Introduction
Systemic bias is often difficult to identify and even more difficult to address. Traditional animal disease surveillance systems and veterinary services too often focus on animal populations in intensified livestock production systems, neglecting the extensive community-based livestock, resulting in underreporting of disease events from these populations. This lack of awareness of disease circulation within extensive community-populations if reflected in disease control strategies which further underemphasize extensively-raised livestock, creating a negative feedback loop and systemic bias with surveillance systems and disease control programmes. To address this bias in Bangladesh, an integrated control strategy for H5N1 HPAI was developed.

Objectives of Integrated Disease Control Strategy
- Effective vaccination
- Farms secured from outside pathogens (Biosecurity)
- Reduction of spread via wholesale markets
- Minimize spillover to humans via Live Bird Markets (LBMs)
- Outbreaks detected and controlled rapidly
- Community mobilization and supported to thrive

Methods
A multi-stakeholder approach was used to develop a disease control strategy for Bangladesh that integrates biosecurity measures at all levels of poultry production, effective vaccination, disease surveillance, outbreak management, and risk reduction measures along the live bird marketing chain. To enable achievement of this last objective, government veterinary services working at field level were mobilized to serve livestock-rearing communities through a new initiative called Upazila-to-Community (U2C).

How is systemic bias addressed?
- Community small-scale livestock farmers now have access to veterinary services and increased probability to detect disease and implement control measures as necessary
- The dynamic of disease transmission and pathways in communities are coming into light to inform control strategies and farmers’ awareness
- Enhancing community-based livestock surveillance system via U2C, complements the traditional surveillance of intensified livestock production systems thereby minimizing the inherent systemic bias

Outcomes of U2C
- U2C was successfully implemented in nine pilot upazilas (subdistricts) and then expanded to 126 more with plans to cover all 496 upazilas in Bangladesh
- Through this initiative Department of Livestock (DLS) has developed capacity in participatory disease surveillance (PDS), community outreach, and principles of avian influenza control and prevention, including poultry farm biosecurity and husbandry
- Skills developed during U2C training enable DLS field staff to:
  - Empower communities to better address their livestock production challenges
  - Respond rapidly when contacted by communities facing significant disease events, e.g., sudden death of poultry
- During the pilot phase, a female officer on each U2C teams ensured that women within communities are also directly engaged since they are most often the custodians of livestock and served as a proof of principle to the Government of Bangladesh of the need to invest further in achieving a gender-balanced field service.

Conclusions
- Overall, the U2C initiative avails veterinary services to rural communities to improve livestock production and disease control to ensure food security and increased resilience to emerging disease events
- The U2C programme, by reaching out to communities bridges the inherent bias in traditional surveillance system by including control of diseases in the extensive livestock production system.

*Corresponding Author contact: eric.brum@fao.org
FAO ECTAD Bangladesh; Fax: +880-291256328

This poster was supported by the United States Agency for International Development (USAID) with technical cooperation of the Government of Bangladesh and the Food and Agriculture Organization of the United Nations (FAO), Emergency Centre for Transboundary Animal Diseases (ECTAD)