

## Zoonoses Research Programme at Human and Animal Interface to Achieve One Health in Ethiopia

Asefa Deressa<sup>1</sup> and Mahendra Pal<sup>2</sup>

<sup>1</sup>Head, Zoonoses Laboratory, Ethiopian Institute of Public Health, Addis Ababa, Ethiopia

<sup>2</sup>Founder Director of Narayan Consultancy on Veterinary Public Health and Microbiology, Anand, India

**\*Corresponding Author:** Mahendra Pal, Professor, Founder Director of Narayan Consultancy on Veterinary Public Health and Microbiology, Anand, India.

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### Introduction

The Global Framework for Progressive Control of Trans-boundary Animal Diseases and the FAO/OIE are encouraging to strengthening of institutions already in existence to build research and development partnership between the public and animal health sectors. This would be done without requiring the integration or fusion of their roles but, rather they can build national strategies of Emerging Infectious Diseases (EID) at Human and Animal interface. This would also reinforce local capacity and promote the commitment towards the operational and intervention research of EID of zoonotic nature. It is pertinent to mention that over 60 % of human infections are acquired from animals. A systematic review on "Public health concern due to emerging and re-emerging zoonoses" is published by Professor Mahendra Pal in 2013. This article highlights the growing importance of emerging and re-emerging zoonotic diseases in human health and also recommended the permanent appointment of Public Health Veterinarian in Public Health Programmes both at National and International levels.

The partnerships that have been developed in response to the Highly Pathogenic Avian Influenza crisis among international agencies, such as FAO, OIE, WHO and UNICEF will be to make use for the national establishment of One Health research under Ethiopian context. In this regard, various national institutions, such as Animal Health Sector of Ministry of Livestock and Fisheries, Wildlife Conservation Authority, Higher Learning Institutions, Ethiopian Institute of Public Health and other Public Health institutions of Federal Ministry of Health including private sectors will closely devise research and development strategies of One Health after, which it can be implemented, monitored and evaluated. Thus, the establishment of Zoonoses Research Division will be a milestone for the joint strategic framework among various national institutions fully engaged at animal and public health issues. The One Health research approach is an important tool to address the key health issues of public versus animal health including the benefit-cost ratio of various options and long-term sustainability.

### The need for one health strategy

In spite of, the fragmented efforts made so far, to reduce the burden of emerging infectious diseases, trans-boundary diseases and other animal and animal products originated public health problems, still severe morbidity and mortality are prevalent due to various factors. The multi-discipline nature of the diseases could be one of the factors, as the mandate of various stakeholders were not clearly stated and the efficient coordination scheme of this program is not in place to jointly plan and shoulder responsibilities of operational and intervention research in the area. In the same line, evidence for programme implementation and health related data are fragmented and staggering. Limited resources of infrastructure and skilled manpower, inadequate diseases awareness, survey and surveillance, poor reporting systems in not accessible areas, are key barriers for evidence generation in terms of Animal and Human Interface/Zoonoses operational research programme in Ethiopia. Thus, taking into account, the World Trade Regulation on security, and safety of animal products, and the opportunity of creating the synergy of the existing local capacities of various institutions is so critical to strengthen

zoonoses research program of Ethiopia by infrastructure. Therefore, One Health approach as a tool for zoonoses research could be one of the strategic plans and management of Ministry of Livestock and Fisheries, Ethiopian Wildlife Conservation Authority, Federal Ministry of Health, Ethiopian Institute of Public Health in forthcoming years, which would create a center of attention for pool fund from developed partners. The global facts of One Health initiative and the burden of zoonotic diseases are the major impacts to re-visit Animal/ Human/ Environment health research strategy with One health approach as a tool. Detailed information on ONE HEALTH can be gathered from two excellent review papers on “The role of veterinary, medical and environment professionals to achieve One Health” and “Impact of food safety on ONE HEALTH”, which are published by Professor Mahendra Pal and others in 2014 and 2015, respectively. Therefore, this concept note is promoting the initiative of Zoonoses Research at Veterinary and Public Health Programme with the following objectives.

**Objectives of one health/zoonoses research**

- To build-up the existing competence and services delivery of Animal/Human/ Zoonoses Research Capacity at National Animal /Human Health Research Strategy.

**Specific objectives**

- To build the capacity of human resource at animal and human interface.
- To strengthen infrastructure of zoonoses at human and animal interface.
- To improve zoonoses prevention and control service delivery at national and regional level.

**Expected outcomes**

- To establish high-tech laboratory facilities of zoonoses research at human/animal interface.
- To train professionals in advanced public/veterinary health techniques and technologies.
- To strengthen collaboration and coordination with local and international stakeholders.
- To advance One Health/zoonoses research outcomes in line with the strategic plan of Ministry of Livestock and Fisheries, Federal Ministry of Health, Ethiopian Wildlife Conservation Authority and Ministry of Environment.

As zoonoses are primarily animal diseases, which are transmitted to humans through various routes, and over 60% of human infections are zoonotic in nature, hence, it is recommended that Public Health Veterinarian must be involved in Public Health Programmes in order to achieve One Health at all levels.

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