Avian Influenza Fact Sheet

Poultry Production Sectors

Sector 1

Industrial integrated system with high level biosecurity and birds/products marketed commercially (e.g. farms that are part of an integrated broiler production enterprise with clearly defined and implemented standard operating procedures for biosecurity).

Sector 2

Commercial poultry production system with moderate to high biosecurity and birds/products usually marketed commercially (e.g. farms with birds kept indoors continuously; strictly preventing contact with other poultry or wildlife).

Sector 3

Commercial poultry production system with low to minimal biosecurity and birds/products entering live bird markets (e.g. a caged layer farm with birds in open sheds; a farm with poultry spending time outside the shed; a farm producing chickens and waterfowl).

Sector 4

Village or backyard production with minimal biosecurity and birds/products consumed locally.

Source: *FAO Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia*, September 2004

The following graphic develops this classification further in tabular form.

Poultry production system	Industrial and integrated production	Commercial poultry production		Village or backyard production
Sector	**Sector 1**	**Sector 2**	**Sector 3**	**Sector 4**
Type of confinement	Indoors	Indoors	Indoors/outdoors	Not confined
Housing	Closed	Closed	Closed/open	Minimal
Biosecurity	High	Medium	Low	Low
Dependence on markets for inputs	High	High	High	Medium to low
Market outputs	Export/urban	Urban/rural	Urban/rural	Rural/none
Contact with other poultry	None	None	Yes	Yes
Contact with domestic ducks and wild birds	None	None	Possible	Possible
Veterinary services	Own services	Contract services	Contract services	Irregular or none

Source: *A Strategic Framework for HPAI Prevention and Control in Southeast Asia*, Emergency Centre for Transboundary Animal Diseases (ECTAD), FAO, Bangkok, May 2006

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NATIONAL PREPAREDNESS AND RESPONSE PLAN CHECKLIST

The following checklist can be used to assess the contents of a National PRP.

	YES	NO
Plan Structure 1. Is the plan divided into clearly defined components? 2. Do the components cover the following sections? • Country Status? • Prevention and Preparedness? • Response and Recovery? • Public Health? • Public Awareness and Communications? • A Financial/Funding Plan	☐	☐
Country Status and Assessment 1. Describes the country, geography, climate, population, and government structure? 2. Describes the veterinary and public health service delivery system? 3. Includes information about the poultry production systems? 4. Species, numbers and associated economic importance of poultry? 5. Descriptions of poultry marketing systems, live bird markets and distribution channels? 6. Any poultry slaughter and processing plants? 7. Any information on main migratory and wild bird resting spots? 8. Is there any interaction between wild birds and poultry mentioned in the plan? 9. Is there a description of an ongoing active or passive animal health surveillance?	☐	☐
Prevention and Preparedness 1. Any existing National HPAI PRP? 2. Does the existing plan have animal and human health and communication components? 3. Does the plan mention a veterinary and legal framework for plan implementation Animal Disease Act)? 4. Is there a clear command structure in the plan? 5. Any regional and local coordinating bodies? 6. Biosecurity programs on farms and live bird markets? 7. Is a biosecurity program in the plan for rapid response teams? 8. Is an equipment and supplies inventory included? 9. Formation of rapid response teams? 10. Information about number and level of training of animal health personnel? 11. Any plans to do simulations (field or tabletop)? 12. Any compensation information or strategy in plan?	☐	☐
Response and Recovery 1. Is a case definition for HPAI described? 2. Any information about diagnostic capabilities, types of tests international testing and notification? 3. Will rapid response teams be deployed to outbreaks? 4. Any plans included for quarantine and movement control? 5. Any plans for epidemiological work carried out during outbreak? 6. What about outbreak surveillance? 7. Any mention of biosecurity protocols during an outbreak? 8. Culling methods mentioned? 9. Disposal methods mentioned? 10. What about decontamination? 11. Is a vaccination strategy part of the plan? 12. Restocking program? 13. Does this section describe how compensation will be paid? 14. Any plans for a review of the entire plan after outbreak response?		
Components of Standard Operating Procedures (SOPs) 1. Does the plan have standard operating procedures? 2. If yes, have they been described for the following activities • Biosecurity in commercial establishments • Biosecurity in backyard flocks • Biosecurity in households (village flocks) • Biosecurity in livebird markets • Biosecurity for rapid response teams (PPE, traffic flow) 3. Is there a description of surveillance activities? • Surveillance and epidemiology networks? • Surveillance types (active and passive for poultry and wild birds)	☐	☐

	YES	NO
• Surveillance locations? • Outbreak surveillance • Sampling size determination? • Sample collection, handling and preservation • Sample submission to international labs 4. Do the SOPs include descriptions of how quarantine and movement controls are going to be carried out? • Have disease zoning definitions been included? • What about quarantine control points? • Enforcement of movement control 5. Are culling procedures described? • Descriptions of cervical dislocation? • Use of carbon dioxide gas • Lethal injection for ratites such as ostriches and emus 6. Have carcass disposal methods been described including carcass removal? • Burial? • Burning or incineration? • Composting? 7. Decontamination procedures described? • Disinfection of farms, litter and equipment? • Disinfection of laboratory equipment and environment? • List of types and action of disinfectants? 8. Compensation – Is there a strategy • Compensation rates and determination? • Payment methods outlined? • Funding sources described?		
Public Health Component 1. Does the plan have a public health component? 2. Public health infrastructure and health services delivery? 3. Human resources in the public health sector? 4. Any public health surveillance systems? 5. Any lab facilities? 6. Are there emergency epidemiologic response plans?	☐	☐
Communications and Public Awareness Component 1. Does the plan have a communications and public awareness component? 2. Does the plan mention public awareness of HPAI? 3. Is there a national plan and mechanism for HPAI communication? 4. Technical capacity for HPAI communications? 5. Does the plan describe the state of mass media in the country? 6. Description of national and local communication activities? 7. How do most people in the country get information?	☐	☐
Financial Plan 1. Any budget included for equipment (culling, disposal, Laboratory, PPEs etc.) 2. Budget for training programs? 3. Budget for surveillance activities 4. Budget for reconstruction and rehabilitation of physical structures (labs, clinics, local response centers)? 5. Indemnity, if planned	☐	☐
Appendices Any appendices included in the plan? If so, are the following included?	☐	☐
1. Contact lists (National hotlines) 2. HPAI disease facts 3. HPAI lab test descriptions 4. Sample types, sample collection and sample submission 5. International shipment of samples to OIE/FAO reference labs 6. Equipment list for surveillance, culling, disposal, decontamination 7. Types and action of disinfectant 8. Quarantine signage 9. Notice of depopulation (letter) 10. Forms – lab submission forms (national and international), disease investigation forms, depopulation and compensation forms 11. Vaccination guide 12. List of important websites and links 13. FAO production sector description 14. Poultry population by region/district/county and species 15. National veterinary service organogramme 16. 16. Country map		

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Date:
Investigator:
Samples obtained: Y / N
Farm ID:
Sector:

AVIAN INFLUENZA OUTBREAK INVESTIGATION FORM

Farm Name:	Phone #:
Location:	GIS:
On-farm contact:	Farm owner(s):
Birds kept at other locations: Y / N	

LIVESTOCK DATA

Farm activities: Check all that apply ☐ Layer ☐ Broiler ☐ Parent stock ☐ Poultry ☐ Non-poultry species ☐ Other: _____

Commercial type/species	Males (>1 yr)	Females (>1 yr)	<1 year	Age range	Total	Comments
						Total flock:
Non-Commercial type/species	**Males (>1 yr)**	**Females (>1 yr)**	**<1 year**	**Age range**	**Total**	**Comments**
Game fowl						
Psitticines						
Waterfowl						
						Total other:

Contact with wild bird species: ☐ No ☐ Yes, describe:_____

List other animal species located on premises:

Bird Health

Increased illness in birds previous 3 months? Y / N	Describe:

Number sick	Last week	Last month	Last 3 months	Total
Number dead	Last week	Last month	Last 3 months	Total

Vaccination practices

Vaccine	Use and number of birds vaccinated	Frequency
Medication used	Use and number of birds treated	Dates

Please turn to next page

Birds introduced to the premises in the past 90 days?		
Type of bird:	Location where birds came from:	Total Number:
Birds leaving the premises in the past 90 days?		
Type of bird:	Location where birds went to:	Total Number:
Of birds that left – did any return to the premises? Y / N		
Type of bird:	Location where birds went to:	Total Number:

MANAGEMENT AND HUSBANDRY

Type of house(s): Check all that apply	☐ Open	☐ Closed	☐ Other: _____	
House materials: Check all that apply	☐ Wood	☐ Cement	☐ Metal	☐ Other: _____
Disinfection of houses:	☐ Yes ☐ No Describe:_____			
Type of husbandry: Check all that apply	☐ All In / All Out	☐ Multi-age	☐ Modification / Other: _____	

Distance	☐ between poultry houses:_____	☐ to residential area:_____
	☐ to nearest poultry farm:_____	☐ to nearest live market:_____
Feed	Feed delivered to farm?	☐ Yes ☐ No
	Feed stored on premises?	☐ Yes ☐ No
Workers	Number of workers: _____	Number of workers per house: _____
	Work on other farms?	☐ Yes ☐ No

Other questions:		
☐ Perimeter fence	**Feeders**	☐ Sick birds isolated
☐ Drainage system	☐ Automatic ☐ Manual	☐ Quarantine of new birds
☐ Personnel disinfection	**Water delivery**	☐ Disinfection of vehicles
☐ Use of PPE for workers ☐ " " for visitors	☐ Automatic ☐ Manual ☐ Individual ☐ Group	☐ Controlled entry and traffic
☐ Poultry house disinfection Frequency:_____	☐ Cleaning of feeders / waterers Frequency:_____	Disposal of dead birds:
☐ Use of poultry house rest period Duration:_____	☐ Waste management If yes, how handled?	☐ Buried ☐ Burned ☐ Thrown away ☐ Other

SAMPLE COLLECTION:

☐ Samples collected previously	Sample type (circle all that apply): Blood / oral swab / cloacal swab / feces / organ	Results if known:_____
☐ Samples collected this visit	Blood / oral swab / cloacal swab / feces / organ	Attach list of samples by identification number and type

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FIELD VISIT

COMMERCIAL HATCHERY
RISK ASSESSMENT CHECKLIST

The purpose of this form is to determine conditions present at the hatchery that may increase the risk of introducing or spreading disease. In the risk level column, quantify the level of risk of each factor as Very Risky (+++), Risky (++), or Mildly Risky (+).

Hatchery Name:	Phone #:
Location:	GIS:
On-site contact:	Owner(s):

Risk Type	Yes	No	Risk Level	Comments
A. ENVIRONMENT				
1. Important infectious disease (endemic or exotic) present in the area				
2. High farm density in the area				
3. Source of eggs (breeders) located in same property as hatchery				
4. Hatching eggs imported				
5. Hatching eggs imported from HPAI-free region				
B. BREEDER FLOCK				
1. Breeder flocks vaccinated				
2. Health monitoring program for breeder flocks				
3. Monitoring for vertically transmitted diseases; Salmonella, Mycoplasma, Lymphoid leukosis				
4. Breeder housing, equipment and nesting materials adequate				
C. HATCHERY EGG ROOM				
1. Eggs graded before setting				
2. Monitoring of temperature and humidity levels				
3. Records of temperature and humidity levels				
4a .Monitoring of egg cleanliness - visually 4b. Eggs monitored for bacterial contamination 4c. Room monitored for bacterial contamination				
5. Room fixtures such as egg racks, walls, ceiling, floor, vents, ducts, fans, cabinets and shelves, filters, doors, and light fixtures checked for cleanliness				
D. SETTERS AND SETTER HALL				
1. Following areas in setter hall checked for cleanliness; doors, lighting, floors, ceilings, vents, ducts, air filters, and walls.				
2.Setters checked visually for cleanliness in floors,				

Risk Type	Yes	No	Risk Level	Comments
walls, ceilings, fans, fan boards, racks thermometers, doors, nozzles, exhaust ports, vents, ducts, tops, and control panels.				
3. Setters evaluated for microbial contamination using air plates				
4. Temperature and humidity checked frequently				
5. Turners working properly				
E. HATCHERYS AND HATCHERY HALLS				
1. Following areas in hatchery hall checked for cleanliness; doors, lighting, floors, ceilings, vents, ducts, air filters, and walls.				
2. Halls evaluated for microbial contamination frequently				
3. Routine testing to verify hatchery sanitation				
4. Hatchery temperature monitored frequently throughout the day				
F. CHICK ROOM				
1. Sanitation program				
2. Routine inspection of walls, ceilings, floors, vents, ducts, fans, cabinets, shelves, filters, doors, and lighting fixtures				
3. Microbial contamination checked using surface swab or plate samples.				
G. VACCINE ROOM				
1. Microbial monitoring of room and vaccine				
2. Check for vaccine "takes"				
3.Records for vaccinations missed and vaccine dosage checks				
H. VACCINE MIXING AND THAWING				
1.Are the following checked? – Amount of time needed to thaw vaccine. – Number of ampules thawed at one time. – Temperature of thawing H2O. – Vials and tops rinsed with diluent. – Length of time to use vaccine mixture. – Use of protective gloves and face shield when handling vaccine. – Cleanliness of Marek's injectors. – Frequency of vaccine bottle change (where applicable). – Frequency of tubing changes.				

Risk Type	Yes	No	Risk Level	Comments
I. MISCELLANEOUS				
a. Visitors restricted				
b. Visitor log book				
c. Hatchery operation manual				
d. Chick trays washed with hot water				
e. Egg and chick disposal system				
f. Hatchery waste disposal system				

ADDITIONAL NOTES

COMMERCIAL FARM DATA COLLECTION FORM

Farm Name:	Phone #:
Location:	GIS:
On-farm contact:	Farm owner(s):
Birds kept at other locations: Y / N	

Province	Locality	Location
Latitude	Longitude	

Production System

Layers	
Broilers	
Mixed	

Number of flocks (batches)

Flock 1:	Size		Age	
Flock 2:				
Flock 3:				

Sample collected:

Flock	Size	Age	Sera collected	Tracheal	Cloacal	Other	S.Label

The age of the chicken when introduced _____

Source of the chicks (company-farm) _____

The number of cages in the farm _____

Source of feed _____

Vaccines used in the farm

1. _____

2. _____

3. _____

Disease outbreak occurrence in the farm (from records of the owner)

1. _____

2. _____

3. _____

Treatment in the farm (Records)

1. _____

2. _____

3. _____

Number of flocks (batches)

Initial number of population introduced	
Current population	

Checklist

1.	Outside fence						
2.	Footpath						
3.	Supervising veterinarian						
4.	Store						
5.	Incinerator						
6.	Records						
7.	Personal hygiene of labour	Uniform		Gum boots		Mask	
8.	Mesh wire status	Good		Old		Bad	
9.	Wild birds nests inside the shed						
10.	Wild birds inside the shed						
11.	Stray animals in the farm						
12.	Stray animals in the farm						
13.	Presence of backyard chickens in the farm						
14.	Presence of rodents						

COMMERCIAL FARM
RISK ASSESSMENT CHECKLIST

The purpose of this form is to determine conditions present on the farm that may increase the risk of introducing or spreading disease. In the risk level column, quantify the level of risk of each factor as Very Risky (+++), Risky (++), or Mildly Risky (+).

Farm Name:	Phone #:
Location:	GIS:
On-farm contact:	Farm owner(s):
Birds kept at other locations: Y / N	

Risk Type	Yes	No	Risk Level	Comments
A. ENVIRONMENT				
1. Important infectious disease (endemic or exotic) present in the area				
2. High farm density in the area				
3. Larger poultry farm located within 750 meters of your poultry farm				
4. Presence of a backyard flock within 400 meters of your farm				
5. Poultry farm located within 3 km of a poultry slaughter place (wet-market, plant, etc.)				
6. Presence of a pond or dam on the farm or in very close proximity				
7. Poultry house very close to the road (less than 50 meters)				
8. Farm located along a main busy road				
9. Manure piled or spread near poultry houses				
10. Dense vegetation comes to the edge of poultry houses				
11. Piles of equipment and construction material abandoned near the poultry houses				
12. Feed spill or feed from previous flock discarded near poultry houses				
13. Non-poultry farms (swine, cattle/buffalo, goats) nearby				
B. FARM CHARACTERISTICS				
1. Free access to poultry houses (no locks on doors)				
2. Free access to the farm (no gate, no fence, no signs)				
3. Free range commercial poultry (chickens or ducks)				

Risk Type	Yes	No	Risk Level	Comments
4. Birds of two different age groups in the same building at the same time				
5. Several flocks of different ages on the same farm				
6. Poultry houses oriented so that wind flow goes from older birds to younger ones				
7. Untreated surface water of dam, lake, or creek used for drinking and/or cooking				
8. Untreated ground water used for drinking				
C. FLOCK CHARACTERISTICS				
1. Breeder flock health status unknown				
2. Flock composed of multiple breeder flocks of widely differing ages				
3. More than one hatchery is used to populate a flock				
4. Flock composed of multiple breeder flocks of similar age				
D. WILD BIRDS				
1. Wild birds able to enter the poultry house				
E. PETS				
1. Dead poultry are fed to dogs, cats, etc. on the farm				
2. Stray dogs present on the farm				
3. Pets like dogs and cats present on the farm, but not inside chicken houses				
5. Pet birds like parrots kept on the farm				
F. OTHER FARM ANIMALS				
1. Other farm animals like pigs, cattle, buffalos, goats, etc., raised on the poultry farm				
G. PESTS				
1. Rat and/or mice infestation				
2. Darkling beetle infestation				
3. Fly infestation				
4. Mosquito infestation				
5. Cockroach infestation				
H. PEOPLE				
1. Farm employees also own poultry				
2. Farm employees attend cock fights				
3. Family of farm employees owns birds or works at another poultry farm				
4. Farm employee owns pet (exotic) birds				

Risk Type	Yes	No	Risk Level	Comments
5. Farm employees hunt wild birds				
6. Employee lives on the farm				
7. Poultry dealers or catching crew wear same clothing when going between farms				
8. Grower or employee visits other poultry farms				
9. Visitors to the farm don't sign a log book, or are not asked if they visited another poultry farm prior to their visit				
10. Non-authorized visitors permitted on the farm				
11. Grower or employee regularly visits places patronized by many other poultry people (restaurant, club)				
12. Farm employees visit homes of relatives or friends who own poultry farms				
13.On farms with flocks of several ages, people go from house to house without consideration of flock age or flock health status				
I. VEHICLES				
1. Cars and trucks parked too close to poultry houses (less than 30 meters)				
2. Farm vehicles go off farm				
3. Farm employee rides between two or more houses or farm units in feed, egg, or chick truck				
4. Outside vehicles are not cleaned or checked for cleanliness before entering the farm				
5. Feed truck driver goes on farm				
J. MANAGEMENT				
1. Leaving some birds on farm after load-out				
2. Partial pickup				
3. Short downtime between two flocks (less than a week)				
K. HYGIENE				
1. No farm- specific clothes for employees and visitors, or no special clothing requirements				
2. No special footwear requirements for employees or visitors				
3. No showers available on farm, or no shower is taken before entering the farm				
4. Outside equipment brought on farm without special sanitation considerations				
5. No farm washing or disinfection between two flocks				

Risk Type	Yes	No	Risk Level	Comments
6. No gloves used and no hand washing before and after handling birds, eggs, feed etc.				
7. People dress wild birds on farm premises				
8. Dirty footbaths filled with an old (non-active) disinfectant solution at the entrance of the poultry house				
9. No head gear (cap) used by person visiting the farm				
10. No face masks are used by visitors				
L. FEED				
1. Feed shed accessible to rodents or wild birds				
2. Feed can get wet in storage room and feed pan				
M. DEAD BIRD DISPOSAL				
1. Central location for dead bird disposal used by several poultry growers				
2. Dead birds stockpiled overnight before disposal and exposed to pests (rats, flies) pets (dogs, cats) wildlife (foxes, crows)				
3. Dead birds left inside the shed for many hours				
N. ANY OTHER RISK FACTORS PRESENT ON FARM THAT ARE NOT ON THIS LIST				

ADDITIONAL NOTES

FEED MILL
RISK ASSESSMENT CHECKLIST

The purpose of this form is to determine conditions present at the feed mill that may increase the risk of introducing or spreading disease. In the risk level column, quantify the level of risk of each factor as Very Risky (+++), Risky (++), or Mildly Risky (+).

Feed Mill Name:	Phone #:
Location:	GIS:
On-site contact:	Owner(s):

Risk Type	Yes	No	Risk Level	Comments
A. ENVIRONMENT				
1. Location in heavily populated area				
2. Good construction of feed mill				
3. Presence of rodents				
4. Presence of wild birds				
5. Rodent control program				
6. Feed bins covered				
7. Presence of dust				
8. Presence of moisture				
B. FEED INGREDIENTS and FEED PROCESSING				
1. Safe source of feed ingredients				
2. Quality of ingredients				
3. Use of more animal than plant protein sources				
4. Safe storage of feed ingredients				
5. Microbial testing of feed ingredients (Salmonella)				
6. Use of mycotoxin binders and antimicrobials in feed				
7. Chemical and microbial testing of prepared feed				
8. Processing of feed into pellets				
9. Heat used in feed processing				
C. FINISHED FEED				
1. Safe and secure storage of feed				
2. Rodent control				
3. Feed sample banking				
4. Feed bags from clean source				
5. Feed bags recycled				
6. Feed transported in clean vehicles				

Risk Type	Yes	No	Risk Level	Comments
D. MISCELLANEOUS				
1. Visitors restricted				
2. Visitor logbook				
3. Sales of feed at or close to mill				
4. Functional biosecurity program in place (PPEs for visitors etc.)				
5. Secure traffic flow pattern evident				
6. Sanitation program for feed trucks				

ADDITIONAL NOTES