

One Health, multiple impacts: A review of 10 years of One Health work in Bangladesh and the region with a focus on the poultry industry in Bangladesh

Esha EJ^{1*}, Mahmud R¹, Abbas SS², Alders R³, Hoque MA¹

¹ Chattogram Veterinary and Animal Sciences University, Zakir Hossain Road, Khulshi, Chattogram-4225, Bangladesh

² Institute of Development Studies, University of Sussex, Library Rd, Falmer, Brighton BN1 9RE, The United Kingdom

³ Development Policy Centre, Australian National University, Canberra ACT 2601, Australia

* easrat750@gmail.com

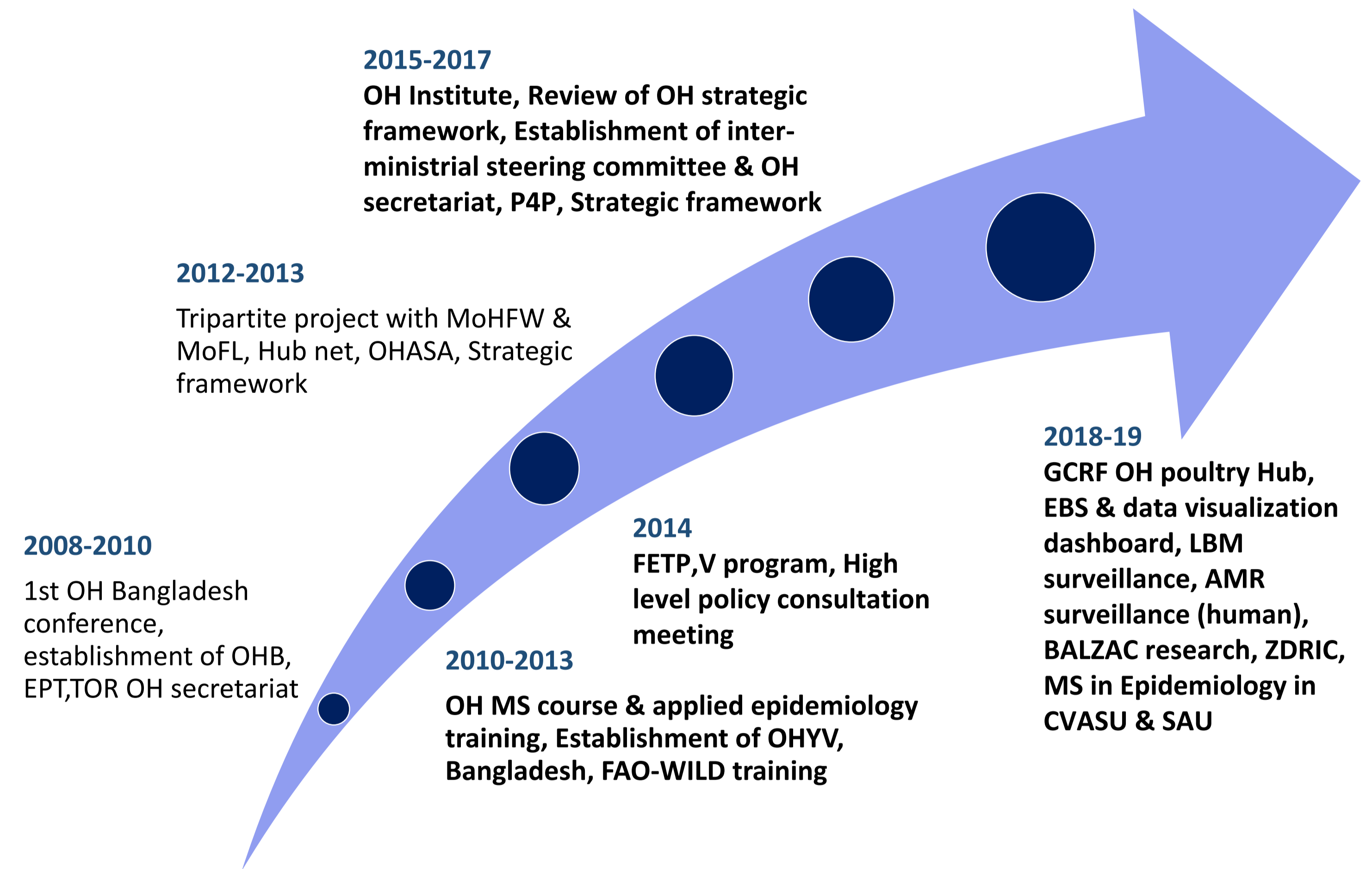
Take home messages

- Structural difference found in terms of institutionalization of One Health among the selected countries
- Lack of sustainable funding & Inadequate capacity building is common behind the One Health implementation
- Lack of community level engagement in the field of networking & collaboration
- Limited evidence generation & resource facility is found in One Health research area
- Emerging & re-emerging infectious disease burden indicate a need of holistic set of science based policy & management

Background & Objectives

- Zoonotic diseases cause 2.4 billion cases of illness and 2.7 million human deaths in the low and middle income countries
- Global One Health framework for pandemic preparedness on December 4-6, 2007, India
- One Health Bangladesh platform (non-government) established in March, 2008
- Expansion of integrated poultry farming system in Bangladesh
 - Lack of implementation of appropriate biosecurity practices
 - Irregular usage and use of inappropriate antibiotics
- Anthropogenic environmental change driving increased pathogen spillover
- Synergism in One Health approaches is expected to expand including new disciplines and sectors
 - Review the foundations of the One Health initiative in Bangladesh and selected south and south-east Asian countries
 - Identification of how the One Health approach relates to the increasingly important challenges of emerging diseases and AMR

One Health work trend over the last two decades in Bangladesh



Methodology

Data Collection

Scoping literature review

- Timeline:** Nov 1, 2007, to Dec 31, 2021
- Location:** SAARC, selected ASEAN & high-income countries
- Type of the documents:** Strategic documents, reports, review paper, unpublished data
- Medium:** Database, website, personal communication

Key informant interviews

- Medium:** Face-to-face & online (zoom) interview
- Sample size:** 20 (approx.)
- Language:** Bengali & English

Data Analysis

- Categorization
- PRISMA flow diagram
- Data extraction
- Summarization
- Identification of the key themes

Script writing:

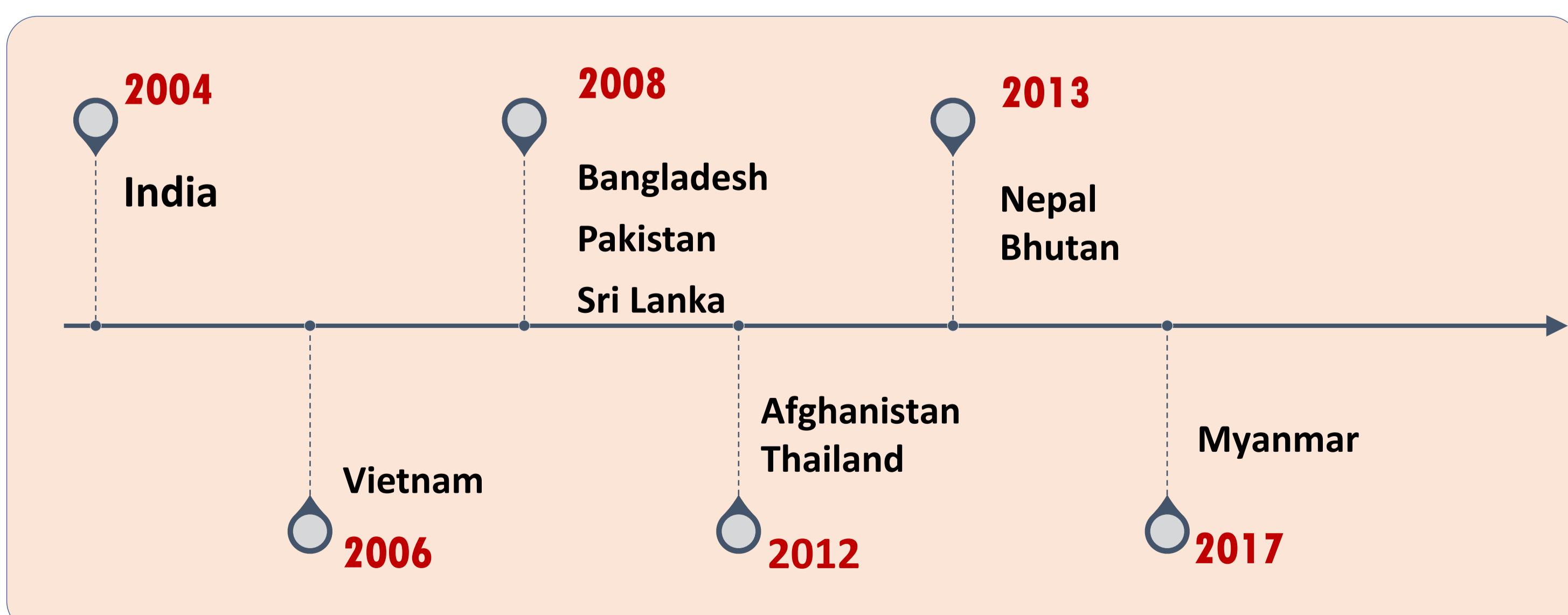
- Transcribed to English (for Bengali interview)
- Thematic analysis

Tools:

- MS Word 2013
- MS Excel 2013
- MAXQDA software

Results & discussion

One Health initiation across the SAARC and selected ASEAN countries



Comparative review of the one health documents

Components		Bangladesh	Pakistan	Bhutan	Nepal	Vietnam	Myanmar	Thailand
Timeline		2017-21	2017	2013-18	2016-21	2021-25	2017-21	2017-21
Institutional Governance	OH Secretariat/OH partnership secretariat							
	OH steering committee							
	Technical working group							
	Technical advisory committee							
	Coordination committee							
Coordinated outbreak investigation and response	Avian							
	Influenza							
	Anthrax							
	Nipah							
	Leptospirosis							
	Rabies							
	Salmonellosis							
	CCHF							
	Brucellosis							
	Wildlife							
Swine								
Streptococcus								
Multidisciplinary research								

Challenges

Lack of institutionalization make the policy level advocacy difficult

Improper management of resources

Weak coordination & communication among the different disciplines

Lack of dissemination of the research findings at local & policy level

