

Updated: August 2017

**Global Health Security Agenda (GHSA)**

**STRATEGIC PLAN  
FOR THE ZOOONOTIC DISEASE ACTION PACKAGE  
(ZDAP)  
2015-2019**

***(Updated August 2017)***

### Five-Year Target

Adopt measured behaviors, policies and/or practices that minimize disease risk and the spillover of zoonotic diseases from lower animals into human populations.

### Objectives

- To increase regional and international cooperation and collaboration on prevention and control of Zoonotic diseases through the GHSA Zoonotic Diseases Action Package.
- To strengthen the technical capacities of the Animal Health and Human Health Services to support zoonotic diseases prevention and control activities.
- To establish and further strengthen the coordination, communication and information sharing among stakeholders involved in zoonotic diseases prevention and control.

### *As Measured by:*

Identify the five zoonotic diseases/pathogens of greatest public health concern and strengthen existing surveillance systems for prioritized zoonoses.

### Desired Impact

- Implementation of guidance and models on behaviors, policies and practices to minimize the spillover, spread, and full emergence of zoonotic disease into or out of human populations prior to the development of efficient human-to-human transmission.
- Nations will develop and implement operational frameworks - based on international standards, guidelines, and successful existing models - that specify the actions necessary to promote One Health approaches to policies, practices and behaviors that could minimize the risk of zoonotic disease emergence and spread.

### Representation

<b>Leading countries:</b>	Indonesia, Vietnam, Senegal
<b>Contributing countries:</b>	Bangladesh, Cote d'Ivoire, Finland, Georgia, Kenya, Netherlands, South Africa, Sweden, United Kingdom, United States, Yemen, Zimbabwe  (other countries may be added)
<b>Contributing international organizations:</b>	FAO, OIE, WHO

## Five-Year Action Items

1. Emphasize One Health approaches across all relevant sectors of government with the goal of detecting and controlling zoonotic threats while they are still in animal populations. This approach should enhance national ability to meet international standards and improve the quality of human and animal health systems via the WHO IHR Joint External Evaluation (JEE) and Monitoring Framework and the OIE PVS Pathway.
2. Implement joint IHR and PVS training programs for human and animal health services.
3. Increase the compatibility of existing animal and human diagnostics and surveillance data fields, avoiding the creation of new data systems wherever possible.
4. Introduce national multi-sectoral policies and regulatory guidelines promoting poultry and livestock production and marketing practices that minimize the risk of zoonotic disease emergence, including food safety policies and guidelines as well as legislation reinforcing veterinary supervision of the use of antibiotics in animals.
5. Support the implementation of national architecture for real-time bio-surveillance, spanning animal and human populations to support disease monitoring, reporting and analysis via bio-surveillance of high-risk wildlife groups (i.e., birds, bats, etc.)
6. Actively address the proposal of core competencies and systems requirements (e.g., laboratory methods, surveillance data fields) for implementation of the surveillance system.
7. Enhance, link, and increase analytic capability within disease reporting systems (WHO, WAHIS), to ensure that WHO, FAO, and OIE receive pertinent information.
8. Introduce an operational framework that supports multi-sectoral notification for outbreaks of suspected zoonotic origin in the early stage of emergence (prior to efficient human-to-human transmission). The framework should address outbreaks that occur in both animals and humans at a similar time and/or place.
9. Introduce systems that promote complementary research, for public health purposes, and analysis within and across countries for enhanced prevention, detection and response activities for emerging zoonotic diseases.

## Baseline Information on existing mechanisms and capacities at the country level

A survey of overall baseline information was conducted in the lead up to and during the 1st ZDAP Conference, which took place in Hanoi on 25-26 August 2015. This survey received responses from delegates from 15 ZDAP member countries and other interested countries attending the Conference, including Bangladesh, Georgia, Kenya, Lao PDR, Malaysia, Myanmar, Nepal, Netherlands, Philippines, Republic of Korea, Singapore, Thailand, UK, USA and Viet Nam

A further survey, sent only to ZDAP member countries, was carried out in the lead up to the 3<sup>rd</sup> ZDAP Conference. This survey received responses from 10 ZDAP member countries, including Bangladesh, Cote d'Ivoire, Finland, Georgia, Indonesia, Kenya, Netherlands, Senegal, Viet Nam, Zimbabwe.

While not directly comparable, the results of the country surveys potentially indicate some trends during the period of ZDAP implementation.

**TABLE: Summary of country responses to the 2015 and 2017 country surveys**

ITEM	2015 COUNTRY SURVEY (15 country responses, including 7 ZDAP member countries)	2017 COUNTRY SURVEY (10 country responses, all ZDAP member countries)
1. <i>Has a national coordination agency or working mechanism for multi-sectoral cooperation on One Health/Global Health Security/Zoonotic Diseases been established?</i>	At least 80 percent of the responding countries have a national agency/working mechanism for multi-sector cooperation on zoonotic diseases.	100 percent of responding countries have a national coordination agency or working mechanism for multi-sectoral cooperation.
2. <i>Is there a policy/legal framework for cooperation between human health and animal health sectors on zoonotic diseases?</i>	At least 87 percent of the responding countries have a policy/legal framework for multi-sector cooperation on zoonotic diseases.	80 percent of the responding countries have a policy/legal framework for multi-sector cooperation on zoonotic diseases.
3. <i>Have priority zoonotic diseases been identified?</i>	<p>At least 30 different zoonotic diseases of concern were identified by these respondents.</p> <p>The most commonly mentioned zoonotic diseases included Rabies, Avian Influenza, Brucellosis, Anthrax and Leptospirosis. The diseases most commonly identified as the most important zoonotic threats arising from wildlife were Avian Influenza, followed by Rabies and Nipah.</p>	<p>60 percent of responding countries have identified priority zoonotic diseases.</p> <p>27 different priority zoonotic diseases were identified.</p> <p>The most commonly mentioned zoonotic diseases, in order, are: Rabies, Anthrax, Avian Influenza, Ebola, TB, and Leptospirosis, followed by Marburg and Rift Valley Fever.</p>
4. <i>Is active or passive surveillance for priority zoonotic diseases <u>in humans</u> and in <u>animals</u> (livestock and wildlife) being conducted?</i>	100 percent of responding countries are conducting surveillance for zoonotic diseases.	<p>100 percent of responding countries are conducting surveillance for zoonotic diseases in humans.</p> <p>90 percent of responding countries are conducting ongoing surveillance for zoonotic diseases in animals. One country only conducts surveillance in animals during disease outbreaks.</p>
5. <i>Is surveillance data on zoonotic diseases shared between the human health and animal health sectors?</i>	<p>100 percent of responding countries indicated that surveillance data on zoonotic diseases is shared between the human health and animal health sectors.</p> <p>53 percent of responding</p>	<p>90 percent of responding countries indicated that surveillance data on zoonotic diseases is shared between the human health and animal health sectors.</p> <p>60 percent of responding countries indicated that surveillance data is</p>

	countries indicated that surveillance data is shared only upon request or during an outbreak/emergency, while 40 percent indicated that data is shared regularly.	shared only upon request or during an outbreak/emergency, while 40 percent indicated that data is shared regularly.
6. <i>Is there sufficient laboratory capacity to test for priority zoonotic diseases in the human health sector and the animal health sector?</i>	Most respondents indicated that laboratories had sufficient capacity to test for at least some priority zoonotic diseases in their countries. Several countries noted that further development of laboratory capacity was needed in one or both of the human health and animal health sectors.	80 percent of responding countries indicated that there is sufficient laboratory capacity to test for priority zoonotic diseases in the human health sector.  70 percent of responding countries indicated that there is sufficient laboratory capacity to test for priority zoonotic diseases in the animal health sector.
7. <i>Are there Standard Operating Procedures (SOPs) in place for zoonotic disease prevention?</i>	At least 80 percent of respondents indicated that their countries had Standard Operating Procedures (SOPs) in place for zoonotic disease prevention and control in the human health sector, and at least 80 percent for the animal health sector.	60 percent of responding countries indicated that they have SOPs in place for zoonotic disease prevention. Many respondents noted that SOPs exist for certain situations or parts of the system but not others, or only exist on an <i>ad hoc</i> or informal basis.
8. <i>Do the human health and animal health sectors coordinate their responses to zoonotic diseases outbreaks?</i>	Around 60 percent of responding countries indicated that the human health and animal health sectors make a joint response to outbreaks, while 33 percent indicated that the response was conducted separately but with sharing of basic information.	100 percent of responding countries indicated that the human health and animal health sectors coordinate their responses to zoonotic diseases outbreaks.
9. <i>Is there any in-country FETP or participation in regional FETP?</i>	100 percent of responding countries indicated that there was some form of Field Epidemiology Training Program (FETP) in their country.	100 percent of responding countries indicated that they had access to Field Epidemiology Training Program (FETP) through either national or regional programmes.
10. <i>Has a WHO IHR JEE been planned or completed?</i>		90 percent of the responding countries indicated that a WHO IHR JEE has been completed or planned. (All but two of these JEE have already been completed.)
11. <i>Has an OIE PVS been planned or completed?</i>		70 percent of the responding countries indicated that an OIE PVS has been completed.
12. <i>Has a World Bank GHSA HSFAT been planned or</i>		10 percent of the responding countries indicated that an HSFAT has been planned (pilot process in

<i>completed?</i>		Viet Nam).
<i>13. Have the results of the JEE and/or PVS been applied to zoonotic diseases planning or prioritisation?</i>		80 percent of responding countries indicated that the results of the JEE and/or PVS have been applied to zoonotic diseases planning or prioritization.
<i>14. Is there any national multi-sectoral plan for zoonotic diseases prevention and control?</i>		60 percent of the responding countries have a national multi-sectoral plan for zoonotic diseases prevention and control
		80 percent of countries have a GHSA roadmap either in place or currently under revision or development

## Identification of Gaps and Challenges

### One Health Coordination

- Lack of formal/legal basis for national zoonotic disease prevention and control mechanisms and for cross-sectoral coordination. Not clear which sector should lead/provide secretariat support to national coordination mechanisms.
- Not all relevant sectors are involved in One Health/Zoonotic Diseases national coordinating mechanisms yet (e.g. security, environment, wildlife, ecosystems).
- Existing mechanisms and leadership tend to be effective only during crises: coordination is difficult to sustain without a (common) enemy.
- Divisions between the human health and animal health sectors.
- Movement of animals and people (both illegal and migratory); cross-border coordination is not sufficient in many cases.
- Financial sustainability: funding is often project based and fluctuates with changes in disease situation.
- Private sector engagement, roles and leverage in promoting One Health is poorly understood.

### Data Systems, Surveillance Systems, and Reporting

- Imbalance of power between Human Health and Animal Health sectors and lack of structured dialogue and data sharing between the human and animal health side.
- Limited Resources, including; technical capacity, financial resources, human resources, facilities, equipment, diagnostic test kits etc.
- Unreliable Data from current surveillance systems; underreporting is common. Human cases are often detected before animal cases.
- Surveillance systems not interoperable: Human Health and Animal Health systems are different and not talking to each other sufficiently.

- Not all countries have diagnostic capacity for all zoonotic diseases; procedures for sharing samples and results of analysis not always clear.
- Data sharing is challenging; human side WHO/IHR, animal side OIE/PVS.

#### **Human, Wildlife, and Livestock Interfaces**

- Lack of information on high risk interfaces where transmission events are more likely.
- Tendency to focus on diseases only, instead of on disease drivers and disease ecology.
- Lack of framework for multi-sectoral risk analysis, coordination and communication.
- Global lack of wildlife health capacity and knowledge about wildlife pathogen ecology.
- Lack of clear responsibility for oversight of legal wildlife farming and trade, including a lack of SOPs/best practices.
- Global illegal wildlife trafficking as a risk for zoonotic disease emergence and spread, disruption of ecosystem services.
- Fungal and parasitic diseases, which may be zoonotic, are mostly ignored.

#### **Outbreak Response**

- Weak capacity for outbreak response, especially at sub-national level. Human cases often detected before animal cases. Joint outbreak investigation not regularly conducted
- SOPs not always available even for prioritized diseases; SOPs that are available may not be used in reality, and may not reflect reality.
- Political will to implement SOPs and other regulations may not exist

#### **Cross-cutting: Training, Research, Policies and Guidelines**

- Insufficient human resources with adequate One Health training.
- Animal health services not mandatory at sub-national level in some countries; may be very few AH workers responsible for a large area.
- Gaps in risk communications to the public, health workers, etc.

Global Joint ZDAP Activities			
No.	Activity / Action Areas	Highlighted Activities	Status*
1	Organize an International Conference on Zoonotic Disease Prevention and Control	Annual ZDAP Conferences hosted by Viet Nam (2015), Indonesia (2016), Viet Nam (2017).	Completed
		Annual International ZDAP Conference hosted by Senegal TBC (2018).	Planned
2	Periodically update and summarise progress on implementation of the Five-Year ZDAP Action Plan, 2015-2019	An updated 5-year plan, highlighting key global, regional/cross-boundary and country activities, is being prepared for the 3 <sup>rd</sup> ZDAP Conference in Da Nang in August 2017.	Ongoing
3	Agree on a ZDAP coordination mechanism including the roles of lead and contributing countries	Draft Terms of Reference (TOR) for the ZDAP Coordination Mechanism have been prepared, and will be presented at the 3 <sup>rd</sup> ZDAP Conference in Da Nang in August 2017.	Ongoing
4	Convene regular teleconferences and e-mail communication among ZDAP countries and also to develop or utilize and adopt existing web platforms to update progress on the Action Plan, identify gaps, and collectively support country activities.	The draft TOR for the ZDAP Coordination Mechanism propose that regular video/teleconference meetings of the ZDAP member countries will be organised (6-monthly and <i>ad hoc</i> as required). and email communication. All ZDAP member countries will share updated information on their designated country focal point. The TOR also note that quarterly email updates will be provided by the Chair of the ZDAP working group (one of the three lead countries, on an annual rotating basis).	Planned
5	Establish a platform (website/forum/email list) to share information on international events and resources	The draft TOR for the ZDAP Coordination Mechanism propose that ZDAP information (best practices, events, news, reports, etc.) will be prepared in a digital format and shared on the GHSA website ( <a href="http://ghsagenda.org">ghsagenda.org</a> ).	Planned

6	Conduct exchange visits between the ZDAP leading countries to share experiences, strengthen ZDAP coordination, and agree on preparations and directions for ZDAP annual conferences and other ZDAP activities.	<p>Leading countries visit of Viet Nam delegation to Indonesia in May 2017 to discussion on strengthening ZDAP coordination and preparations for the 3<sup>rd</sup> ZDAP Conference.</p> <p>Exchange visits between the leading countries to be arranged at least annually in 2017, 2018 and 2019.</p>	<p>Completed</p> <p>Planned</p>
7	<p>Develop and share examples of adaptable tools/ frameworks/curricula:</p> <ul style="list-style-type: none"> <li>• SOPs/Best Practices about successful development of One Health networks</li> <li>• Documentation of existing One Health coordination mechanisms</li> <li>• Zoonotic Disease Prioritization tool</li> </ul>	<p>At the 2<sup>nd</sup> and 3<sup>rd</sup> ZDAP Conferences, ZDAP member countries have presented posters and other presentations on their One Health coordination mechanisms and approach to zoonotic disease prevention and control.</p> <p>Information on relevant tools has been shared at the 2<sup>nd</sup> and 3<sup>rd</sup> ZDAP Conferences, including: the WHO JEE, the OIE PVS, and the World Bank HSFAT</p> <p>Senegal has prepared a presentation on their application of the USCDC tool for prioritization of zoonotic diseases.</p>	Ongoing
8	Develop and share Good Animal Management Practices guidelines/ SOPs that contribute to preventing zoonotic disease and spillover at the farm level and throughout the value chain	The draft TOR for the ZDAP Coordination Mechanism propose that the ZDAP Working Group will explore suitable options for a public or membership-based online system for sharing relevant ZDAP information, tools and resources. Based on the agreed approach, suitable content will be sourced from ZDAP leading countries, contributing countries, contributing organizations and other related partners and provided in a suitable format, with quarterly updating (as far as possible, this will be integrated with the Quarterly ZDAP Online Newsletter), with coordination of the Chair of the Leading Countries.	Planned
9	Develop and share good wildlife farming management practices / SOPs that contribute to preventing zoonotic disease and spillover at the farm level and along the value chain	Good animal management practices are being applied in a number of countries (e.g. Bangladesh).	
10	Inventory and share resources (e.g. share online: plans, guidelines, SOPs, training materials, risk communication materials, best practices, case studies, rapid diagnostics)	Proposed to develop a catalogue of global, regional and country-level ZDAP resources, and share this online at <a href="http://ghsagenda.org">ghsagenda.org</a>	Planned

\* Completed, Ongoing, Planned

## National Significant Country Achievements, or Plans at National Level to Achieve Milestones

No.	Possible Milestones at National Level	Summary of Achievements, or Planned High Priority Outputs in the ZDAP Lead and Contributing Countries	Cross-Border <sup>1</sup> “√”	Status <sup>1</sup> “A” or “P”
	<b>I. One Health Coordination, Joint Assessments and Plans</b>			
11	Country assessments (JEE, PVS, World Bank Health Security Financing Assessment Tool (HSFAT)) to identify priorities for national action	<p>As of July 2017:</p> <ul style="list-style-type: none"> <li>JEE have been completed in Bangladesh, Cote d'Ivoire, Finland, Kenya, Senegal and Viet Nam. Georgia undertook an external GHSA assessment (forerunner to the JEE) in 2015. JEE for Indonesia and Zimbabwe are planned.</li> <li>PVS have been completed in Bangladesh, Cote d'Ivoire, Indonesia, Kenya, Senegal and Viet Nam.</li> <li>A pilot HSFAT assessment is planned for Viet Nam.</li> </ul>		A,P  A  P
12	National GHSA Roadmaps or multi-sectoral plan for ZD prevention and control	National multi-sectoral plans for prevention and control of priority zoonoses have been established in Cote d'Ivoire, Finland, Georgia, Kenya and Viet Nam. A One Health strategic framework was previously adopted in Bangladesh. An emergency preparedness plan has been established in Zimbabwe, covering zoonotic disease emergencies.		A
13	Advocacy to policy makers on cost-benefit analysis, prioritization and allocation of appropriate resources	<p>Advocacy to policy makers has been undertaken in a number of countries. For example, Bangladesh is planning advocacy for using its One Health platform for joint planning, preparedness and response. Bangladesh plans to generate evidence of the advantages of the platform (economic analysis, case studies, after action review, etc.).</p> <p>Indonesia has identified advocacy to policy-makers as a high priority.</p> <p>A One Health advocacy policy is being developed in Kenya.</p> <p>The World Bank HSFAT is expected to provide a basis for advocacy to policy makers on health security financing once it is finalised and applied.</p>		P   P P P
14	Coordination mechanisms for multi-sectoral cooperation on zoonotic diseases	Existing coordination mechanisms are in place in Bangladesh, Finland, Georgia, Kenya, Netherlands, Senegal and Viet Nam.		A

<sup>1</sup> Cross-Border: “√” if this activity may cross borders/ involve multiple countries.

<sup>2</sup> A = Achieved; P = Planned

		Bangladesh, Cote d'Ivoire, Viet Nam and Zimbabwe have plans to establish or revise and strengthen national coordination mechanisms.		P
15	Policy/legal framework for cooperation between human health and animal health sectors on zoonotic diseases	Policy/legal frameworks are in place in Bangladesh, Finland, Georgia, Indonesia, Netherlands, Viet Nam and Zimbabwe.  Kenya, Senegal, Zimbabwe are currently in the process of developing policy/legal frameworks. Kenya is also in the process of developing a national One Health policy.		A  P
16	Plans or initiatives to control or eliminate selected zoonotic diseases: e.g. rabies, leptospirosis, anthrax, others	<i>Rabies</i> : Bangladesh, Cote d'Ivoire, Georgia and Zimbabwe have plans or initiatives for rabies control. Kenya and Viet Nam have adopted national plan on rabies elimination. Viet Nam's plan is developed within the framework of the ASEAN Rabies Elimination Strategy (ARES). Indonesia has developed a best practice model on rabies control on the island of Bali.  <i>Anthrax</i> : Cote d'Ivoire and Zimbabwe have plans or initiatives in place. Bangladesh is in the process of developing a plan.  <i>Avian Influenza</i> : Cote d'Ivoire and Viet Nam have plans in place.  <i>Leptospirosis</i> : Bangladesh is in the process of developing a plan.	√  √  √	A  A P A P
17	Regional coordination on zoonotic diseases in general, and on prevention, control and elimination of specific diseases	Bangladesh has established engagement with SAARC on zoonotic diseases and One Health through the Regional Support Unit.  Finland's Zoonosis Centre operates as the national contact point for international expert bodies including the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC). The Centre takes part in the design, data collection and reporting of EU wide monitoring programs and studies. The Centre also collaborates with the other Nordic Zoonosis Centers and epidemiological investigation networks.  Georgia is participating in the Bio-surveillance Network of the Silk Road (BNSR), a multi-national partnership consisting of Human and Animal Health practitioners from Azerbaijan, Georgia, Kazakhstan, and Ukraine, which works to create sustainable, integrated disease surveillance network, thereby contributing to One Health perspective and strengthening global health security within the region.  Indonesia and Viet Nam are participating in the ASEAN Rabies Working Group and the ASEAN Rabies Elimination Strategy (ARES).	√  √	A  A  A  A,P
<b>II. Data Systems, Surveillance Systems, and Reporting</b>				
16	Event-based surveillance (EBS) for zoonotic diseases	EBS is being applied in Bangladesh, Cote d'Ivoire, Finland, Indonesia, Kenya, Netherlands, Senegal and Viet Nam.		A

		EBS is planned in Georgia and Zimbabwe (guidelines are under development for medical and veterinary field staff).	√	P
17	Indicator-based surveillance (IBS) for zoonotic diseases	IBS is being applied in Finland, Georgia, Indonesia, Kenya, Netherlands and Viet Nam. IBS is planned in Senegal.		A P
18	Surveillance for especially dangerous pathogens	Surveillance for especially dangerous pathogens is being conducted in Bangladesh, Cote d'Ivoire, Finland, Georgia, Indonesia, Kenya, Netherlands and Viet Nam through different approaches, including passive surveillance and USAID EPT PREDICT. It is also planned in Senegal.  Georgia is planning to establish expert and stakeholder working groups (Task Forces) under the National Animal Health Program (NAHP) for each disease of national concern (Rabies, Anthrax, Brucellosis, Crimean-Congo Hemorrhagic Fever, etc.) to develop control strategies, access ongoing activities and provide reports to NAHP steering Group.	√	A P P
19	Protocols, standard operating procedures, interoperability, and evaluation of multi-sectoral surveillance and response for priority zoonotic diseases.	Activities are being implemented or planned in a number of countries. For example, Cote d'Ivoire is in the process of setting up an interoperability system to report data from animal health surveillance, environment and human health. Bangladesh, Indonesia and Viet Nam are applying four-way linking. Indonesia is planning to develop protocols and SOPs as a high priority. Based on the results of its JEE, Finland has identified a need to strengthen the co-review legislation and procedures on disease notification in animals and humans, and on data sharing between veterinary, environmental and public health authorities at all administrative levels. Georgia is undertaking multi-sectoral surveillance of zoonotic diseases. Netherlands has established a contingency plan for zoonotic diseases. In addition to existing information sharing on zoonotic disease surveillance, Viet Nam is implementing a Longitudinal Influenza Surveillance Network (LISN) to carry out active surveillance and cross-sectoral information sharing on influenza in humans, livestock and wild animals.	√	A,P
20	Laboratory capacity development for priority zoonotic diseases	Many ZDAP member countries now have sufficient laboratory capacity to test for priority zoonotic diseases, however further capacity building is underway for human health and animal health laboratories, for example to build capacity on diagnosis for	√	A,P

		Rabies and Brucellosis testing in Bangladesh and for Avian Influenza testing in Cote d'Ivoire.		
21	Protocols for surveillance in animal and human populations at high-risk interfaces	ZDAP member countries have established a range of protocols for surveillance in animal and human populations at high-risk interfaces. For example, Bangladesh has identified six high risk human/animal interfaces in border locations.  Bangladesh, Cote d'Ivoire and Viet Nam have established protocols for avian influenza surveillance.  Kenya is currently developing surveillance protocols for rabies, anthrax, brucellosis.  Senegal has established SOPs for all laboratories.  Zimbabwe is developing joint surveillance protocols.	√	A,P  A  P A P
22	Syndromic surveillance at human-wildlife-livestock interfaces	Cote d'Ivoire has developed tools for community surveillance including animal health and environment threats. Georgia is conducting syndromic surveillance for avian influenza. Kenya is piloting a syndromic surveillance system. Zimbabwe is planning to establish a platform for sharing surveillance information .		A,P
<b>III. Human, Wildlife, and Livestock Interfaces</b>				
23	Joint risk assessment for EIDs/ zoonotic diseases using WHO-FAO-OIE assessment tool	Cote d'Ivoire completed a Threat and Hazard Identification and Risk Analysis (THIRA) in May 2017. A number of countries addressed this as part of their JEE.		A
24	Place ZD prevention in the context of economic development and land use planning	No specific activities have yet been identified by the ZDAP member countries.		
25	Assess key risk interfaces for disease spillover from wildlife to livestock, other animals, and humans, taking into account ecosystem changes	Finland has carried out risk assessment regarding spillover risks of avian influenza events; activities concerning rabies have been implemented and further activities are planned.  Kenya is carrying out several studies to estimate the spill over potential of zoonotic diseases.  In Viet Nam, the USAID EPT PREDICT activities is identifying key risk interfaces for disease spillover, and developing relevant risk reduction activities.  Zimbabwe is planning to undertake a risk assessment on zoonotic disease spillover.		A,P
26	Focus on illegal wildlife trafficking and ecosystem disruption as a significant risk for zoonotic disease emergence: within and beyond national borders	Netherlands is conducting bush meat inspection at borders in relation to Ebola risk.	√	A

27	Inventory and map wildlife species being farmed	Cote d'Ivoire, Finland and Netherlands have an inventory and mapping of farmed wildlife species.		A
28	Monitoring and intervention systems for diseases and risks on wildlife farms	Finland and Kenya have established monitoring and intervention systems for diseases and risks on wildlife farms.		A
<b>IV. Outbreak Response</b>				
29	Protocols and exercises for joint (animal health and human health) response to zoonotic disease outbreaks	Bangladesh is applying a joint or coordinated outbreak investigation and response. After action review (ARA) is also applied, and lessons are identified for future planning and action.  Kenya and Senegal have conducted contingency plans and simulation exercises for Rift Valley Fever.  Zimbabwe is developing a joint RRT.		A  P
30	Introduction/expansion of rapid or field laboratory diagnostics	Bangladesh is planning to introduce rapid diagnosis for Avian Influenza and TB. Kenya is applying rapid test kits for Rabies and Rift Valley Fever. Indonesia has applied this.		A,P
31	Develop and/or adapt rapid diagnosis for anthrax and brucellosis	Finland, Indonesia, Kenya, Netherlands and Senegal have applied rapid diagnosis. Georgia is planning to apply rapid diagnosis in future. Bangladesh is applying a rapid diagnosis for Anthrax, and is planning to apply a rapid diagnosis for Brucellosis in future.		A,P
32	Develop training materials/curriculum for sub-national level staff for zoonosis outbreak investigation that can be adapted to different country settings	Bangladesh has developed training materials/curriculum on Avian influenza and Anthrax. Cote d'Ivoire, Finland, Georgia, Kenya and Netherlands have also developed training materials/curriculum for sub-national level staff.  Senegal and Zimbabwe are planning to develop training materials/curriculum for sub-national level staff in future.		A  P
<b>V. Cross-cutting: Training, Research, Policies and Guidelines</b>				

33	National workforce development strategies/plans, integrating One Health approaches	<p>National workforce development strategies/plans are being implemented in many ZDAP member countries.</p> <p>For example, Bangladesh has a programme for health workforce development for the health sector, and is in the process of updating the veterinary curriculum to align with One Health Approach.</p> <p>In Viet Nam, FETP and FETP-V programmes have been established, with cross-linkages. The Viet Nam One Health University Network (VOHUN) brings together around 19 universities/faculties to contribute to a One Health workforce through One Health graduate programs and integrating One Health into relevant undergraduate curricula.</p>		A,P  A,P  A,P
34	Cross-sectoral (One Health) in-service training, animal health and human health	Several ZDAP member countries are implementing FETP programmes for pre- and in-service training on field epidemiology and strengthening linkages between the animal health and human health sectors.		A
35	One Health pre-service training			
36	Field epidemiology training, including linkages between animal health and human health			
37	Risk communication templates and risk reduction guidelines for priority zoonotic diseases	Risk communication efforts are ongoing in Bangladesh (Avian Influenza and Anthrax), Finland, Georgia (under Sweden's CBA-G project), Netherlands and Viet Nam. Plans are under development in Kenya, Senegal and Zimbabwe.		A,P
38	Coordination and sharing results of One Health research, risk assessments, simulations			
39	Institutional links between countries for collaborative research on zoonotic diseases	Activities are ongoing or planned in a number of countries. Bangladesh is implementing the ZELS project (AI Animal and Human Interface) Limited.		A,P
	<b>OTHER:</b>			
	Improve (internal/external) communication			
	Linking veterinary and human medicine on different levels			
	Build trust between animal and human health side with systematic approach			