

Controlling Avian Flu and Protecting People's
Livelihoods in the Mekong Region, Africa and Indonesia

Alignment of poultry sector actors with avian influenza control

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Supply Chain Actors

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Objective

- To assess the level of compliance of poultry value chain actors in backyard and small-scale broiler and layer chicken production and marketing systems with HPAI control measures
 - Compliance - state of being in “agreement with”
 - measures are likely to be used more effectively and widely

Key questions

- What mitigation measures are likely to enjoy better compliance therefore achieve technical effectiveness?
- For each control measure, where do potential compliance fail points lie and how might they be addressed?

Presumptions

The actors' willingness to comply depends on:

- Actors' capacity to comply
 - Capital, knowledge, information, etc
- Their current practices
 - Does it require major change in current practices?
- Incentives they face
 - Benefits (monetary, increased productivity)

Materials and Methods

- **Unit of analysis:**
 - A live bird supply chain rather than individual actors
- **Value chains:**
 - Backyard, small-scale broiler and layer live-bird supply chains (corresponding to FAO sector 3 and sector 4)
- **Likert questionnaires tailored to each actor and mitigation measure**
- **Mitigation measures assessed:**
 - Biosecurity, reporting, culling and compensation, movement control and vaccination (indonesia)

Examples of Likert items on culling and compensation

Practices:

Q. Some producers may try to sell their chickens quickly before culling.

- Strongly agree 1 Agree 2 Neither agree or disagree 3
 Disagree 4 Strongly disagree 5 Don't know 0

Incentives:

Q. If I don't let my chickens get culled, they may die anyways and I won't get compensated

- Strongly agree 5 Agree 4 Neither agree or disagree 3
 Disagree 2 Strongly disagree 1 Don't know 0

Capacities:

Q. I can cooperate with culling because my poultry business is just a portion of my income

- Strongly agree 5 Agree 4 Neither agree or disagree 3
 Disagree 2 Strongly disagree 1 Don't know 0

Which mitigation measures are likely to enjoy better compliance and therefore achieve the expected technical effectiveness?

Mean score for each mitigation measure

Mitigation measure	Value Chain Actors	Mitigation agents	All Actors and Agents
Biosecurity	3.46	3.39	3.44
Vaccination	3.30	3.38	3.33
Movement control	3.23	3.02	3.21
Reporting	3.14	3.49	3.20
Culling with compensation	2.93	3.43	3.02
Results on ANOVA test	F= 37.8; p < 0.001	F= 5.33; p < 0.001	F= 29.36; p < 0.001

Ranking by value chain actors

Rank	Indonesia	Nigeria	Ghana	Kenya	Ethiopia
1	Biosecurity C	Biosecurity C	Movement control C	Reporting C	Biosecurity C
2	Vaccination P	Reporting P	Culling and compensation C	Biosecurity C	Movement control I
3	Movement control C	Movement control P	Biosecurity P	Movement control C	Reporting P
4	Reporting P	Culling and compensation P	Reporting P	Culling and compensation P	Culling and compensation P
5	Culling and compensation C				

- Improving **biosecurity** is the control measure expected to enjoy **the most compliance** across the actors in chicken value chains originating in sectors 3 and 4.
- **Culling and compensation** appears to be **the most difficult to achieve sufficient compliance** to ensure its effectiveness.

Ranking by Mitigation agents

Rank	Indonesia	Nigeria	Ghana	Kenya	Ethiopia
1	Reporting C	Reporting I	Reporting I	Reporting C	Movement control I
2	Culling and compensation C	Culling and compensation I	Biosecurity I	Movement control C	Reporting P
3	Biosecurity P	Biosecurity C	Movement control P	Culling and compensation C	Biosecurity P
4	Vaccination I	Movement control C	Culling and compensation P	Biosecurity P	Culling and compensation C
5	Movement control I				

- **Mitigation agents compliant with disease reporting.**
- **Mis-match between ranking given by value chain actors from those of mitigation agents**

For each control measure, where do potential compliance fail-points appear to lie and how might they be addressed?

Actors with the least alignment score for each mitigation measure

Rank	Indonesia	Nigeria	Ghana	Kenya	Ethiopia
Biosecurity	S4 producer Trader S3 layer pr.	S4 producer Retailer Transporter	Transporter S3 producer Trader	Transporter S4 producer Retailer	Transporter Retailer Trader
Reporting	S4 producer Trader S3 layer pr.	S4 producer Retailer Trader	S4 producer Transporter Trader	S4 producer S3 broiler pr. S3 layer pr.	Retailer Transporter Trader/S4 pr.
Movement control	Broiler Trader S3 layer pr.	Trader Retailer S4 producer	S4 producer Retailer Transporter	Trader S4 producer Retailer	Transporter S3 layer pr. Trader
Culling and compensation	Trader S4 layer pr. S3 broiler pr.	Trader Retailer S3 layer	Retailer S3 layer pr. S4 producer	Trader Retailer S4 producer	Trader Retailer S4 producer
Vaccination	S4 producer S3 layer pr. S3 broiler pr.				

- **Biosecurity – S4 producers and transporter**
- **Culling and compensation – Trader/retailer**

Key Findings

- **Potential fail-points for compliance with biosecurity lie mainly in the backyard chicken value chain among both producers and transporters, mostly due to inherently weak capacity**

Suggestions to improve compliance

- **Improve access to information and financial resources through training, micro-credit to build human resource capacity**
- **Subsidize actor investment**

Key Findings

- **Vaccination against HPAI is inconsistent with current S4 producer practices**
- **Attitudes of backyard chicken farmers that consider preventive vaccination against chicken diseases in backyard flocks as low priority or unneeded**

Suggestions to improve compliance

- **Messages targeting this specific behaviour in places where vaccination can be reliably used**

Key Findings

- **Timely reporting of outbreaks by most actors, especially backyard chicken producers, is contrary to their current practices and attitudes**

Suggestions to improve compliance

- **More specific messages highlighting benefits and need for timely reporting and trust-building**
- **Devise appropriate penalties for failure to report**

Key Findings

- **Weak capacity among small-scale commercial chicken farmers and traders in terms of absorbing extra holding costs when movement controls are imposed create potential fail-points for successful implementation of such controls**

Suggestions to improve compliance

- **Adjust movement controls strategically**
- **Subsidize or compensate the extra costs incurred**

Key Findings

- **The expected poor compliance with culling and compensation appears to be related to:**
 - ❑ **Poor alignment with existing practices and attitudes among all categories of value chain actors**
 - ❑ **Capacity (from disaggregated analysis)**

Suggestions to improve compliance

- **The reasons behind the existing practices merit more investigation**
- **Resilience to income shocks can be addressed by attention to equity and timeliness in administration of compensation**

Key Findings

- **Mismatch between types of mitigation measures that are compliant with value chain actors' verses mitigation agents' socio-economic characteristics**

Suggestions to improve compliance

- **Frequent needs assessments/consultations by mitigation agents**

Thank You

Value chain – key findings

- Broiler, layer and indigenous poultry producers, traders, transporters, retailers and consumers studied
- Uneven coordination and governance mechanisms exist in each chain studied, with limited evidence of chain “champions” to drive and coordinate chains
- Livelihoods and economic impacts of HPAI were often severe throughout the chain, though alternative activities sometimes mitigated impacts
- Government response measures have had variable success, and focused overwhelmingly on upstream actors (e.g. producers), but not on the chain
- Regional contexts relating to strong consumer sovereignty in “buyer-driven” chains matter, as do their interactions