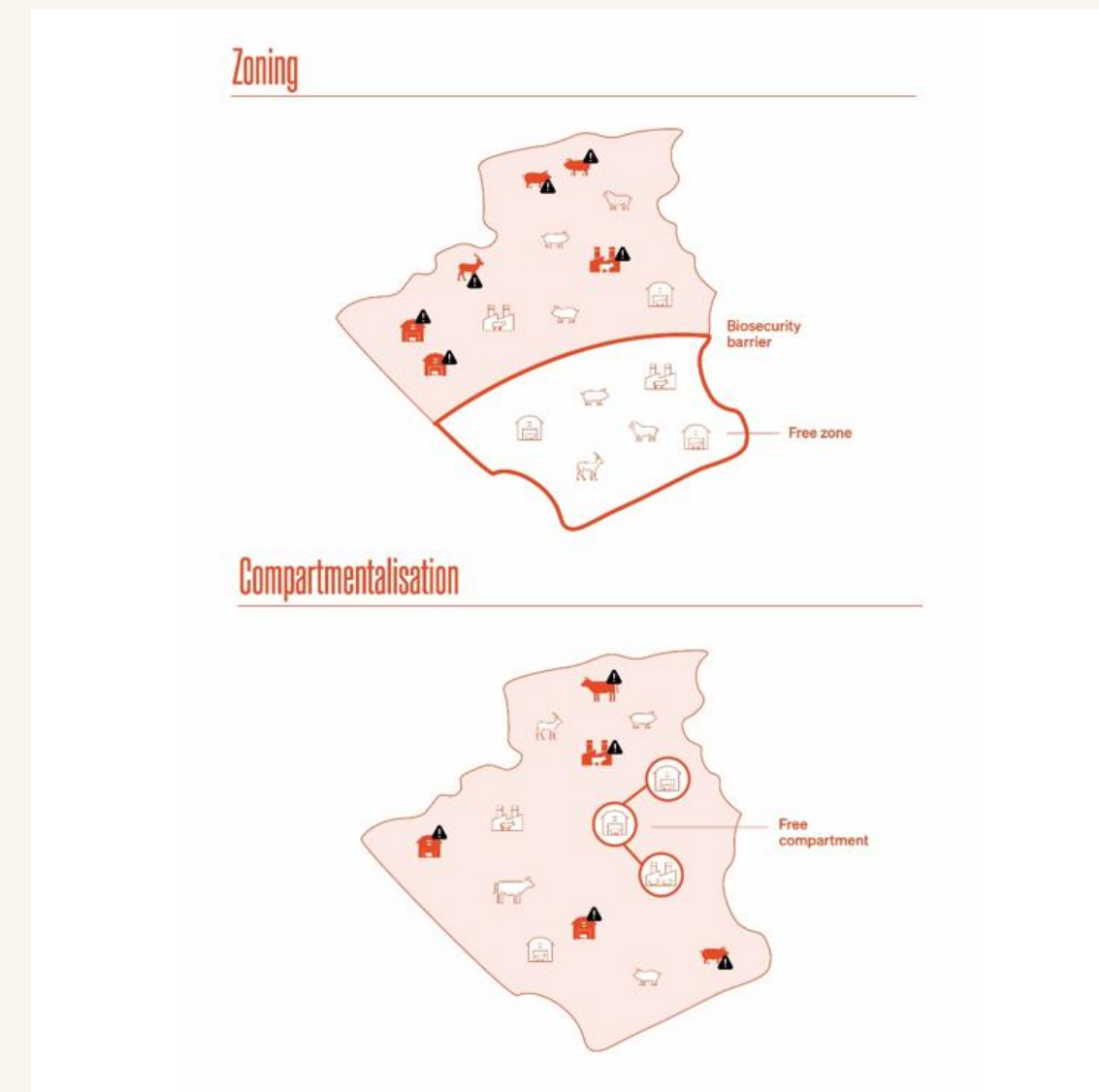
Two Complementary Tools

Zoning

Geographic separation. Health status defined by administrative or natural boundaries. Well suited to spatially driven risk.

Compartmentalisation

Functional separation. Health status defined by harmonised biosecurity, surveillance and management systems - often within integrated production chains.



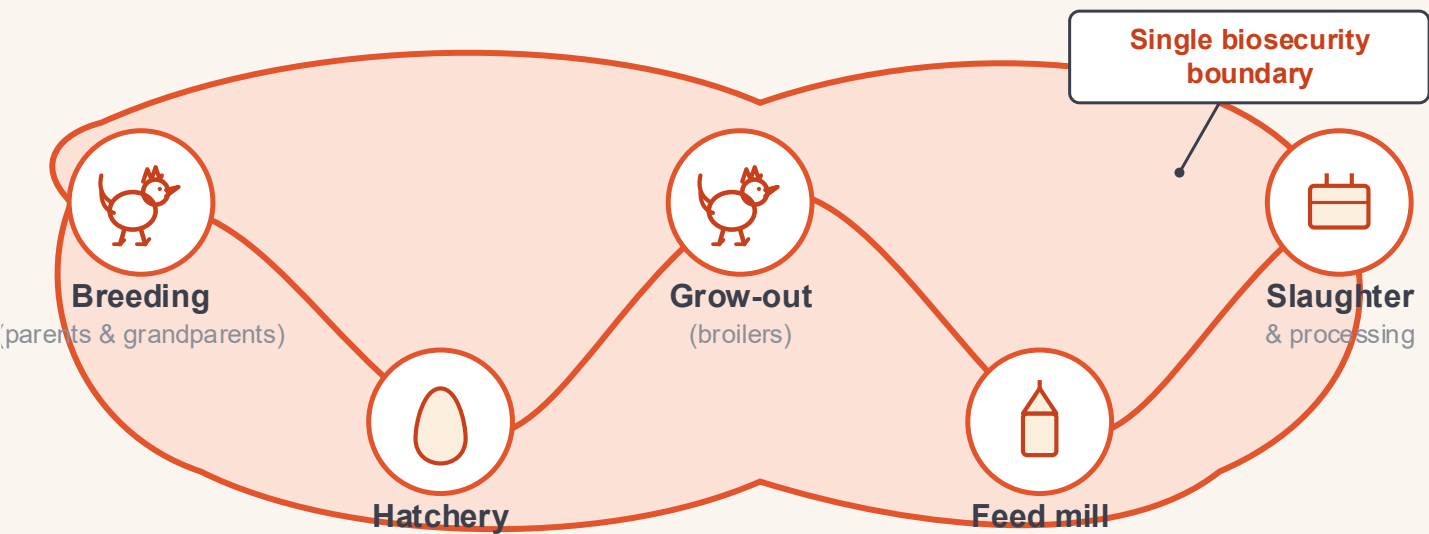
Neither replaces the other: compartmentalisation complements zoning, particularly where integration is high.

Why compartmentalisation fits poultry

Integration decides whether one biosecurity system can cover the whole chain

POULTRY — VERTICALLY INTEGRATED

One operator controls the whole chain

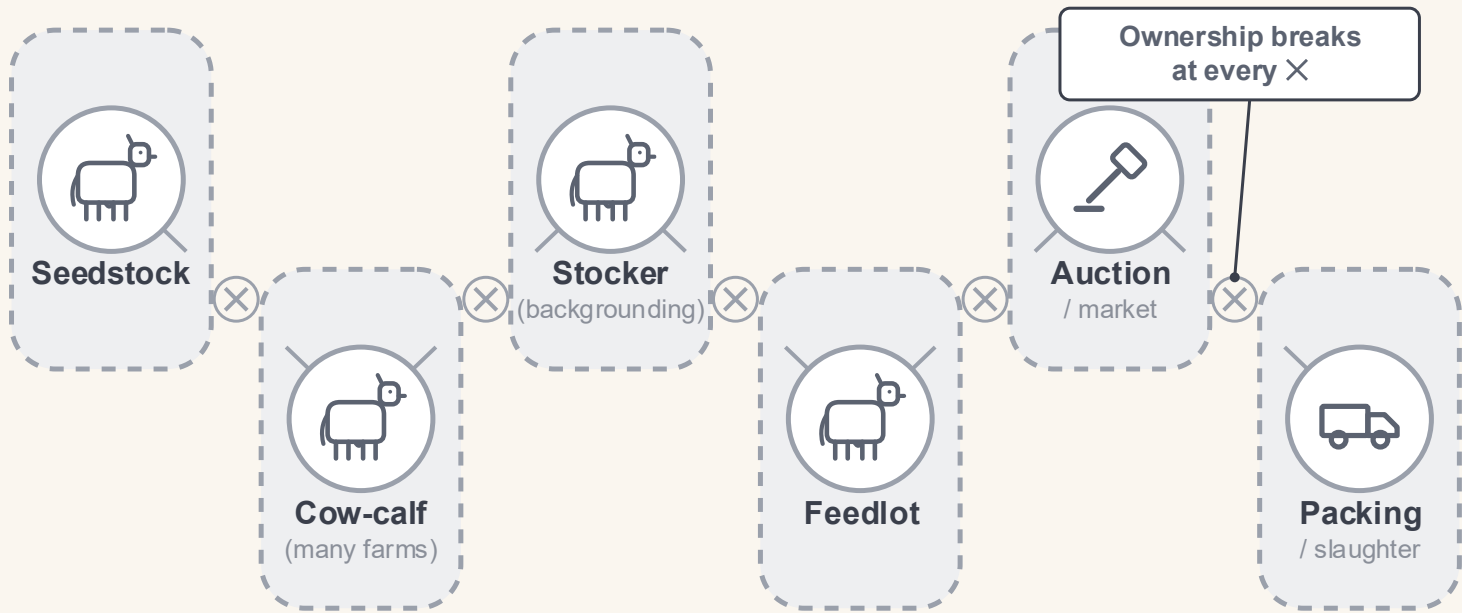


One harmonised biosecurity system

→ COMPARTMENT FEASIBLE

CATTLE (BEEF) — FRAGMENTED

Animals change hands 3–4× between owners, no shared system



Many independent actors, no common system

→ COMPARTMENT DIFFICULT

- Coral, one continuous enclosure = one integrated system (compartment feasible)
- Grey, six separate enclosures = fragmented chain, ownership breaks at each X (compartment difficult)

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PART 2

The study

Objectives / Who we heard from / Where responses came from / Evidence base



What is This Study

WOAH sets international standards for animal health and safe trade; through its Observatory it analyses how Members apply them. This study gives a global, evidence-based picture of compartmentalisation for avian influenza.

- 01** Describe current practices (Members, companies, associations)
- 02** Assess the conditions for effective compartmentalisation
- 03** Identify barriers to implementation, maintenance and recognition
- 04** Explore the perceived benefits and added value
- 05** Inform future WOAH activities (improvement of standards and their implementation, capacity-building, guidance, dialogue)

Expected outcome: evidence to strengthen credible use of compartmentalisation, in complementarity with zoning - not a compliance assessment.

Who We Heard From, and How

72

Veterinary Services

Responses retained, out of 183
Members contacted

13

Industry associations

Responses, covering a large share of
national and regional production

5

Companies

Responses, mostly integrated and
export-oriented operations

Data from 3 questionnaires (2025) covering Veterinary Services, associations and companies; descriptive and qualitative analysis.

What the Published Literature Shows

- Well established for avian influenza, where zoning is limited by migratory birds
- Applied in poultry genetics and integrated broiler chains (Thailand, UK, Brazil, Colombia)
- Core requirements: a biosecurity plan, surveillance, traceability and credible Veterinary oversight
- AI-free compartments require intensive biosecurity, buffer zones and frequent surveillance
- The most frequently cited barrier in the literature: limited international recognition

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PART 3

What we observe

Current use / Where it brings value / Common barriers



Current Use: A Descriptive Snapshot

39%

report a regulatory or administrative framework for compartmentalisation (28 of 72 responding Veterinary Services)

19%

have evaluated at least one compartment in practice (14 of 72 responding Veterinary Services)

Descriptive results from the Veterinary Services questionnaire; full interpretation remains under review.

Where Compartmentalisation Brings Value

Where

Concentrated in high-value, integrated segments - genetics and breeding - mainly in upstream chicken production.



General tendency observed across responding Veterinary Services and companies.

Why

To protect valuable stock and maintain business and trade continuity during outbreaks.



Common Barriers Reported

Technical

Biosecurity and physical separation are demanding to set up and maintain.

Surveillance & audit

Gaps in surveillance, traceability, documentation and auditing were common.

Institutional

Limited Veterinary Services capacity constrains oversight in many settings.

Economic

High set-up and maintenance costs, with an uncertain return on investment.

General categories of barriers reported across stakeholder groups; not a ranking or assessment of any Member.

Recognition for Trade: A Central Obstacle

Limited trust

Trading partners often lack confidence in compartments not yet tested during an outbreak.

Unpredictable process

Bilateral recognition can be long and uncertain, with criteria seen as unclear.

Missing legal frameworks

Some importing countries have no legal basis to recognise overseas compartments.

Weak incentive

Recognition is rarely requested; without it, there is little incentive to invest.

General barriers to international recognition reported across stakeholder groups; not a ranking or assessment of any Member.

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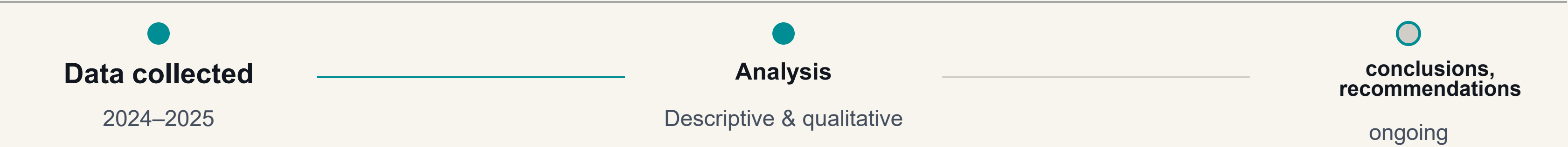
PART 4

Next steps

Where the study stands / What comes next



Where the Study Stands



Full findings and recommendations are undergoing internal review and validation before wider dissemination.



Thank You

WOAH

DIAD: Data Integration and Analytics Department
Thematic Study - Compartmentalisation

www.woah.org



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