

Minutes

Kenya Risk assessment workshop, 2nd -3rd October 2008 ILRI, Nairobi, Kenya

The programme of the workshop and the list of participants are presented in (**Annex 1**).

1. The workshop started with a welcome address by Amos Amore (ILRI) followed by a series of self introductions by the participants.
2. Amos Amore of ILRI then made a presentation on the overview of the project (**Annex 2**).
3. The presentation of the objectives and agenda of the workshop was then presented by Dr.Dennis Onkundi (DVS) (**Annex 3**).
The ownership of this activity by the participating Kenyan stakeholders was emphasized, as well as the fact that this activity should be recognized as a good opportunity to use and apply skills gained from a recent training organized by FAO in risk assessment at the national level for DVS staff.
4. The presentation of the risk assessment activities was then done by Solenne Costard (RVC) and Serge Nzietchueng (ILRI) (**Annex 4**)
The definition of risk questions and pathways are lead by the Kenyan stakeholders, while RVC and ILRI as are providing technical support.
5. During the discussions, participants took note of other related on-going projects in Kenya, on HPAI. These include;
 - FAO (EDRS-AIA project): Risk mapping and description of value chain
 - CDC: Network analysis and transmission of HPAI among poultry sectors. Data collection is ongoing in western Kenya
 - AU-IBAR (SPINAP): Capacity building in Risk assessment and surveillance strengthening

The participants felt that there is need to look for synergy among these projects to avoid duplication especially when it comes to data collection. Leaders of disease and value chain analysis clusters should initiate dialogue with FAO, CDC and AU-IBAR.

6. A presentation on introduction to risk Analysis was then made by Solenne Costard (RVC) (**Annex 5**)
Details were provided on the different steps of a risk assessment.

7. A presentation on Background information: HPAI and poultry production in Kenya was then presented by Dennis Onkundi (DVS) (**Annex 6**)
8. Dr. Humphrey Mbugua (KPBA), technical consultant in the Kenyan Poultry industry, made a brief presentation on sector 3 (**Annex 7**)
9. Dr. Samuel Okuthe (FAO ECTAD unit) gave a brief presentation on the qualitative risk assessment of HPAI H5N1 virus introduction into Kenya, work that had been carried out recently. (**Annex 8**)

Under that emergency project, a general pathway of introduction of HPAI H5N1 virus into Kenya (**Figure 1**) and generic risk assessment was conducted.

However, two pathways:

1. Introduction via illegal trade of poultry & poultry products;
2. Introduction via wild birds,

were difficult to assess because of limited data available. An initial ranking of the transmission pathways was also provided. The timeline of the project didn't allow going into much details for the numerous steps and parameters of the pathways, however this 1st risk assessment provide very valuable data and should be used to inform the definition of risk questions and pathways under the DfID project.

10. An overview of HPAI surveillance in wild bird in Kenya, potential risks & role of wild birds in HPAI introduction into Kenya was presented by Mr. Vincent Obanda (Kenya Wildlife Service) & Dr. Stephen Chege (KWS) (**Annex 9**)

The main objective of the surveillance is to provide an early detection and warning for the introduction of HPAI H5N1 virus into Kenya. Active and passive surveillance is focussed on the susceptible wild migratory birds which can be infected, carry and introduce the virus into Kenya. The period of the surveillance is based on seasonality of inter and intra continental migration of the wild birds.

So far, all samples tested negative for sero-type H5 and H7. Discussion with participants highlighted the fact that no calculation had been made to estimate what prevalence could be detected with such samples.

11. Definition of the risk question

The risk of introduction of HPAI, H5N1 virus into Kenya has been assessed under the FAO project and pathways of entry have been ranked.

The risk of transmission within and between pathways however had not been assessed. Pathways of transmission had been identified and ranked according to the limited data available at the time the risk assessment was conducted.

It was therefore decided to focus the DfID risk assessment on the risk of transmission
For that purpose, the participants:

- Drew all the interactions between and within the poultry sectors (**Figure 2**)
- Drew a pathway for each interaction (**Annex 10**).

For these pathways, only chicken production was considered.

Based on the results of the FAO risk assessment, the participants agreed that the introduction of HPAI H5N1 virus into Kenya is generally low. However, illegal trade at the border represents the main challenge and pathway for introduction of HPAI H5N1 virus, and that if this was to happen, then the sector 4 is the more exposed one.

In addition, results from the FAO assessment on transmission pathways show that markets and sector 4 farms are important for the spread of the disease. These results match the outputs of the discussion during the previous workshop under the DfID project.

It was therefore decided to address the 3 following risk questions:

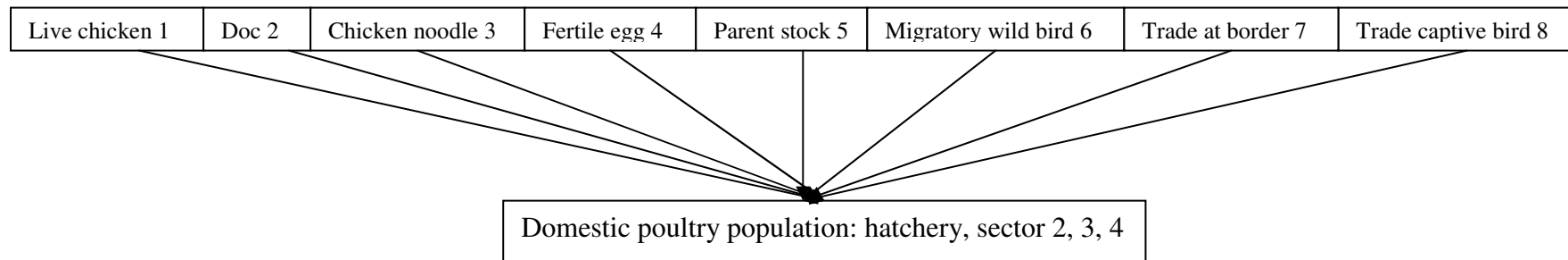
- What is the risk of HPAI transmission between sector 4 poultry farms
- What is the risk of HPAI transmission from sector 4 to sector 3 poultry farms
- What is the risk of transmission from sector 3 to sector 4 farms via trade of live poultry on markets

12. Spatial modelling, Frank Hans (**Annex 11**)

Short presentation on agent-based, spatially-explicit dynamic models to be developed in the context of the project.

Figure 1: Risk Assessment of HPAI H5N1 virus introduction into Kenya

Pathways of introduction:



- 1:** Live chicken: Likely transmission via import of live chicken, poultry products such as eggs and poultry meat. This is possible directly into sector 4 poultry
- 2:** Day old chicks: both legal and illegal imports. Possible transmission if sourced from infected countries. Transmission Pathway directly into sector 2 and sector 3 farms.
- 3:** Chicken noodle plus other poultry products, information about preparation? [Imports from infected countries directly into the Kenyan consumer market.](#)
- 4:** Hatching eggs: legal and illegal. Directly into sector 2 and some sector 3 farms
- 5:** Parent stock. Possible introduction pathway directly into sector 2 and some sector 3 farms
- 6:** Migratory wild birds via resident wild birds: Possible introduction pathway due to interaction of migratory wild birds with susceptible resident wild birds as well as contact with sector 3 and sector 4 domestic poultry. Assessment based on the informal discussion, uncertainty high due to lack of data.
- 7:** Trade at borders (importations via airports and sea). Possible introduction via live bird imports, poultry products, travellers from infected countries?.
- 8:** Trade of captive birds/pet birds: Possible introduction pathway through susceptible captive or pet birds`imports into Kenya. Assessment based on the limited information and informal discussion at ports of entry

Pathways of exposure:

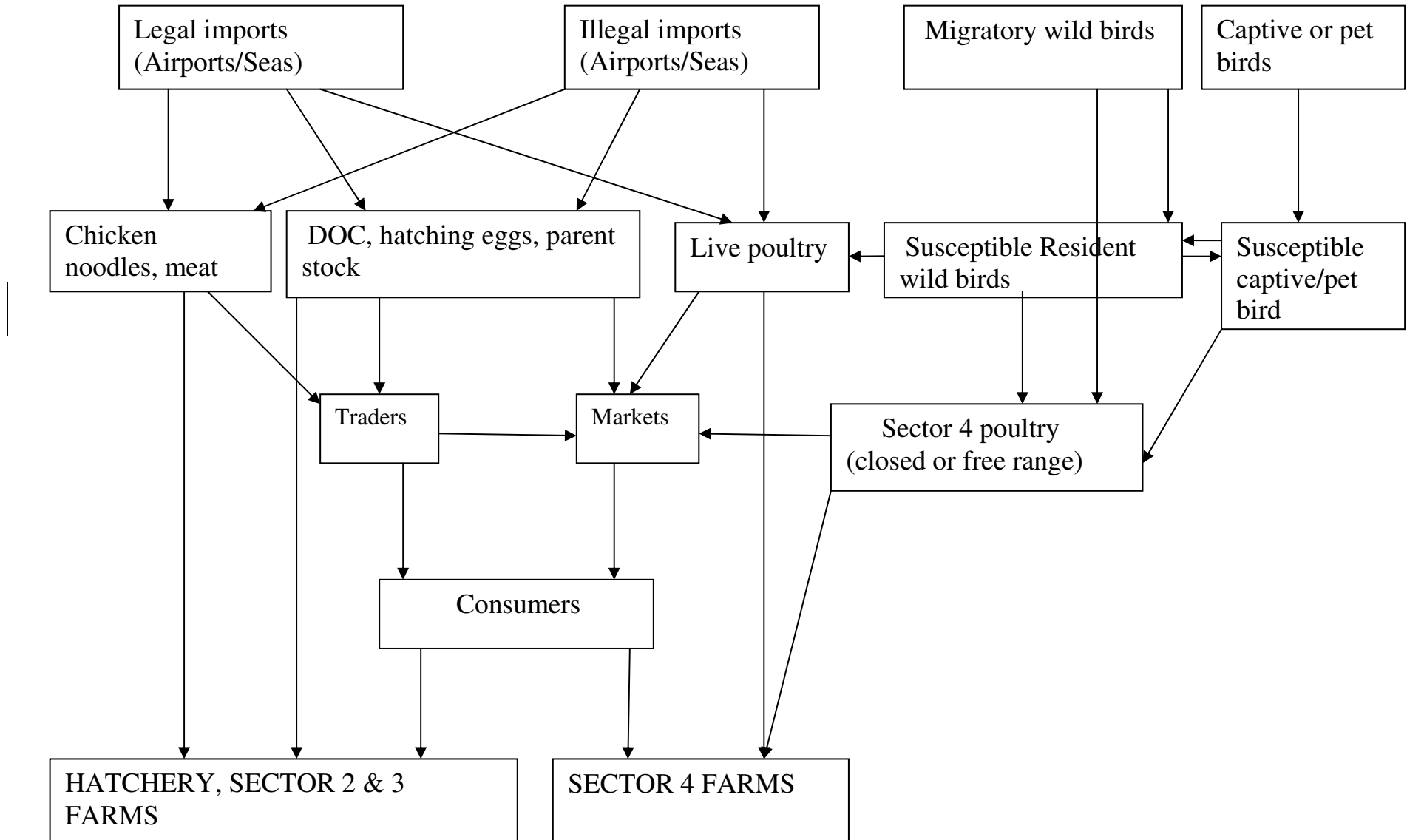
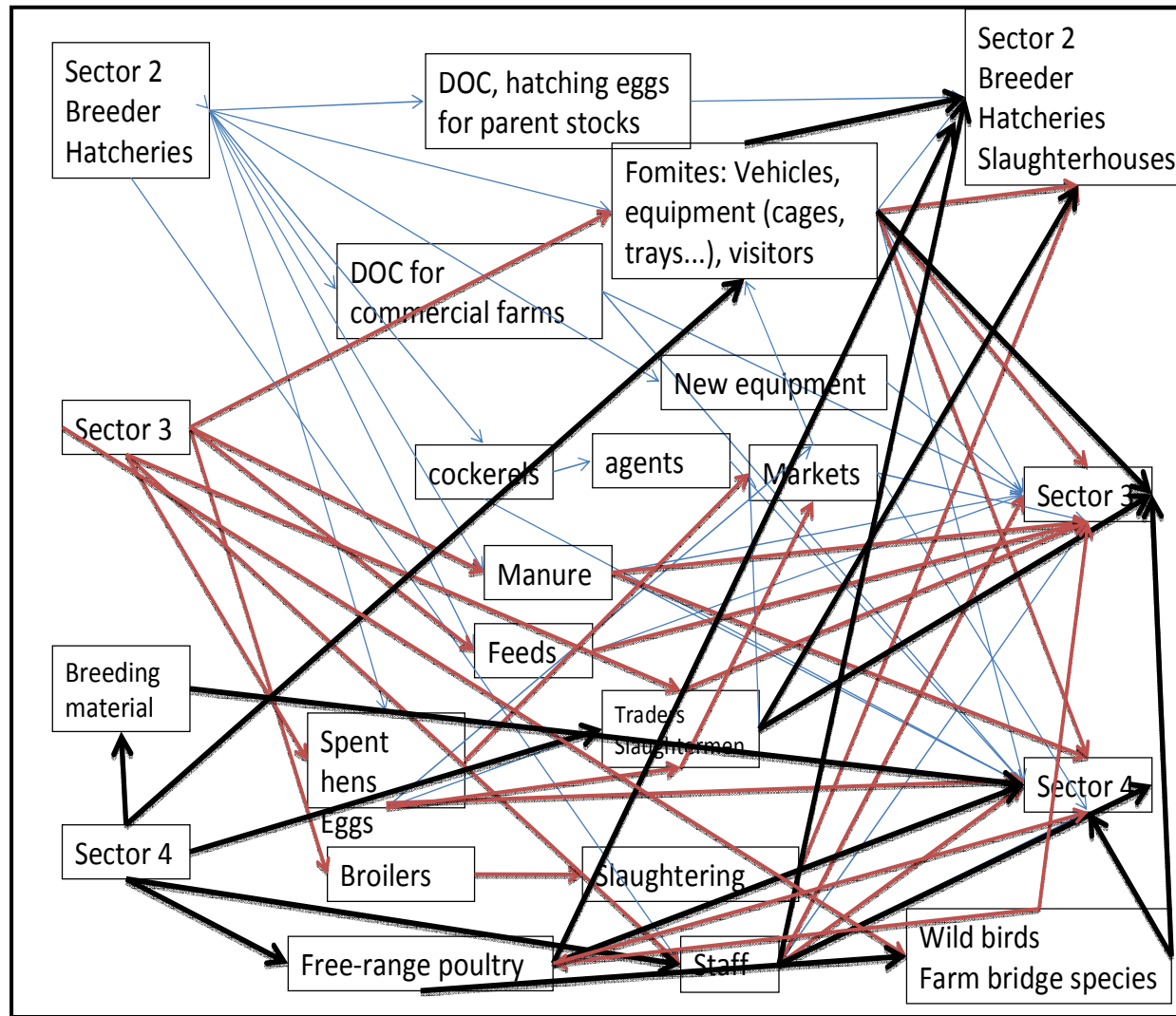


Figure 2: Interaction among poultry sectors



Legend

Blue arrow: Interaction between sector 2 and sector 2, 3, 4.

Red arrow: Interaction between sector 3 and sector 2, 3, 4

Black arrow: Interaction between sector 4 and sector 2, 3, 4



