Programme Evaluation Series

Evaluation of FAO/USAID Emerging Pandemic Threats Programme – Phase II (EPT-2)

Annex 2. Portfolio analysis

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Contents

Figures

1. EPT-2 thematic areas and context

1. EPT-2 has three overarching purposes: prevention of new zoonotic disease emergence; early detection of new threats; and their timely and effective control. EPT-2 builds on lessons and knowledge from its predecessors (EPT-1 and EPT+) and invests in the One Health policies and capacities. At the core of the overall EPT-2 programme are seven new areas of strategic focus:

   i. Developing longitudinal data sets for understanding the biological drivers of disease emergence.

   ii. Understanding the human behaviors and practices that underlie the risk of "spill-over, amplification and spread" of new viral threats.

   iii. Promoting policies and practices that reduce the risk of disease emergence .

   iv. Supporting national One Health platforms.

   v. Investing in the One Health workforce.

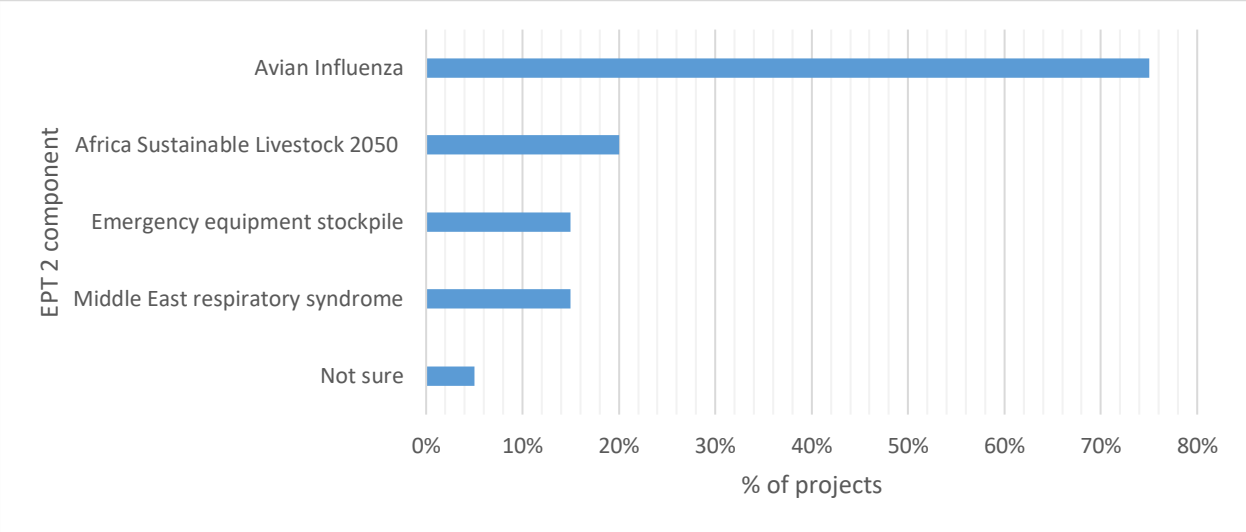
   vi. Strengthening national preparedness to respond to events of public health significance.

   vii. Strengthening global networks for real-time bio-surveillance.[1]

2. Apart from technical assistance and capacity building initiatives, the United States Agency for International Development (USAID) evaluation highlights the role of EPT-2 projects in raising awareness and understanding the importance of the One Health approach.

3. The programme focuses on four main components, i.e. avian influenza, Middle East respiratory syndrome, Africa Sustainable Livestock 2050 and emergency equipment stockpile. Figure 1 shows the percentage of projects linked to the four components.[2] Each FAO project should ideally be linked to one or more of these components; however, one project could not be linked to any, which was focused on addressing antimicrobial usage in the Asia region (OSRO/RAS/502/USA).

Figure 1: Percentage of projects linked to each EPT-2 component



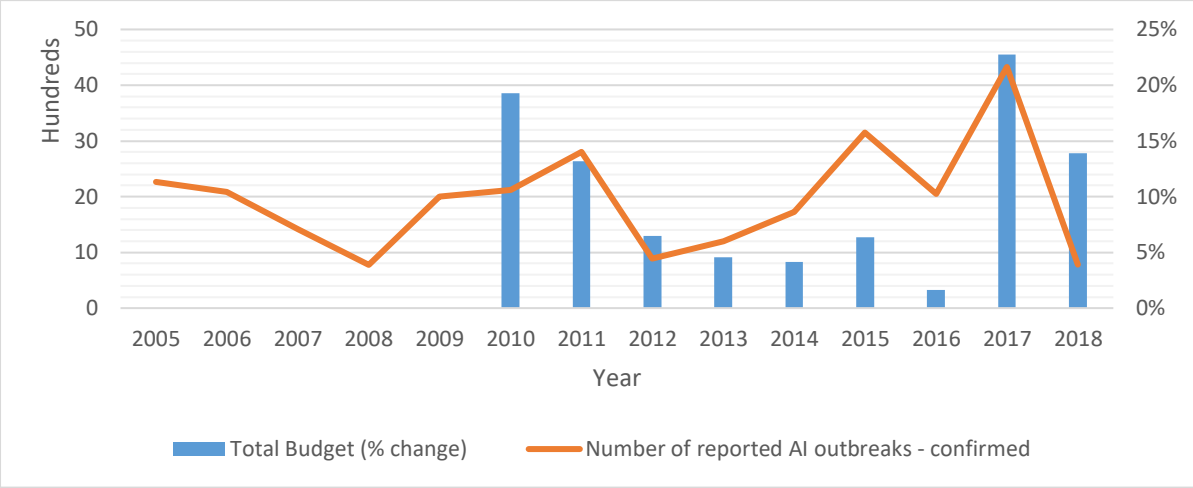
[1] USAID. 2014. *Emerging Pandemic Threats program (EPT-2)* [web page]. Accessed at: https://www.usaid.gov/ept2

[2] The total number of FAO EPT-2 projects used for the analysis is 20.

4. EPT-2 is also set in a context of an increasing number of epidemics with greater resource constraints. Figure 2 overlays the change in total budget for the USAID-funded FAO emergency projects and the number of reported AI outbreaks. There seems to be a lag in the funding. However, it might be tough to make any clear conclusions, as the total budget presented here might include projects focusing on issues other than Avian Influenza. Figure 1.3 plots major animal health epidemics and pandemics in Africa and Asia, since 2005 and the three different EPT programmes.

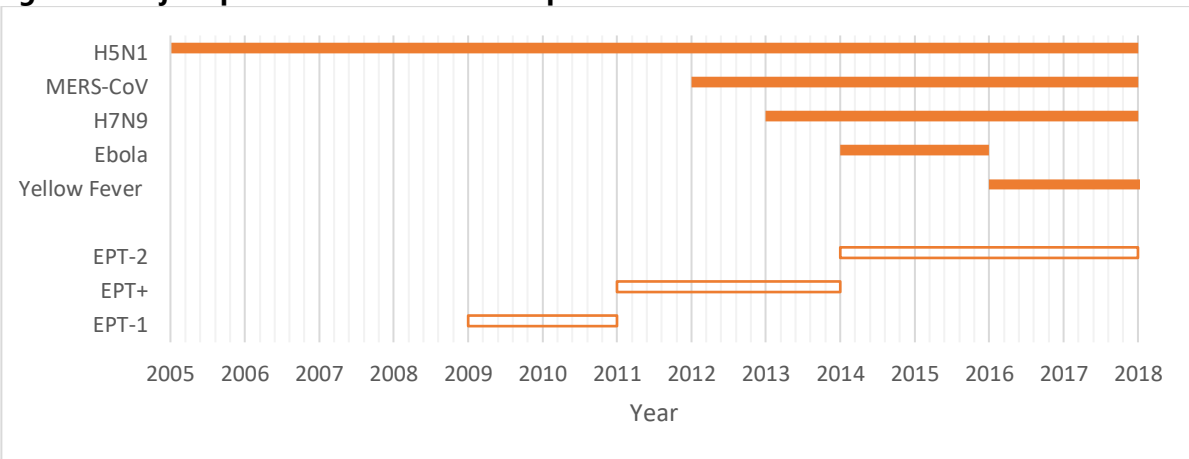
5. Most of the EPT 2 projects begin in 2014 and 2015, with a focus on South Asia and South East Asia in 2014 and expanding the focus to Africa in 2015. The timing also corresponds to the high number of outbreaks in Asia in 2013 and in Africa in 2014, reiterating that projects are set up in response to outbreaks rather than monitoring or pre-empting them.

Figure 2: Total budget change and number of Avian Influenza (AI) outbreaks



Source: http://empres-i.fao.org/eipws3g/ and FPMIS, data retrieved on 11 September 2019

Figure 3: Major epidemic threats and EPT phases



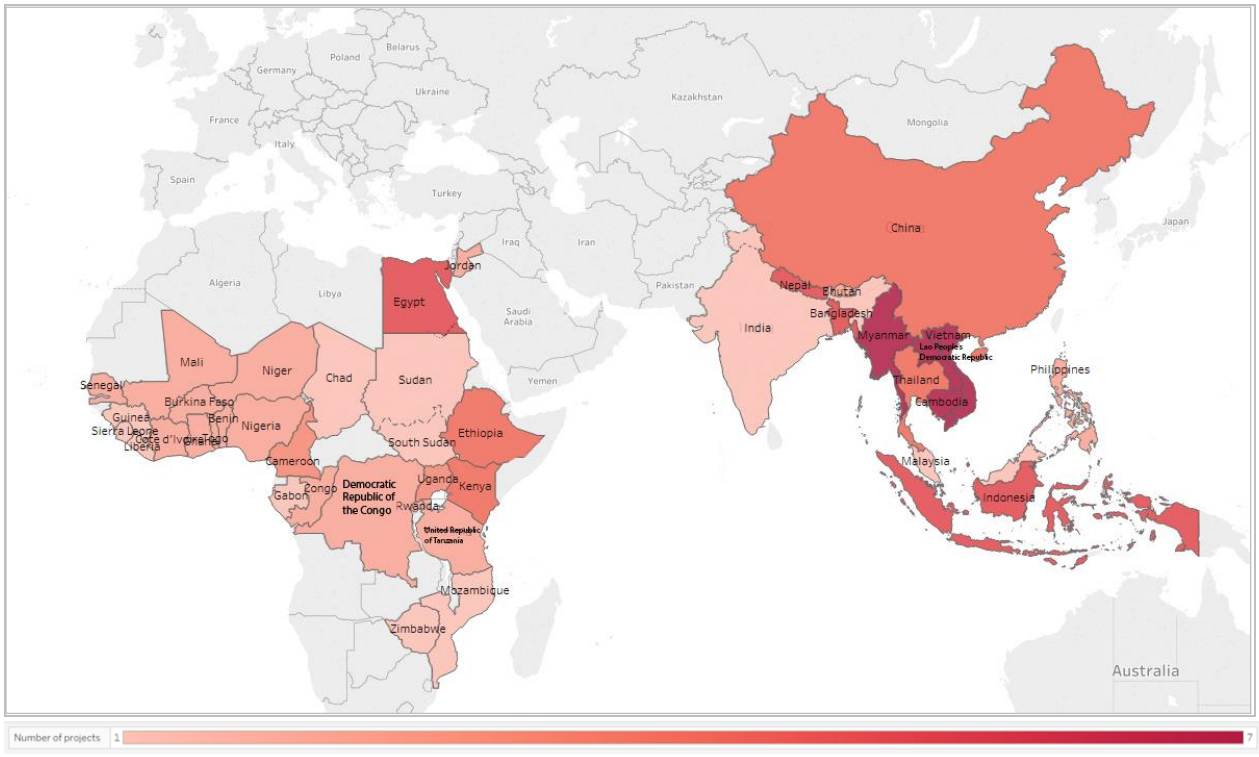
Source: World Health Organization (WHO). 2018. Managing epidemics: key facts about major deadly diseases. Geneva. (also available at: https://www.who.int/emergencies/diseases/managing-epidemics-interactive.pdf).

2. Geographical analysis

6. Most of the EPT-2 projects are concentrated in southeast Asia and a few African countries. A few global seem to cover a large number of sub-Saharan African countries. The map below shows countries covered by EPT-2 projects and the number of projects in each country based on the project documents.[3] There are a few discrepancies regarding the number of FAO EPT-2 countries. 36 countries are mapped here; however, the FAO 2019 report lists 28 countries and the USAID evaluation states that in June 2017 FAO was working in 33 countries. Appendix 3 shows the discrepancies observed across the three information sources, the progress reports, FAO 2019 report and the USAID EPT-2 evaluation.

7. Figure 4 provides details on projects classified as global, regional and national. However, few projects labelled as 'global' dealt with specific regions. Of the eight global projects, Figure 6 shows their geographic composition.

Figure 4: Geographical distribution of EPT-2 projects

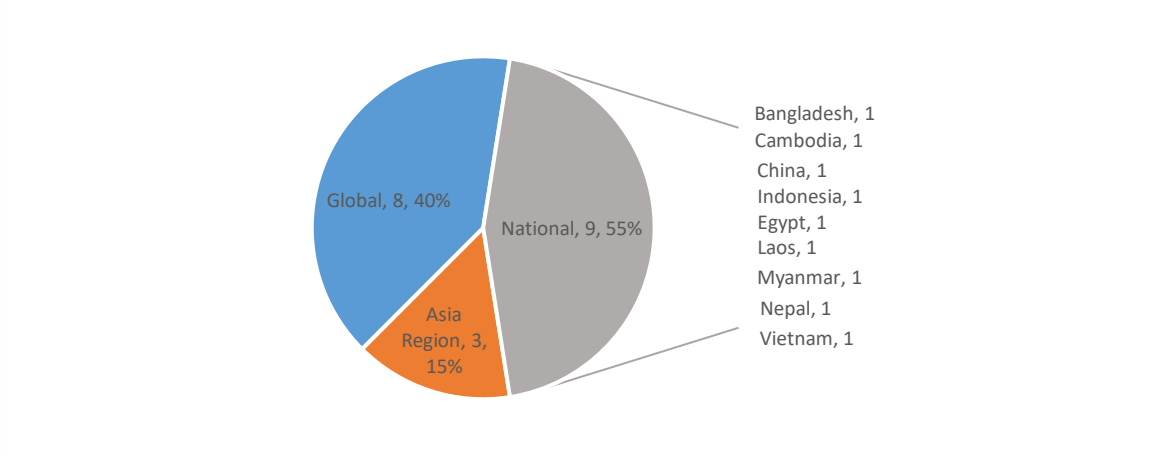


Source: Created by evaluation team from project documents and consultation with FAO staff (Tableau software)

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

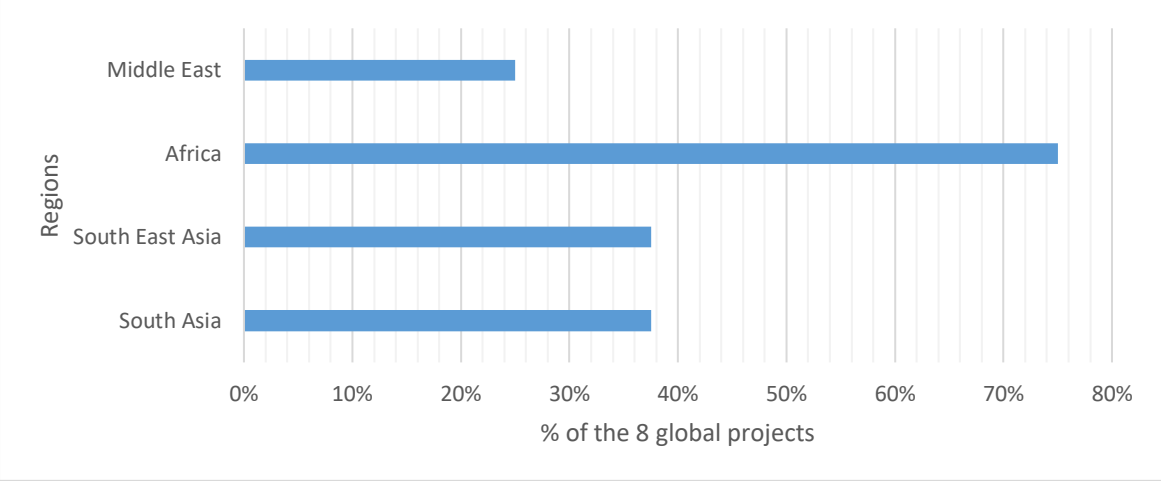
[3] Project documents retrieved from FPMIS on 20th August 2019.

Figure 5: Projects by geographic scope



Source: Evaluation team (project documents)

Figure 6: Composition of the eight global projects



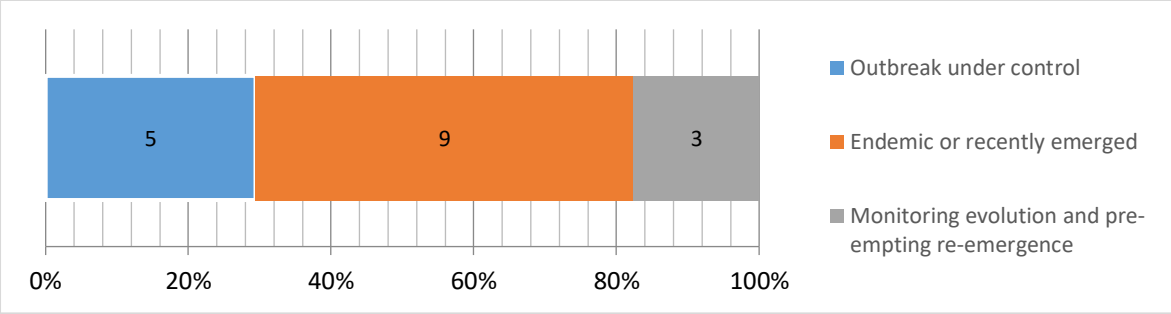
Source: Evaluation team (project documents)

3. Project context

8. The programme deals with a diverse range of projects with each of them being set in a certain context and driven by specific country requirements. The context provides useful insights into why and how outputs and activities are set as they are. FAO 2019 presents three different contexts to understand the Avian Influenza projects and its corresponding activities (1) where the virus in under control (2) where the virus is endemic or has recently emerged or re-emerged (3) where FAO is monitoring the evolution of the virus and pre-empting re-emergence. This might also set projects in (2) as the ones set in a more volatile context. Figure 7 tabulates the number of projects using this categorization, most of the EPT-2 projects have been set in situations where the virus is endemic or has recently emerged. FAO's work seems to be focused more on the response rather than monitoring (either before or after an emergency).

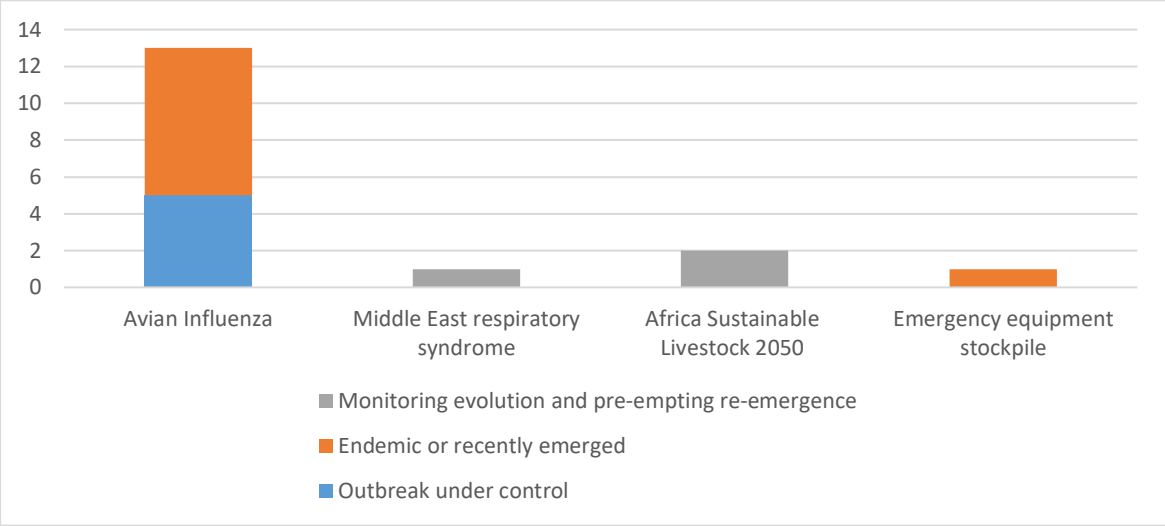
9. Furthermore, Figure 3.2 categorises projects by the context and EPT-2 component. Only the Middle East respiratory syndrome and the Africa Sustainable Livestock 2050 seem to be set as projects monitoring evolution and pre-empting re-emergence.

Figure 7: Number and percentage of projects by context[4]



Source: Evaluation team (project documents)

Figure 8: Number of projects by context and EPT component



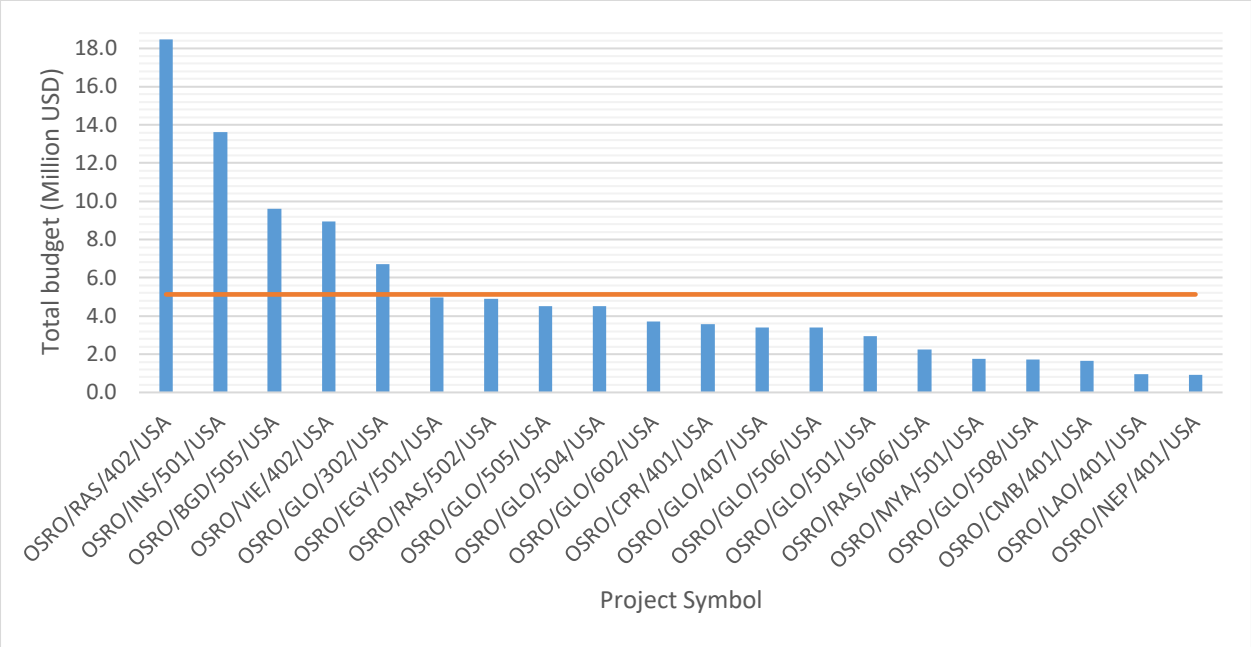
Source: Evaluation team (project documents)

4. Project budgets

10. Project budgets vary significantly from around USD 18 million to USD 1 million. The figures below are based on total budget figures as reported on FPMIS. Three of the country projects in Indonesia, Bangladesh and Viet Nam had budgets larger than the average project budget for the programme and most regional and global projects. The average project budget is around USD 4.6 million, with more than half of the projects having budgets of less than USD 4 million. Figure 10 shows per capita budget allocation across country projects. Even though projects in Indonesia and Bangladesh have one of the largest budgets, they also could be targeting larger populations or complexities.

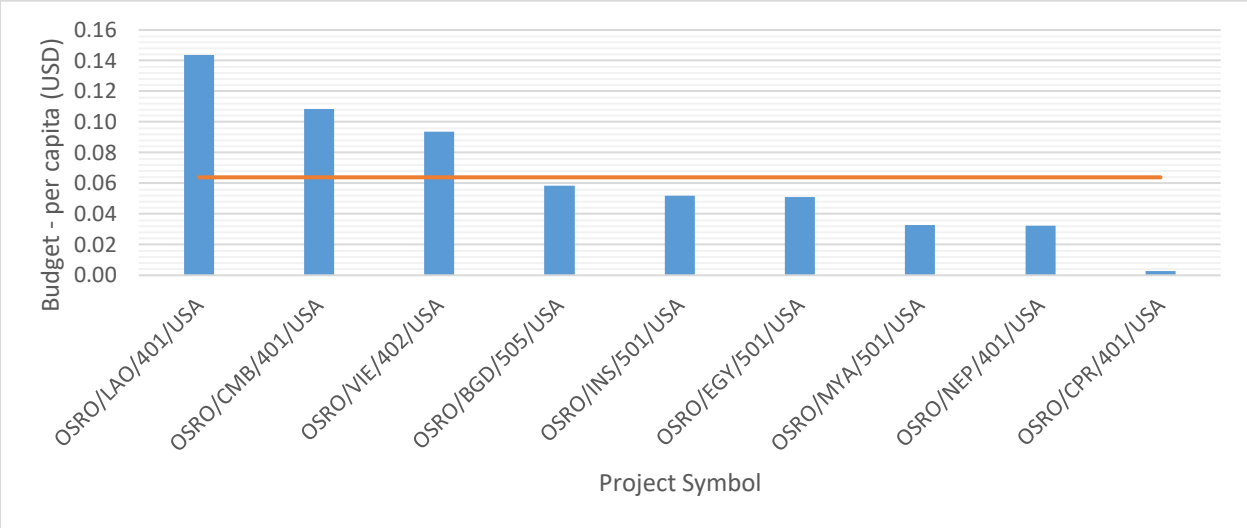
[4] One project still needs to be categorized.

Figure 9: Projects by total budget[5]



Source: Evaluation team (project documents)

Figure 10: Budget allocation per capita for country projects



Source: Evaluation team (project documents)

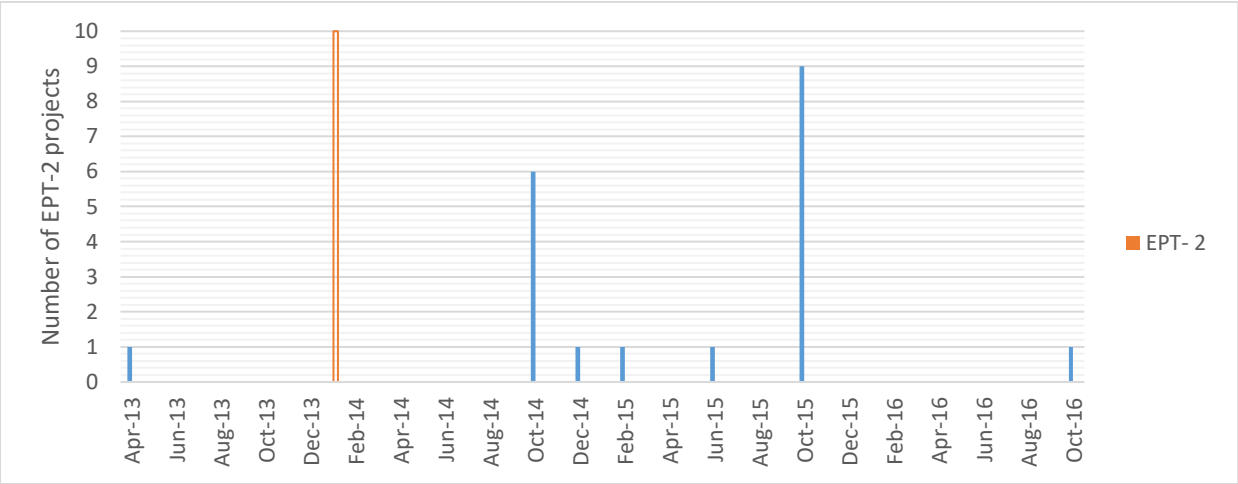
[5] Data retrieved from FPMIS on 20th August 2019.

5. Project timelines

11. The figures below show the EPT-2 projects by their start date. Most have the projects begin in October 2014 or October 2015 with the programme beginning in early 2014 and end in either late 2019 or early 2020. OSRO/GLO/302/USA[6] began before the EPT-2 programme. It seems to have started as an EPT+ project with a focus on Avian Influenza.[7] Figure 12 groups the projects according to the start year and their geographic scope with no clear patterns.

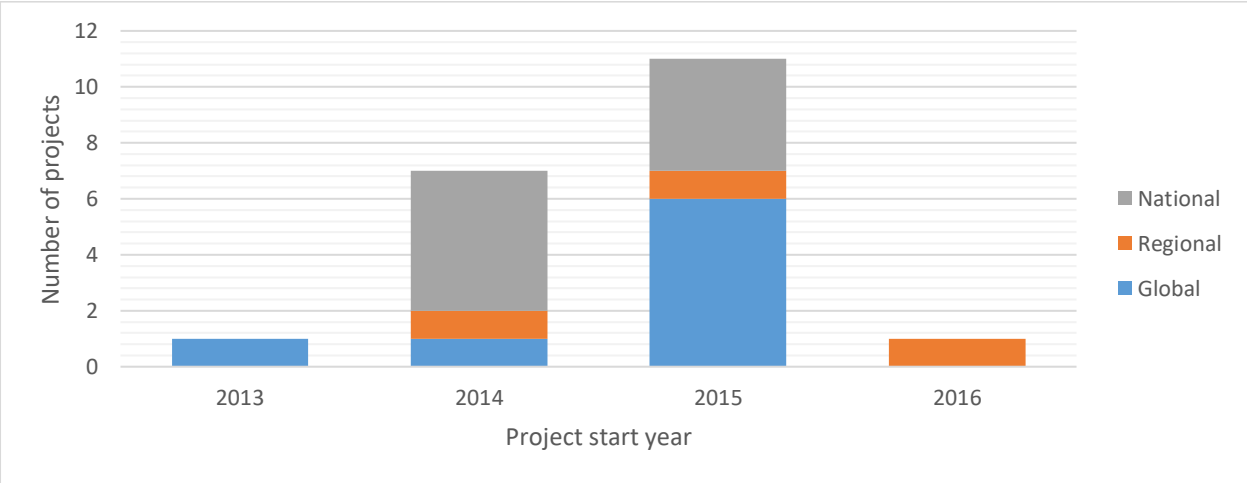
12. Most of the EPT-2 projects begin in 2014 and 2015, with a focus on South Asia and South East Asia in 2014 and expanding the focus to Africa in 2015. The timing also corresponds to the high number of outbreaks in Asia in 2013 and in Africa in 2014,[8] reiterating that these projects are set up in response to outbreaks rather than monitoring or pre-empting them.

Figure 11: Projects by start date



Source: Evaluation team (project documents)

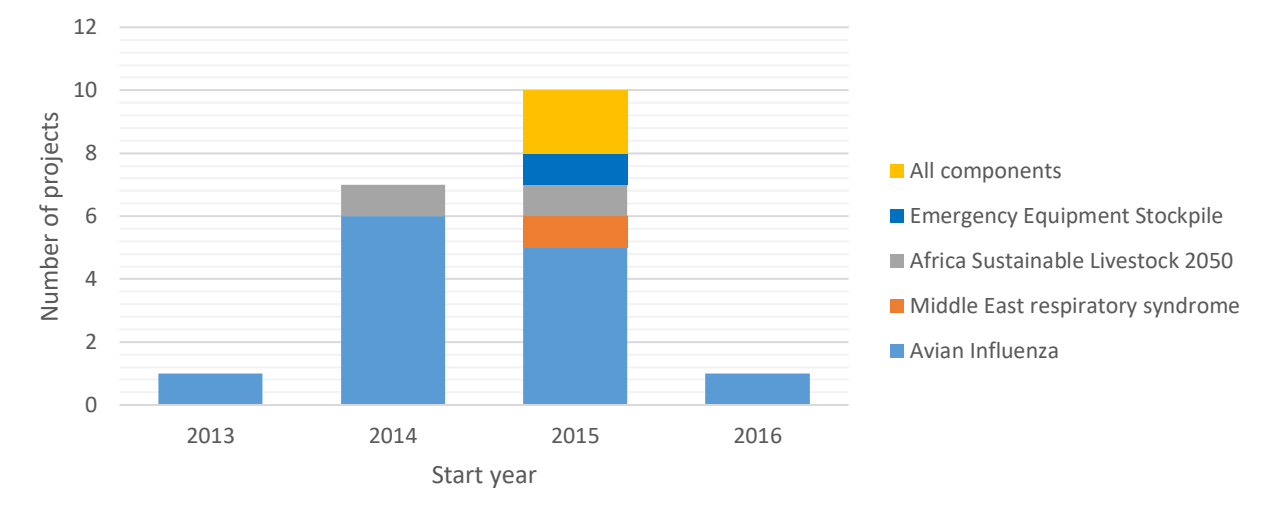
Figure 12: Number of projects by start year and geographic scope



Source: Evaluation team (project documents)

[6] No progress reports available on FPMIS.
[7] OSRO/CMB/401/USA Project document.
[8] See Appendix 4.

Figure 13: Number of projects by start year and EPT-2 component[9]

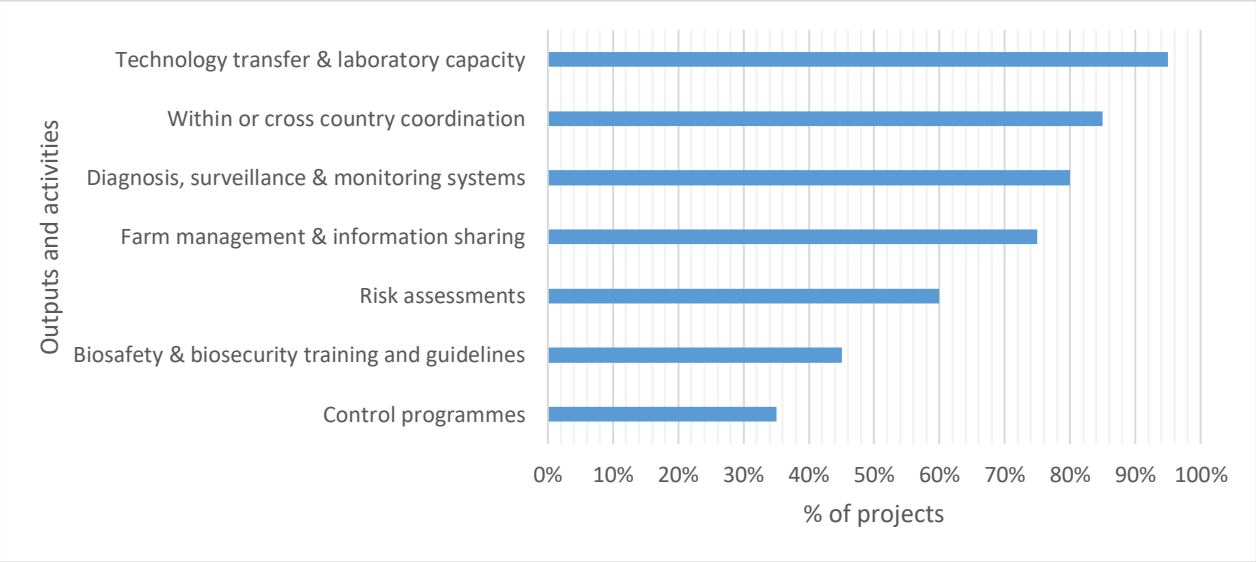


Source: Evaluation team (project documents)

6. Expected outputs and project activities

13. Based on information from the project documents and the description in FAO 2019, Figure 14 categorizes outputs and activities across seven areas. The figures here do not intend to indicate that projects should cover all seven areas, instead aim to show what have been the focus areas of the projects. Figure 15 organizes the same information by EPT-2 components, with similar compositions across components. 'Control programmes' have been only in projects dealing with Avian Influenza and projects under MERS and EES do not include 'biosafety and biosecurity training and guidelines'.

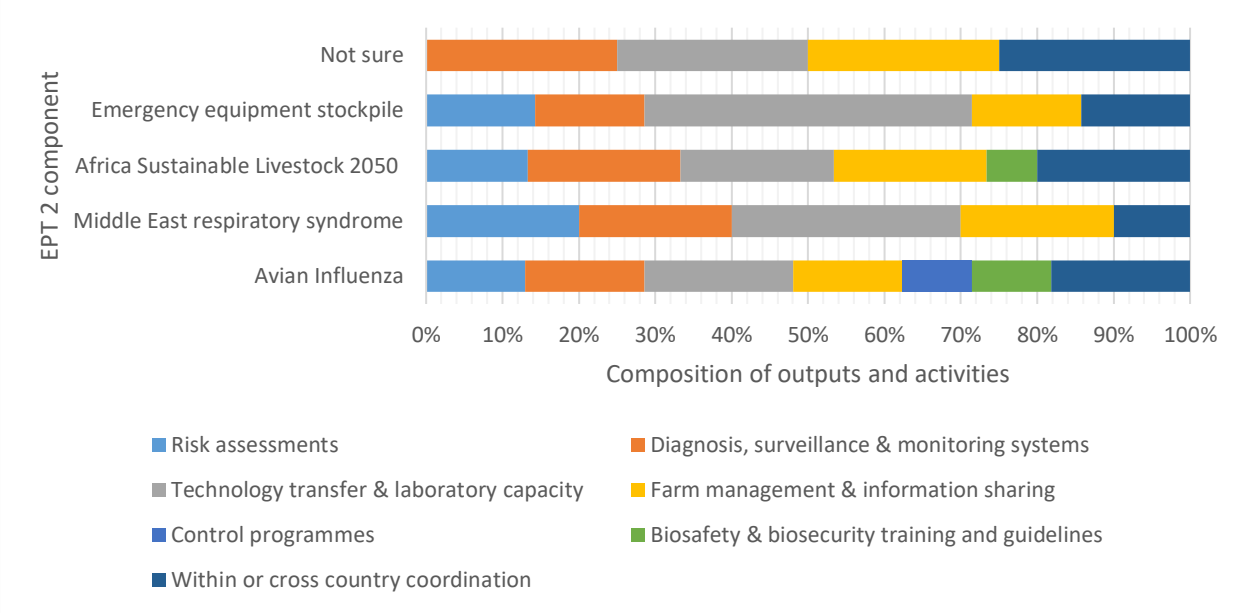
Figure 14: Percentage of projects covering each output



Source: Evaluation team (project documents)

[9] 19 projects were used for this graph.

Figure 15: Composition of projects by each EPT2 component[10]



Source: Evaluation team (project documents)

7. Stakeholder description

Stakeholder groups	Examples from the projects
Government ministries and organizations	Ministry of Agriculture and Health, government research institutes, veterinary and health services
Universities and research centers	Institut Pasteur du Cambodge
Private sector	Poultry industries
Farmers	Rural farming households
International Organizations	World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), United Nations Evaluation Programme (UNEP), World Organisation for Animal Health (OIE)
Specialized regional organizations	Association of Southeast Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC), Economic Community of West African States (ECOWAS), Economic Community of Central African States (ECCAS)
NGO's	
Consumers	

[10] The project in the 'not sure' category is OSRO/RAS/502/USA.

Appendix 1. List of projects

	Project title	Project Symbol	Start Dat	End Da	Project
1	Improving food security and public health through strengthened veterinary services in **Bangladesh**	OSRO/BGD/505/USA	10/1/2015	12/31/2019	9024142
2	Immediate technical assistance to strengthen emergency preparedness for Highly Pathogenic Avian Influenza (HPAI) in **Cambodia**	OSRO/CMB/401/USA	10/1/2014	9/30/2019	1580002
3	Immediate technical assistance to strengthen emergency preparedness for Highly Pathogenic Avian Influenza (HPAI) in **China**	OSRO/CPR/401/USA	10/1/2014	9/30/2019	3588001
4	Strengthening national capacity for preparedness early detection and response to emerging pandemic threats (EPT-2) [**Egypt**]	OSRO/EGY/501/USA	2/1/2015	12/31/2018	4377271
5	Emergency Surveillance Response to Avian Influenza A (H7N9) in China and high risk countries	OSRO/GLO/302/USA	29/4/2013	9/30/2019	6700000
6	Global Health Security in Africa and Asia	OSRO/GLO/407/USA	10/1/2014	12/31/2019	2838999
7	Emergency assistance for prevention and control of H5N1 HPAI in **West and Central Africa**	OSRO/GLO/501/USA	6/1/2015	12/31/2019	2934998
8	Global Stockpile of Emergency Animal Disease	OSRO/GLO/504/USA	10/1/2015	9/30/2019	4500000
9	MERS-CoV applied research activities in the **Middle East and Northeast Africa**	OSRO/GLO/505/USA	26/10/2015	12/31/2019	4520000
10	Global Support for the implementation of EPT-2 Programme	OSRO/GLO/506/USA	10/1/2015	9/30/2019	3400000
11	EPT-2 results framework and performance monitoring system	OSRO/GLO/508/USA	10/1/2015	9/30/2019	1570350
12	African Sustainable Livestock 2050 (ASL 2050)	OSRO/GLO/602/USA	10/1/2015	12/31/2019	3219999
13	Strengthening National Capacity to Prevent and Control Emerging and Re-Emerging Pandemic Threats Including Influenza A in **Indonesia** (EPT-2)	OSRO/INS/501/USA	10/1/2015	9/30/2019	12260000
14	Immediate technical assistance to strengthen emergency preparedness for Highly Pathogenic Avian Influenza (HPAI)	OSRO/LAO/401/USA	10/1/2014	9/30/2019	969147
15	Immediate technical assistance to strengthen emergency preparedness for highly pathogenic avian influenza (HPAI)	OSRO/MYA/501/USA	10/1/2015	9/30/2019	1750000
16	Immediate technical assistance to strengthen emergency preparedness for highly pathogenic avian influenza	OSRO/NEP/401/USA	12/8/2014	9/30/2019	860000
17	Immediate technical assistance to strengthen emergency preparedness for Highly Pathogenic Avian Influenza (HPAI) (Regional Activities)	OSRO/RAS/402/USA	10/1/2014	12/31/2019	16110001
18	Addressing Antimicrobial Usage in Asia's Livestock Production Industry	OSRO/RAS/502/USA	10/1/2015	12/31/2019	4400000
19	Evidence based Risk Management along the Livestock Production and Market Chain	OSRO/RAS/606/USA	10/1/2016	4/30/2019	2234880
20	Risk Mitigation and Management of Human Health Threats Along Animal Value Chain	OSRO/VIE/402/USA	10/1/2014	12/31/2019	8600000

Appendix 2. Notes from the USAID evaluation

Relevant questions from the USAID EPT 2 evaluation:

1. What contributions has the EPT2 program made to strengthen cross-sectoral "One Health" (OH) capacities to prevent, detect, and respond to emerging pandemic threats? How is country capacity for this work being sustained?
2. How has EPT2 engaged or coordinated with international organizations, donors, and technical partners to improve OH coordination and to prevent, detect, and respond to emerging pandemic threats?
3. Has EPT2 identified or filled key knowledge gaps to improve the effectiveness of prevention (including risk mitigation), detection, and response to emerging pandemics? If so, what are they? What gaps remain in this field?

Relevant points from the USAID evaluation on the OH approach:

1. Developing and strengthening an effective OH approach is a long-term endeavor, requiring a cultural shift within and across sectors. To achieve full success will require providing support and assistance beyond a 10-year period. Source: USAID evaluation
2. Progress toward a OH approach varies by region (i.e., Asia, Africa) and within region by country, and depends on political commitment, funding, human resources, and institutional capacity. Countries in Asia have confronted highly pandemic avian influenza (HPAI) beginning with H5N1 in 2003. They have received assistance and support, including from EPT1 and now EPT2, and are further along in successfully applying a OH approach to strengthen prevention, detection, and response of EPTs. West African countries are just starting to engage fully in implementing a OH approach. Source: USAID evaluation
3. Respondents said EPT2 was strengthening OH capacities by:
    a. Raising awareness and understanding of the importance of a OH approach;
    b. Serving as a catalyst to bring government sectors together into a OH approach;
    c. Strengthening animal health laboratories;
    d. Strengthening the current and future OH workforce capacity; and
    e. Promoting cross-sectoral collaboration and country ownership.
4. EPT2 is credited with raising awareness and understanding of the importance of OH so that health, agriculture, and environment sector leadership and staff have a greater awareness of their complementary and necessary roles, responsibilities, expertise, experience, and resources needed to confront EPTs. The program is seen as a catalyst to bring government sectors together into a OH approach through assistance in establishing OH platforms and strengthening enabling environments.
5. <u>OH Policy Coordination in Indonesia:</u> Indonesia's KOMNAS Zoonosis, the National Commission on Zoonosis, comprises multiple ministries. It predated EPT2 and provides an example of how the program helps build on and sustain OH coordination in government. EPT2 is working closely with Government of Indonesia stakeholders to ensure that inter-ministerial coordination continues. In 2015, a general Presidential Directive aimed at ridding government of special commissions called for KOMNAS Zoonosis to be disbanded by December 2017. EPT2 and its partners are working to integrate KOMNAS Zoonosis and

OH into a "supra-ministry," the Coordinating Ministry of Human Development and Culture, and into local-level operations. The goal is to assure sustainability and funding. OH is accepted as an approach in five ministries: Health, Agriculture, Forestry, Home Affairs, and National Emergency. Indonesia's 2015-2019 National Plan has eight areas of focus, one of which is OH coordination, supported by EPT2. It also includes priority zoonotic diseases, such as AI and rabies. Indonesia's OH University Network recently became an independent entity and can now apply for its own funding. EPT2 partners assist the government under the current National Plan and are helping develop the next one. (Source: From a discussion led by USAID with in-country stakeholders and ETD input. EPT2 is also assisting Indonesia with HPAI endemicity studies to better understand why AI viruses are circulating and changing in the country.

6. Several respondents, including donors and EPT2 in-country POCs, described significant challenges to achieving successful OH platforms. Examples of what made this type of collaboration difficult include:

    a. Different levels of resources/human resources in the human health and animal health sectors, as well as different educational and cultural backgrounds;

    b. Concerns by human health leadership that international health resources were moving (i.e., "being diverted") to the animal health sector, creating a dynamic of competition rather than collaboration;

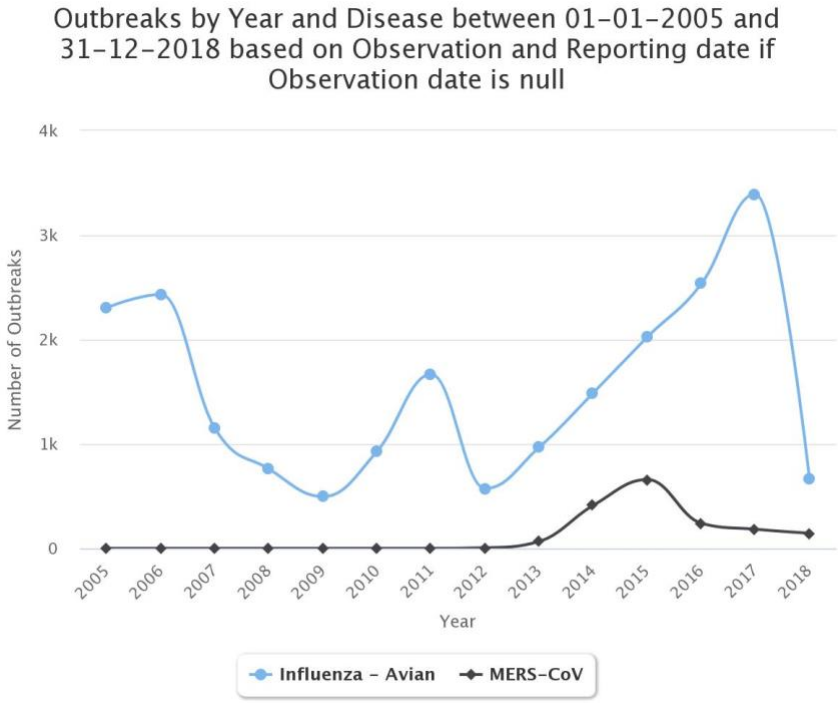
    c. Human health leadership not fully engaged in OH collaboration and senior animal health officials not at the table when collaborative meetings did occur; and

    d. In-country respondents noted that EPT2 had attracted high-level policy advisors to assist countries. During field visits, government respondents were pleased with the caliber of in-country teams supported by P&R (in Vietnam, the United Nations Development Program supported the OH Program.) A few respondents said governments would be more receptive to policy development assistance if USAID or international organizations (e.g., FAO, WHO) provided it directly, instead of it coming from a non-governmental organization.

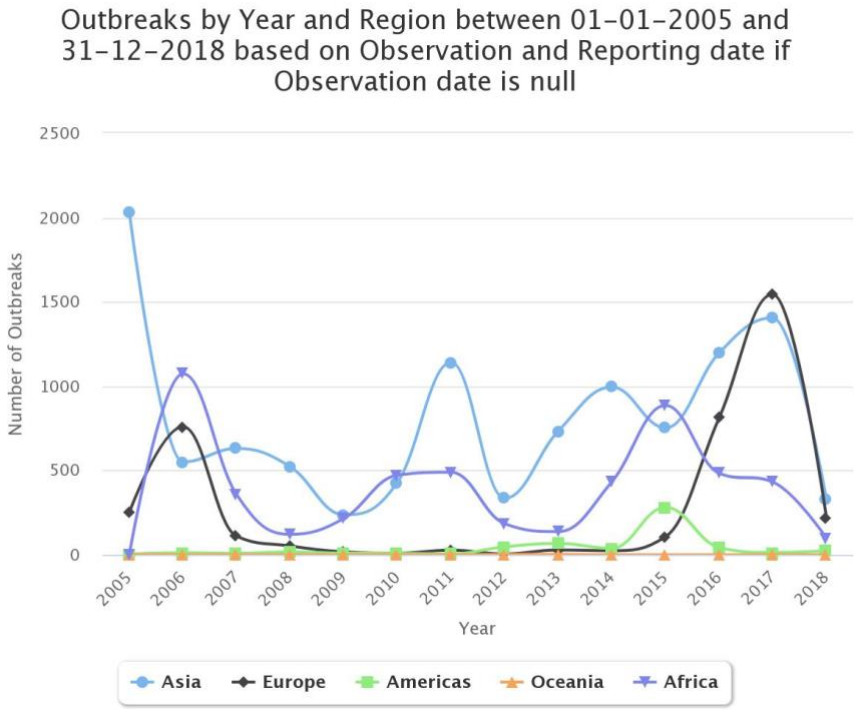
Appendix 3. List of project countries

	Total country list	EPT-2 Evaluation Countries	Project document countries - 41	FAO 2019 countries - 28+1	USAID EPT-2 countries - 35	Number of projects
1	Bangladesh	1	1	1	1	6
2	Benin	1	1	1		2
3	Bhutan	1	1			1
4	Burkina Faso	1	1	1	1	3
5	Cambodia	1	1	1	1	7
6	Cameroon	1	1	1	1	3
7	Chad	1	1	1	1	1
8	China	1	1	1	1	6
9	Congo	1	1			1
10	Cote d'Ivoire	1	1	1	1	2
11	Democratic Republic of the Congo	1	1	1	1	2
12	Egypt	1	1	1	1	6
13	Ethiopia	1	1	1	1	5
14	Ghana	1	1	1	1	3
15	Guinea	1	1		1	1
16	India	1	1	1	1	1
17	Indonesia	1	1	1	1	6
18	Jordan	1	1	1	1	3
19	Kenya	1	1	1	1	5
20	Lao People's Democratic Republic	1	1	1	1	7
21	Liberia	1	1	1	1	2
22	Malaysia	1	1		1	2
23	Mali	1	1	1	1	2
24	Myanmar	1	1	1	1	7
25	Nepal	1	1	1	1	6
26	Nigeria	1	1	1	1	2
27	Philippines	1	1	1		3
28	Rwanda	1	1		1	2
29	Senegal	1	1	1	1	2
30	Sierra Leone	1	1		1	2
31	South Sudan	1	1			1
32	United Republic of Tanzania	1	1		1	3
33	Thailand	1	1		1	4
34	Togo	1	1	1	1	2
35	Uganda	1	1	1	1	4
36	Viet Nam	1	1	1	1	7

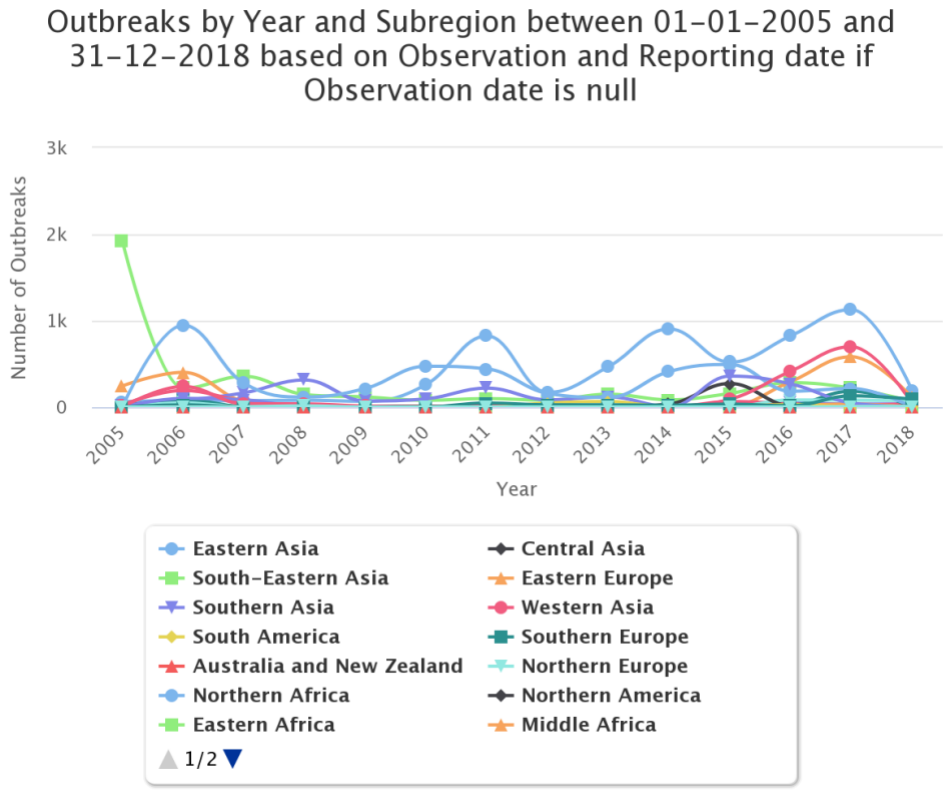
Appendix 4. Outbreaks by region and subregion



Source: EMPRES database, accessed on September 13, 2019



Source: EMPRES database, accessed on September 13, 2019



Source: EMPRES database, accessed on September 13, 2019

Appendix 5. Project summary by component

1. Avian Influenza (AI)

	Project Symbol	Year	Location
1	OSRO/BGD/505/USA	2015	Bangladesh
2	OSRO/CMB/401/USA	2015	Cambodia
3	OSRO/CPR/401/USA	2015	China
4	OSRO/EGY/501/USA	2013	Egypt
5	OSRO/GLO/302/USA	2015	Asia
6	OSRO/GLO/501/USA	2014	Africa
7	OSRO/INS/501/USA	2014	Indonesia
8	OSRO/LAO/401/USA	2014	Lao People's Democratic Republic
9	OSRO/MYA/501/USA	2015	Myanmar
10	OSRO/NEP/401/USA	2015	Nepal
11	OSRO/RAS/402/USA	2015	Asia [11]
12	OSRO/VIE/402/USA	2015	Viet Nam
13	OSRO/RAS/606/USA	2015	Asia [12]

Most of the projects that focus on Avian Influenza are located in south and southeast Asia that corresponds to the high rate of outbreaks in the region. There is one project covering West and Central Africa and another covering Egypt. All these projects have been set either during or after an outbreak. The projects set during an outbreak have slightly different activities with a greater focus on dealing with immediate country needs by providing equipment and technology. This group consists of projects in China, Egypt, Indonesia, Lao People's Democratic Republic and Nepal. While others like BGD/505 and CMB/401, focus more on capacity building, developing a revised curriculum and trainings.[13] The AI projects cover the following outputs with some differences in the breadth and depth:

1. Diagnosis, surveillance and monitoring systems – Planned activities were assessing and strengthening existing surveillance systems, designing protocols and Standard Operating Procedures (SOPs), training staff on PREDICT protocols, sharing relevant surveillance information, providing support in monitoring and evaluation of the surveillance systems and procuring, testing and distributing diagnostic material. Some projects also focused on understanding drivers for spread and emergence of AI, while some included risk based targeted emergency surveillance. This was one of the main components and part of all projects.
2. Integrated control of animal diseases – activities included multi-sectoral collaboration (national and cross-border), implementation of control programs and development of information systems.
3. Dissemination of policies and good practices for:
    a. Efficient farm management activities – technical support directly to farmers for increase in productivity, establishment of technical support units, and husbandry and veterinary outreach to farmers.

[11] Not clear from progress reports but includes most countries in south and southeast Asia. FPMIS data also shows a baby project under the project symbol. Not sure what the purpose of setting up the baby project was.
[12] Cambodia, Lao People's Democratic Republic, Myanmar, Viet Nam.
[13] However, the distinction is not always clear as multiple projects report outbreaks during the project cycle.

b. Reduction of disease emergence – improvement of AI vaccination effectiveness in commercial poultry production sector, an endemicity study, support of biosecurity measures and safe trade along the live bird supply value chain, policies for farm licensing and an exposure reduction program.

c. Stakeholder collaboration – on interventions to improve the quality of poultry marketing processes, meetings with senior government officials and other key stakeholders for safer policies and practices in the sector.

4. Strengthening competencies of workforce and laboratories – conducting laboratory needs assessments, training programmes, updating laboratory equipment, biosafety assessments and epidemiology capacity building activities. Projects also supported the Regional Field Epidemiology Training Programme for Veterinarians (FETPV), an in-service veterinary epidemiology capacity-building programme using a One Health approach. Some projects also focused on developing a veterinary curriculum for animal disease control, a career development programme for veterinary services and veterinary professional accreditation (BGD/505).

5. Strengthening national preparedness – activities included a review of existing national preparedness and response plans, simulation exercises using the One Health approach, support in capacity development for good emergency practices, establishing web-based platforms for zoonoses and providing support on media-handling and crisis communication to reduce consumer panic, market shocks and behaviours that increase disease spread risk.

6. One health coordination – validation of the one health proof of principle and providing support for GHSA/EPT2 coordination for impact and in institutionalization of the OH approach.

While projects covered multiple outputs from the above list, implementation was different in term of the activities across projects. EGY/501 included a system wide monitoring and evaluation plan as one of its main outputs, while others built it into project activities. Few projects also included a focus on evidence based Risk Management along the Livestock Production and Market Chain (LAMP).The country projects in Lao People's Democratic Republic, Myanmar and Nepal seemed to be identical in the terms of the expected output. Both the regional and country projects in Asia took into account the importance of regional coordination and collaboration, in most cases working closely with SAARC and ASEAN. Few projects like EGY/501 mention direct collaboration with other UN agencies like UNICEF and WHO. The project documents also note that FAO's role has evolved from a predominantly HPAI emergency response to one of long-term capacity building.

2. Africa Sustainable Livestock (ASL2050)

	Project Symbol	Year	Location
1	OSRO/GLO/602/USA	2015	Eastern Africa
2	OSRO/GLO/407/USA	2014	Eastern and Central Africa[14]

ASL2050 projects are set out in anticipation of high risks of disease emergence posed by an increasing demand for livestock products in Africa. The two projects overlap in Ethiopia, Kenya and Uganda. GLO/602 essentially seems to focus on capacity building. It takes into account how

[14] A baby project also exists under this project symbol. The baby project was focused on Rwanda.

the livestock sector would look in future, assess potential implications and identify any policy instruments to mitigate impacts on the risk level of zoonotic infections and antimicrobial resistance. Its outputs cover strengthening capacity of governments and stakeholders to assess the livestock sector and the policy implications of market trends on animal health, public health and on the environment. Accordingly, activities included developing models for estimating levels of demand, supply and livestock productivity, and facilitating inclusive policy dialogues.

GLO/407 was set up like other Avian Influenza projects with similar outputs and activities but focusing on containing or preventing emerging viruses. These outputs included a focus on:

1. Surveillance systems for pathogens – improving data collection and reporting, characterization of viruses and bioinformatics support
2. Policy support and dissemination – for animal health and risk reduction policies through policy dialogue meetings, analysis of farming systems, establishment of livestock policy hubs and regional meetings
3. Multi-sectoral collaboration and coordination – development of a user-friendly handbook on national OH platforms, support in establishing OH platforms at national and regional levels and a national OH strategic plan
4. National preparedness and response plans – activities include assessing current national preparedness and response capacities, GEMP trainings and simulation exercises.
5. Bio surveillance and biosafety – contribute to improvement of IT portals, support to epidemiology and laboratory networks and laboratory quality assurance, biosafety and biosecurity

GLO/602 seems to be more closely aligned with ASL2050 with a more streamlined approach. However, there is limited information in the project documents on the synergies between the two ASL2050 projects.

3. Middle East Respiratory Syndrome (MERS)

	Project Symbol	Year	Location
1	OSRO/GLO/505/USA	2015	East Africa and Middle East

Apart from the two projects that covered all four EPT-2 components, only one focuses on MERS. The long-term goal is stated as 'to fully understand the source and infection and transmission dynamic of the MERS-Cov and minimize or interrupt animal-to-animal transmission and animal-to-human transmission of the MERS-CoV by targeting risk-mitigation interventions'. The countries covered are Egypt, Ethiopia, Jordan and Kenya,[15] with varying levels of implementation and different project start dates. The outputs covered across projects were:

1. Cross sectional and longitudinal surveillance – including support to field teams, training of surveillance teams, support for capacity strengthening and provision of surveillance equipment.
2. Strengthening of national lab and epidemiology networks – organizing network meetings and strengthening sample banking system.

[15] Sudan is also mentioned in the project document but no progress report is available for it.

3. Mapping of camel and other livestock production systems, husbandry and marketing practices.
4. National and cross-border camel value chain and risk assessment studies.

In the progress reports, implementation in Egypt has been limited to understanding biological drivers of disease emergence stating administrative challenges, whereas implementation in Ethiopia seems to be more extensive. However, the progress reports available on FPMIS only cover a six-month period in 2017 and no other information is available.

4. Emergency Equipment Stockpile (EES)

	Project Symbol	Year	Location
1	OSRO/GLO/504/USA	2015	Global

The project supports the USAID stockpile initiative by establishing a global supply mechanism to meet emergency outbreak response needs. It aims to assist GHSA priority countries affected by transboundary animal diseases and those at a high risk for incursion of these diseases. Its outputs include a focus on:

1. Coordination, training and management of stockpiles
2. Procurement of laboratory items and personal protective equipment, and appropriate storage facilities
3. Facilitation of international shipment of specimens to reference centres
4. Local procurement of other emergency outbreak control items and laboratory supplies
5. Monitoring and reporting of all activities

Procurement activities also included working closely with WFP and OIE.

5. All components

	Project Symbol	Year	Location
1	OSRO/GLO/506/USA	2015	Africa
2	OSRO/GLO/508/USA	2015	Global

The projects seem to coordinate overall EPT-2 programme activities. However, there is no clear information on which projects they provide support and how. These projects also seem to coordinate more with other UN agencies and OIE. GLO/506, in line with the broader programme objectives, focuses on the prevention of new zoonotic disease emergence, early detection, and timely and effective control. The outcomes specified are coordination and management, capacity development of national veterinary services, and advocacy and communication, which are similar to other AI projects but not limited to only Avian Influenza. The project covers countries only in Africa.

GLO/508 on the other hand is a global project focused on enhancing country and regional capacities in project performance monitoring for ongoing/future project interventions. It aims to strengthen the M&E culture/awareness within the organization, creating a common results

framework and a joint monitoring system for EPT-2 for programmatic coherence. The outputs for the project also indicate baseline data collection and piloting of indicators for all EPT-2 projects.

6. AMR

	Project Symbol	Year	Location
1	OSRO/RAS/502/USA	2015	Asia

The project aims to promote a more prudent antimicrobial usage within the Asian livestock production industry leading to a reduction in antimicrobial resistance. It does not correspond exactly to the EPT2 components and seems to be more aligned to GHSA. The outcomes include an improved understanding of AMU and AMR, establishment of regional platforms, raising awareness among target groups and strengthening of surveillance capacities. The project also aims to use existing Regional AMR dialogues at ASEAN and SAARC level. Most countries in South East Asia and Bangladesh are covered under this project.