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POTENTIAL OUTBREAK OF AVIAN INFLUENZA: IMPLICATIONS FOR LESOTHO

Global concern is increasing about the outbreak of the current strain of avian influenza (AI) and its socio-economic implications. The Government of Lesotho (GoL) also shares this worldwide concern...

1. Background

According to the World Health Organisation (WHO), avian influenza (AI) refers to a large group of different influenza viruses that primarily affect birds. On rare occasions, these viruses can infect other species, including pigs and humans. AI was initially diagnosed in Italy over 100 years ago. Its cause was identified to be a Type A influenza virus which can affect all birds, although certain birds are more resistant to infection. The disease causes high mortality rates among poultry and occasionally infects humans. However human infection remains rare as the virus does not spread easily from birds to humans.

The latest outbreak has been much more deadly than the previous ones, with South-East Asia, particularly China and Thailand, being the hardest hit in the region. WHO has recently confirmed the presence of a deadly H5N1[1] strain in Cambodia, China, Indonesia, Japan, Malaysia, South Korea, Thailand and Vietnam. A total of about 200 million birds were killed or culled in this region. This massive culling of birds led to devastating economic impact on the poultry industries of affected nations. Since then, milder strains of the virus have been reported in Canada, Pakistan, Taiwan and United States. In addition, WHO has also recently confirmed the detection of H5N1 strain of the disease in Cameroon, Egypt, Eritrea, Niger, Nigeria and Zimbabwe. The organisation therefore called on countries in these regions to take emergency measures to prevent the spread of the virus within and outside those regions.

The two currently worst affected countries, China and Thailand, account for 15 per cent of the global poultry shipments. As already indicated, the culling of birds so as to prevent the spread of AI could lead to devastating economic impact. Recent economic studies on this subject indicate that individual farmers at the lowest income levels are usually the hardest hit by the culling of flocks. The problem could compound itself as restrictions imposed on bird exports could negatively affect trade among countries.

2. Evidence of the macroeconomic impact

According to a study by the World Bank (WB), poultry production accounted for about 0.6 per cent to 2.0 per cent of gross domestic product (GDP) in East Asia and the Pacific. Following the outbreak of the AI, the contribution of poultry to economic activity declined considerably. For instance, in Vietnam, the loss was worth about 0.1 per cent of GDP or about \$45 million. The WB study further highlights that in countries like Indonesia, where the poultry sub-sector plays a significant role in the economy, the cost could amount to about 0.2 per cent of GDP. In a study by Meltzer, Cox and Fukuda (1999) the cost of AI was estimated at between \$100 and \$200 billion for the United States (US) alone, based on the disease pattern of the post-World War II pandemics. These authors further discovered that if economic costs were extrapolated from the US to other high income countries, the loss in present value terms could be around \$550 billion.

Therefore, the possibility of an AI pandemic and its global socio-economic implications for humans has become cause for concern.

3. Economic costs

According to the WHO, the evolution of AI cannot be predicted. However, high global mobility and interconnections could imply quick spread of illness and high fatality rate[2], which could threaten millions of lives around the world. The WHO identified six stages of alert and the world is currently at stage 3, where a new influenza virus, sub-type A, is causing disease in humans, but is not yet spreading efficiently and sustainably among humans.

The outbreak of AI is not just a health problem but also an economic issue. If the outbreak of the pandemic gets to a severe stage, then both the *micro and macro economic impacts* are likely to be significant. The severity of the pandemic will depend on its attack[3] and fatality rates, its duration, the behaviour and preparedness of households or firms, as well as the capacity and preparedness of health care systems in individual countries. Some of the implications to be considered include losses of poultry due to the disease and control measures such as culling.

Firstly, the possible spread of AI to humans may result in high absenteeism due to illness and the need for the affected family members to take care of their sick relatives. Prolonged absenteeism may result in disruptions in the production processes and in turn impinge on sales turnover.

Secondly, the demand for poultry could contract sharply with consumer spending at household level falling and investment on poultry-related products being put on hold. Additional losses may occur because of lower egg production and reduced activity in distribution channels. However, producers of poultry products may be positively influenced towards the production of substitute products such as pork.

Thirdly, indirect economic costs could also arise from a fall in international tourism because of the disease fears or travel restrictions. The other sub-sectors such as wholesale and retail trade, and restaurants and hotels could be negatively affected due to a slowdown in international tourism.

Fourthly exports could suffer from trade and transportation restrictions imposed to control the spread of the virus as well as from lower global demand and domestic supply disruptions. Low income countries (LICs) could experience deterioration in their trade balances owing to a rise in health-related imports.

Fifthly, owing to the fact that current accounts are highly dependent on commodity prices and imports of goods and services, countries might be able to address temporary balance of payments pressures by drawing down foreign reserves, which for many LICs are relatively at low levels.

Moreover, countries with weak fiscal and health systems are likely to be more vulnerable as a result of lack of financial resources and capacity to purchase and distribute drugs and vaccines,

hire workers for culling and clean-up, and surveillance and diagnostics. Governments may also come under political pressure to pay compensation to poultry owners. If such compensation is in the nature of transfer payments for the economy as a whole, it can impose a significant fiscal burden on governments.

4. Lesotho's Situation Analysis and Policy Response

4.1 Situation analysis

The WHO has urged governments to put in place measures to prevent the emergence of and contain the spread of AI. Some of the measures required are relatively costly for LICs. More challenging may be the likely fiscal impact of AI pandemic and the actions required for governments to prevent and respond to it. A pandemic of this magnitude will almost invariably put substantial pressure on the fiscal balance, due to increased spending on health, public safety, social welfare, and subsidies to businesses and lost revenues.

Lesotho imports about 90 per cent of poultry and its by-products from SA. It therefore faces enormous exposure in the event that AI affects SA. This therefore exposes Lesotho's economy in the event that AI affects SA. The contribution of poultry production in agricultural sub-sector is significant in the country, hence lower poultry production impacts negatively on the agricultural sub-sector and ultimately on GDP as a whole. Import restrictions may not necessarily be a solution if domestic supply of poultry does not increase to meet the consumer demand.

4.2 Policy response

Southern Africa, like other regions, is concerned and taking precautionary measures against the possible outbreak of AI. In this regard, the Food and Agricultural Organisation (FAO), with the assistance of the United States Agency for International Development (USAID), facilitated a regional workshop on AI attended by delegates from the Southern African Development Community (SADC), in March 2006. The workshop discussed the eminent threat faced by the SADC member states through three working groups, namely; risk assessment, diagnostics and public awareness, and areas of cooperation between veterinary and medical personnel.

The Government of Lesotho (GoL) through the Department of Livestock Services within the Ministry of Agriculture and Food Security in collaboration with the Ministry of Health and Social Welfare, banned all poultry products from SA for a period of about a year from August 2004 to September 2005. This was due to detection of AI in some regions within SA. The following Acts play a role in minimising the spread of AI in the country Stock Disease Proclamation 10 of 1896, Stock Disease Amendment Act 18 of 1984 and Stock Disease Regulation Notice No.42 of 1910. The following measures are in place to safeguard against the possible infections:

- No live poultry, birds or any poultry products are allowed into the country, unless an import permit has been obtained from the Department of Livestock Services. Imported live poultry and birds are subject to post-importation quarantine.
- The importation of live poultry and poultry products are only allowed from countries that are free from AI.

The GoL through the abovementioned Ministries is quite aware of the threat of AI to the domestic poultry industry. As a consequence, these two ministries drafted a National Preparedness and Response Plan for Avian Influenza Pandemic. The Plan outlines measures to be executed to prevent and/or control the pandemic at different phases of its progression in the country. It aims to prepare the country for a consistent, coordinated and timely response to the pandemic to avoid or minimise loss of human life and suffering. This Plan is structured in accordance with the Recommended Strategic Actions in Responding to the Avian Flu Pandemic Threat (WHO, 2005) and Influenza Pandemic Risk Assessment and Preparedness in Africa (WHO, 2005).

4.3 Financial Requirements

The National Preparedness and Response Plan for Avian Influenza Pandemic is soon to be presented to the Cabinet for approval and adoption. The financial requirements for implementing the plan, which was not included in the 2006/07 government budget, amount to about M22.6 million, broken down into the following three phases:

- *Phase 1 (Inter-pandemic)* is estimated to cost about M2.4 million. The objective is to reduce opportunities for human infection and key activities include, among others, creating awareness among staff in key institutions to be involved in prevention and control measures, educating the public on major aspects of the disease, establishing and increasing surveillance activities in birds, controlling of the disease in animals and increasing inter-ministerial collaboration.
- *Phase 2 (Pandemic alert)* is expected to require about M20.1 million. The main objective in this phase is to contain or delay the spread of the disease at source. Key activities include, procurement of required medication, culling of birds and compensation, increased surveillance of risk areas, continuous public awareness campaigns and minimisation of human movement in and out of affected areas.
- *Phase 3 (Pandemic)*, which is estimated to cost about M0.05 million, is aimed at reducing morbidity, mortality and social disruptions among the inhabitants of Lesotho. Key activities in this phase are, among others, safe management of health care wastes and provision of regular updates to stakeholders and public at large.

At present, no cases of AI infections have been detected in the country. However, there is potential risk posed by migration of wild birds from affected areas.

5. Conclusion and Policy Recommendations

The FAO and the WHO have set out detailed recommendations on animal and human health policies and preparations that should be implemented at national and international levels to control AI and the danger of a human influenza pandemic. In this regard, animal and human health are closely linked. Therefore, there is a need for an integrated cross-sectional approach that brings together agriculture and animal health, human health, finance and other key agencies and experts with strong support and leadership at the policy level.

In order to minimise or reduce the spread of AI to humans, there is need to curb the virus at source, as a matter of national priority. This requires implementation of strong animal and

human surveillance, disease control and mitigation measures. At present, the country may be vulnerable due to lack of capacity needed in the event of AI outbreak. However, the required resource gap may be addressed by working closely with Lesotho's developmental partners, as well as international organisations such as WHO to build capacity on handling an AI outbreak.

This report benefited from:

- *The International Monetary Fund (IMF) Publication: "Global Economic and Financial Impact of an Avian Flu Pandemic and the Role of the IMF". Available at: <http://www.imf.org/external/pubs/ft/afp/2006/eng/022806.pdf>*
- *WHO's publication: "Ten things you need to know about pandemic influenza". Available at: <http://www.who.int/csr/disease/influenza/pandemic10things/en/index/html>*
- *A report on the Regional Workshop on Notifiable Avian Influenza in SADC. Pretoria, South Africa, 7th – 9th March 2006*
- *"The Economic Impact of Pandemic Influenza in the United States: Priorities for intervention". Available at: <http://www.cdc.gov/ncidod/EID/vol5no5/meltzer.htm>*

Table 1: Monetary and Financial Indicators+

| | Jan. | Feb. | Mar. |
|--|-------------|-------------|-------------|
| 1. Interest rates (Percent Per Annum) | | | |
| 1.1 Prime Lending rate | 11.50 | 11.63 | 11.63 |
| 1.2 Prime Lending rate in RSA | 10.50 | 10.50 | 10.50 |
| 1.3 Savings Deposit Rate | 1.24 | 1.24 | 1.24 |
| 1.4 Interest rate Margin(1.1 – 1.3) | 10.26 | 10.39 | 10.39 |
| 1.5 Treasury Bill Yield (91-day) | 6.84 | 6.90 | 6.90 |
| 2. Monetary Indicators (Million Maloti) | | | |
| 2.1 Broad Money (M2) | 2571.4 | 2587.9 | 2566.93 |
| 2.2 Net Claims on Government by the Banking System | -1399.82 | -1196.48 | -1027.20 |
| 2.3 Net Foreign Assets – Banking System | 4631.52 | 4396.27 | 4376.67 |
| 2.4 CBL Net Foreign Assets | 3457.3 | 3329.78 | 3238.38 |
| 2.5 Domestic Credit | -474.00 | -274.25 | -169.84 |
| 2.6 Reserve Money | 400.80 | 437.98 | 461.96 |
| 3. Spot Loti/US\$ Exchange Rate (monthly average) | 6.0958 | 6.1221 | 6.2537 |

| 4. External Sector (Million Maloti) | 2005 | | |
|--|---------|---------|--------|
| | QII | QIII | QIV |
| 5.1 Current Account Balance (Excl. LHWP) | -122.41 | 34.71 | -51.90 |
| 5.2 Capital and Financial Account Balance (Excl. LHWP) | 187.88 | -102.54 | 102.73 |
| 5.3 Reserves Assets | -94.55 | 26.53 | -86.9 |

+These indicators refer to the end of period. Prime and deposit (savings) rates are averages of all commercial banks' rates operating in Lesotho. The Statutory Liquidity Ratio in Lesotho is 25 percent of commercial banks' short-term liabilities.

[1] H5N1 is a sub-type of the species called avian influenza viruses.

[2] The fatality rate is the percentage of the population that falls ill and die from the virus.

[3] The attack rate is the percentage of the population that falls ill with the virus