



MINISTRY OF AGRICULTURE AND
RURAL DEVELOPMENT



MINISTRY OF HEALTH

THE VIET NAM ONE HEALTH STRATEGIC PLAN FOR ZOONOTIC DISEASES 2016-2020

AGRICULTURE SECTOR

REVIEW OF IMPLEMENTATION PROGRESS 2016-2017
AND IMPLEMENTATION PLAN FOR 2018-2020



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I. INTRODUCTION

In recent years, due to the intense process of globalization along with exchange of human with humans, humans with animals and the apparent climate change impacts due to human intervention lead to changes of the ecology and environment. As the result, the risk of zoonotic diseases is on a rise. According to World Health Organization studies, over 70% of emerging human disease outbreaks are diseases of animal origin.

Viet Nam is identified as one of the global hotspots with very high risk for emerging infectious agents, including communicable diseases from domestic and wild animals, as well as the risk of cross-border infectious diseases, such as MERS-CoV from the Middle East and South Korea, Ebola from West Africa, plague from Africa, and A/H7N9 from China.

Being aware of such dangers and the risk of animal-to-human transmission to human and animal health as well as to the economy and society, the Government of Viet Nam has approved the National One Health Strategic Plan for Zoonotic Diseases, 2016-2020, developed by the Ministry of Agriculture and Rural Development (MARD) together with the Ministry of Health (MoH), in close cooperation with national and international One Health partners.

The National One Health Strategic Plan for Zoonotic Diseases addresses three objectives: (1) Strengthening One Health capacity for prevention and control of zoonotic diseases; (2) Enhancing preparedness for human emergencies of animal origin; and (3) Applying One Health principles to limit the public health impact of current prioritized zoonotic diseases.

Seven core areas of the National One Health Strategic Plan for Zoonotic Diseases, 2016-2020, have been identified:

- (1) Building One Health Capacity
- (2) One Health approaches for managing human disease emergencies of zoonotic origin
- (3) One Health approaches to managing pandemic threats that are yet to emerge
- (4) One Health approaches to managing zoonotic influenza
- (5) One Health approaches to managing rabies
- (6) One Health approaches to antimicrobial resistance
- (7) One Health approaches for managing other priority zoonotic diseases.

During implementation process of the One Health National Strategic Plan, in order to promote and concretize the approved objectives and actions, the draft Agriculture Sectoral Plan has been prepared based on the inputs and review of the Ministry of Agriculture and Rural Development and related stakeholders. A corresponding plan has also been developed for the Health Sector. Both of these plans support collaboration and coordination of One Health efforts, clearly identifying areas where these two ministries need to work together, and areas where they need to work with the Ministry of Natural Resources and the Environment and other key stakeholders.

The purpose of this Sectoral Plan is to review the progress of the One Health Strategic Plan from 2016 to the present; set out the activities and expected results for the 2018-2020 period; identify gaps/deficiencies that need to be supplemented; and indicate the multi sectoral coordination mechanism needed for the application of One Health approaches in the prevention of zoonotic diseases.

The Sectoral Plan is based on the National One Health Strategic Plan for Zoonotic Disease Control (2016-2020), which was issued by the Ministry of Agriculture and Rural Development according to Decision No. 5273/QD-BNN-HTQT dated December 19, 2016, with the agreement of the Ministry of Health as set out in Official Letter No. 8225/BYT-DP dated November 17, 2016. The Department of Animal Health is the main technical focal point along with relevant units of MARD such as Department of Livestock Production, the National Institute of Veterinary Research, the National Agriculture Extension Center, and the Viet Nam CITES Management Authority. The Department of Animal Health and its partners have sent their professional staffs to support the work and provide necessary information for the consultant. The preparation and consolidation of the plan was supported by Msc. Truong Thi Dung - Senior Consultant at the Research Institute for Biodiversity Conservation and Tropical Diseases. The OHP Secretariat has coordinated supports for information sharing and consultation during the development process of the plan.

In order to develop the Agriculture Sectoral Plan, key documents that were referred to could be named as: the One Health Strategic Plan for Zoonotic Disease Prevention, 2016-2020; the Integrated National Operational Program for Avian And Human Influenza (OPI), 2006-2010; the Joint Action Program on Avian Influenza, The Viet Nam Integrated National Operational Program on Avian Influenza, Pandemic Preparedness and Emerging Infectious Diseases (AIPED),

the Veterinary Law, the Law on Prevention and Control of Infectious Diseases, the National Rabies Program, the National Influenza Program, and the National Antimicrobial Resistance Action Program; the Global Health Security Agenda; Joint Circular No. 16/2013 and other decrees, directives and other relevant documents.

The effective support of the OHP Secretariat with information sharing and interdisciplinary coordination, along with the high awareness among MARD stakeholders especially the Department of Animal Health, the Department of Livestock Production, the National Agriculture Extension Center, and the Viet Nam CITES Management Authority in implementing the One Health approach and interdisciplinary collaborating to prevent zoonotic disease have been well noted in the process of developing the Sectoral Plan.

However, the inter-sectoral coordination mechanism as well as the mandate of the related partners still requires further strengthening in the current context, in order to have the effective and sustainable mechanism for information sharing. Currently, the significant reduction of the budget for veterinary disease prevention and control, along with limited human resources, have created formidable challenges at district, commune and village levels in the regular and timely detection and reporting of epidemics.

In the current phase, there are only five prioritized diseases identified in Joint Circular No. 16/2013, including: (1) Influenza A (H5N1) (2) Rabies (3) Streptococcus suis (4) Anthrax (5) Leptospirosis. In the coming period, other emerging dangerous zoonotic diseases should be added in response to the actual situation.

II. REVIEW OF IMPLEMENTATION PROGRESS DURING 2016-2017 AND THE IMPLEMENTATION PLAN FOR 2018-2020

Please refer to the following tables for each of the seven core areas in the One Health Strategic Plan for Zoonotic Diseases, 2016-2020.

FOCUS AREA 1: Building capacity for One Health implementation

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
A. Administration and coordination					
<i>1.1 A completed national coordination mechanism that is capable of coordinating the human health, animal health, wildlife and environmental health and other relevant areas in emergency and non-emergency pandemic situations.</i>					
1.1.1	Establish a unified national steering committee	MARD has coordinated with MOH to conduct research, review and advise the Government on a plan for the establishment of a coordinated and unified national coordination mechanism on One Health under the chairing of a Deputy Prime Minister.	This activity will not continue to be implemented following the direction of the Prime Minister on limiting the establishment of new interdisciplinary Steering Committees/Organizations. National steering committees will continue to operate to address zoonotic disease outbreaks in humans, according to the provisions of the Veterinary Law.	The lack of an ongoing overall national steering committee may limit the effectiveness of inter-sectoral coordination on surveillance, preparedness, risk reduction and prevention activities during periods where there are no outbreaks ongoing.	MOH leadership and GDPM Other related sectors as included in existing national steering committees for zoonotic disease outbreaks in animals
1.1.2	Actively apply the Joint Circular No. 16/2013 in zoonotic prevention and control activities	MARD (DAH, RAHOS) cooperated with agencies in MOH (GDPM, NIHE and regional institutes) to carry out activities on zoonotic prevention and control, disease information sharing as regulated in Circular No. 16/TTLT-BYT-BNNPTNT. Implemented pilot project to evaluate and enhance the implementation of Circular	1. Coordinate the monitoring of zoonotic diseases, including wildlife; 2. Coordinate the investigation and handling of zoonotic outbreaks; 3. Coordinate the communication and raising public awareness on the prevention and control of zoonotic diseases; 4. Coordinate the organization of trainings and conducting	1. Establish an enhanced surveillance system between humans and animals for 5 prioritized zoonotic disease listing in Joint Circular 16 / TTLT-BYT-BNNPTNT; 2. Establish a selected monitoring system for animal groups with high risks 3. There should be key personnel at central, regional and provincial levels responsible	FAO, WHO GDPM, NIHE and regional institutes

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investments/support)	MOH Other ministries, international partners, etc
1.1.3	Clarify the role of MONRE	16 at the grassroots level in four provinces: Ha Giang, Thanh Hoa, Quang Nam, Binh Dinh.	scientific researches on the prevention and control of zoonotic diseases. Implementing agencies: DAH and other relevant agencies in MARD. Expected result: Zoonotic diseases under control. Timing: 2018-2020	for developing and implementing these activities. 4. There should be more detailed regulations on coordination mechanism at sub-provincial level	
				1. Coordinate the development of guidelines on prevention and control of environmental pollution in livestock production. 2. Coordination in overcoming environmental incidents and environmental degradation. Specifically, it provides guidance of optimal measures to handle infected and death animals which must be destroyed; to treat waste in livestock production and feed processing facilities	Collaboration with MONRE (VEA/ Department of Pollution Control) to develop guiding documents Need to cooperate with MONRE VEA/Department of Pollution Control to develop guidance documents Central budget to be allocated for drafting the document

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		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
1.1.4	Strengthen and timely share information between the Animal Health and Human Health sectors through established information channels (e.g. reporting cases of animal-to-human transmission to MARD and reporting the risk of zoonotic disease outbreaks and other risks (AMR) to MOH) to be	DAH has collaborated with the GDPM and the NIHE to share information on diseases as stipulated in Circular No. 16 / TTLT-BYT-BNNPTNT. Implemented pilot project to evaluate and enhance the implementation of Circular 16 at the grassroots level in four provinces: Ha Giang, Thanh Hoa, Quang Nam, Binh Dinh.	Expected result: Available guidance on preventing and control of environmental pollution in livestock production, overcoming environmental incidents, dealing with infected and death animals, treating wastes Timing: 2019-2020	1. It is necessary to have legal documents to clearly regulate a timely, accurate and effective information sharing mechanism between the Animal Health and Human Health sectors, from central to local levels; 2. In case of emergency, they may exchange directly, by telephone, fax or email, but within 24 hours after detecting the case, the human or animal outbreak or suspected of zoonotic disease, official document has to be sent.	FAO, WHO, US-CDC In collaboration with GDPM and NIHE to develop guiding documents 2. Sharing of disease surveillance data on wildlife
				Implementing agencies: Department of Animal Health and other relevant agencies in MARD Expected result: Timely sharing information to rapidly delineate the outbreak, not allow it to spread widely, especially minimize the disease transmission	

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
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	consistent with Joint Circular No. 16/2013 TILT-BYT-BNNPTNT	sion from animal to human Timing: 2018-2020			
1.1.5	Strengthen information sharing and coordination between MARD, MONRE, and MOH in the prevention and control of environmental pollution from livestock production and zoonotic disease transmission.	In the past two years and since the issuance of Joint Circular No. 16 / TILT-BYT-MARD, DAH has been trying to strengthen information sharing on coordination among ministries in the prevention and control of environmental pollution from livestock production and zoonotic disease transmission, especially the establishment of inspection teams.	Through the One Health Partnership and interdisciplinary workshops, relevant agencies of the ministries have been meeting and sharing information on the livestock production, animal health sectors and diseases. Implementing agencies: Department of Animal Health and other relevant agencies in MARD Expected result: Shared information, coordinated prevention and control of environmental pollution from livestock production and zoonotic disease transmission; Issued document on coordination mechanism Timing: 2019-2020	There should be legal documents clearly stipulating mechanisms for sharing information and coordinating the prevention and control of environmental pollution from livestock production and zoonotic disease transmission among three Ministries from central level to local.	Collaboration with GDPM and NIHE to develop legal documents on environmental sharing and coordination on environmental prevention and control
1.1.6	Identify indica-	DAH has regularly provide	DAH, GDPM and NIHE will	There should be clear legal	In collabora- FAO, WHO

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
	tors for monitoring and evaluation of coordination mechanisms for the prevention and control of zoonotic diseases at all levels from central to provincial and district.	guidance of the surveillance of diseases transmitted from animals to RAHOs, Sub-Department of Animal Health / District Livestock and Veterinary, District Veterinary Station following monitoring index (Joint Circular No. 16/TTLT such as number of infected, death, number of infected herds, clinical symptoms, test results)	define indicators to monitor and evaluate the coordination mechanisms for the prevention and control of zoonotic diseases at all levels from central to province and district. Implementing agencies: Relevant agencies in MARD Expected result: Identified monitoring and evaluation indicators for coordinating mechanisms for the prevention and control of zoonotic diseases at all levels from central to provincial and district.	documents regulating the monitoring and evaluation of the coordination mechanisms for the prevention and control of zoonotic diseases.	ratiation with GDPM and NIHE to develop guiding documents
1.1.7	Identify the roles and responsibilities of the relevant agencies in the management and regulation of the wildlife farming, disease surveillance, conservation	Over the past two years, CITES has advised the competent authorities on the issuance of legal policies regarding the prevention and control of illegal wildlife trade. - The Criminal Code has part of the content related to the CITES	Continue such activities as finalization of legal documents and guidelines, organizing workshops to define the roles and responsibilities of relevant agencies in the management and regulation of wildlife farming, disease surveillance systems, conservation and illegal trading, as well as other agencies involved in environment and forest protection in the environment and forest	There should be legal documents that define the roles and responsibilities of relevant agencies in the management and regulation of wildlife farming, disease surveillance systems, conservation and illegal trading, as well as other agencies involved in environment and forest protection	In collabor-ation with MOH, GDPM, NIHE to work on outbreak surveillance system FAO

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	and illegal trade, as well as other agencies involved in environmental and forest protection	<ul style="list-style-type: none"> - The Forest Code has part of the content related to CITES - Coordinate with police, forest rangers to prevent wildlife trade - Training: Coordinate with FAO, DAH to train forest rangers on the risk of zoonotic disease transmission through illegal trading activities. - Coordinate with the Ministry of Education and Training, propagandize and introduce teaching curriculum on wildlife protection. 	<p>protection.</p> <p>Implementing agencies: Relevant agencies in MARD, VNFOREST/CITES MA.</p> <p>Expected result: Report on the results of the activities and workshops on the roles and responsibilities of the relevant agencies in the management and regulation of wildlife farming, disease surveillance systems, conservation and illegal trade, as well as other agencies involved in environment and forest protection.</p> <p>Timing: 2018-2020</p>			

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<i>Connect government agencies with civil society organizations and key stakeholders in the process of consultation and collection of specialized information (e.g. clinical, public health, laboratories, risk communication, private sector, international partners, etc.) as well as collaborative disease prevention and control programs.</i>					
1.2					
1.2.1	Seek and enhance the contributions of experts	Though this objective is not yet implemented ideally as planned, meetings, workshops and forums that bring together national and international experts who organized to gather the participation of national and international experts who have the potential to support the collaborative programs on zoonotic disease prevention and control.	Strengthen the organization of meetings, workshops and forums that bring together national and international experts who have the potential to support the collaborative programs on zoonotic disease prevention and control.	There is the need to enhance the participation of experts from enterprises, private sectors, international partners, international partners, relevant agencies and stakeholders.	Coordinate with GDPM and NIHE
					MONRE (VEA/ Department of Pollution Control), VOHUN members, and other relevant agencies and stakeholders.
					Enterprises, private sectors, international partners, Government Office, OHP members.
1.3					
1.3.1	Support OHP and participate in the activities implemented by	Attend workshops, advocacy forums and reviews of the One Health activities; Policy and Technical Meeting	Continue to support OHP Implementing agencies: OHP Secretariat. Relevant agencies in MARD such as NAEC, CITES	There should be a clear coordination mechanism and responsibilities Should consider the sustain-	Coordinate with GDPM and NIHE MONRE (VEA/ Department of Pollution Control) on

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	OHP	<p>ings for both Animal and Human Health.</p> <p>Support OHP on technical contents of communication and information sharing activities.</p>	<p>ability of these activities when funding ends There should be a clear coordination mechanism and responsibilities</p> <p>Should consider the sustainability of these activities when funding ends</p>
1.4	<i>Coordinate the investigation of outbreaks of zoonotic disease when necessary (as well as develop guidelines which clearly state the cases where investigation should be coordinated)</i>		
1.4.1	Apply the relevant provisions of Joint Circular No. 16/2013	<p>There was the coordinated investigation of the zoonotic disease outbreak; Sharing disease information, jointly organizing training workshops.</p>	<p>Develop the legal documents to clearly regulate the coordination mechanism, organization and implementation.</p> <p>Implementing agencies: DAH and relevant agencies in MARD, enterprises, private sectors, international partners.</p> <p>Expected result: Issued legal documents.</p> <p>Timing: 2018-2020</p>
B. Legal framework		<p><i>Measures to ensure widespread application of Circular 16/2013, laying a strong foundation for the coordination among Ministries related to the prevention and control of zoonotic diseases, especially at provincial and sub-provincial levels.</i></p>	
1.5	Organize the training of Circular	Organized training courses to assist high risk localities	<p>Seek the support for the periodical training at least 01 per year</p>
1.5.1	FAO, WHO	Continue the organization of training courses to assist	Coordinate with

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		circular 16/2013 implementation	localities on the implementation of Joint Circular No. 16 / TTLT-BYT-BNNPTNT.	for the staff at provincial and sub-provincial levels. Implementing agencies: DAH and relevant agencies in MARD. Expected result: Training at larger scale. Timing: 2018-2020	GDPM, NIHE and relevant agencies to organize training
1.6	MONRE	<i>Continue to develop the legal documents/Directives/Circulars to support the coordination and participation of environmental sector, especially</i>		The extension of Circular 16 is not feasible because the Government has issued a decision to stop issuing and revising the inter-ministerial Circulars. Therefore, it is necessary to consider adding roles and responsibilities as well as coordinated activities with agencies other than MARD and MOHusing appropriate documents.	Coordinate with GDPM, and NIHE to develop supplement document to have the activities and roles of MONRE
1.6.1	Draft the guidelines of the Veterinary Law implementation and consider to extend the contents of Joint Circular No.16/2013 with additional information on the roles of MONRE	Not yet implemented	Develop the guidelines of the Veterinary Law implementation and consider to extend the contents of Joint Circular No.16/2013 with additional information on the roles of MONRE.	 Implementing agencies: DAH and relevant agencies in MARD. Expected result: Issued supplement document to the Joint Circular No.16/2013 with additional information on the roles of MONRE.. Timing: 2019-2020	

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	Other ministries, international partners, etc
1.6.2	Review the legal framework and interdisciplinary regulations in dealing with emergency cases of zoonotic disease outbreaks, cross-sectoral responses to zoonotic diseases as well as shortcomings/limitations have not been reviewed.	Organized trainings on responding to the avian influenza outbreak. The legal framework and interdisciplinary regulations for the resolution of emergency cases of zoonotic disease transmission, cross-sectoral responses to zoonotic diseases, as well as shortcomings/limitations. This should include environmental protection legislation in the legal system in addition to the Veterinary and Agricultural Laws.	Continue to review the legal framework and interdisciplinary regulations for the emergency cases of zoonotic diseases transmission, cross-sectoral responses to zoonotic diseases, as well as shortcomings/limitations. This should include environmental protection legislation in the legal system in addition to the Veterinary and Agricultural Laws.	There should be funds from the 2 Ministries to develop the document	Coordinate with MONRE (VEA) to provide laws on environmental protection in legal system WHO, FAO
1.7	C. Risk assessment and risk communication	Capacity building for disease risk assessment in human-animal-environment interface	Continue to organize training	This is not in regular basis	Coordi- WHO, FAO, US-
1.7.1	Organized train-	Organized training cours-			

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		ing sessions on risk assessment and coordination under the framework of AVET, FETP and other programs	courses on Applied Veterinary Epidemiology Training (AVET); Investigating animal diseases in wildlife; Introductory Course on Public Health / Field Epidemiology Training Program (FETP) for veterinary staff; Training on interdisciplinary outbreak investigation; Interdisciplinary training on rabies control; Interdisciplinary training on Avian Influenza A / H7N9.	and requires a stronger and stronger coordination mechanism. Support from international organizations such as FAO, WHO, CDC, USAID is needed in both technical and financial terms, for sustaining these activities. Implementing agencies: DAH, NAEC, VNUA and other relevant agencies in MARD. Expected result: Annual report of trainings on risk assessment coordination. Timing: 2018-2020	CDC nate with GDPM, NIHE, Hanoi University of Public Health to develop plan and organize trainings
1.7.2	The involvement of the social sciences in the development and common risk assessment as well as behavior change communication for zoonotic diseases is prioritized with the	MARD has chaired the training sessions and interdisciplinary meetings on the risk assessment with the participation of the social sciences in the country.	Continue to chair trainings, workshops and communication activities. Implementing agencies: DAH, DLP, NAEC, CITES MA and relevant agencies in MARD.	The involvement of the social sciences is limited due to the lack of mechanisms and funding to engage them in cross-sectional training and workshops. Expected result: Reports on the participation. Develop and assess common risks and behavior change. Timing: 2018-2020	Coordinate with MONRE (VEA) on relevant issues Coordination with GDPM, NIHE to chair and organize workshops and trainings More attention should be paid to involvement of social sciences in developing and evaluating mutual risks as well as in behaviour change communication, in order to reduce disease formation and transmission agents which emerge from human-animal-environment interface.

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
	objective of reducing the factors that emerges and spreads diseases in human-animal-environment interface					
<i>1.8 Enhance risk communication for public agencies and community about the threats emerged in human-animal-environmental interface.</i>						
1.8.1	Organize risk communication training on emergency situations and disease prevention	Organized risk communication training courses for the Health and Veterinary staff at central, regional and provincial levels, chaired by MOH.	Continue to organize risk communication training courses for the Health and Veterinary staff at central, regional and provincial levels, chaired by MOH.	Implementing agencies: Relevant agencies in MARD. Expected result: Actively assess the risks and then propose solutions for disease prevention and response in an emergency with interdisciplinary coordination. Timing: 2018-2020	Coordinate with GDPM, NIHE, Hanoi University of Public Health, to develop the plan	FAO, WHO
1.8.2	Communications channels		Implementing agencies: Relevant agencies in MARD,		Coordinate with MONRE FAO, WHO and	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		for emergency cases: - Establish communication mechanisms between different levels and from upper to lower levels in different stages of health emergency cases. - Establish communication mechanisms between government agencies and other external agencies (such as NIHE) which can contribute technical knowledge to develop communication messages	including DAH, NCVD and the RAHOs, NIVR, DLP, NAEC Expected result: Timing: 2018-2020	GDPM, NIHE, Hanoi University of Public Health, and international partners to develop the plan.	other international partners

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020 (areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.8.3	in the field of public health - Establish community communication mechanisms during emergencies and collect information from the community to deliver accurate communication messages.	The OHCN factsheet was developed and disseminated to related stakeholders for introduction about objectives and key projects/activities of Network members. NAEC together with DAH and DLP participated in the One Health Communication materials that are evaluated once every quarter to share the activities being done and maintain, enhance the	Continue maintaining and strengthening the network, responding and developing appropriate communication materials. Implementing agencies: NAEC, DAH, DLP, and relevant agencies in MARD; OHP Secretariat. Expected result: Be able to evaluate the impact when delivering the communication messages, both quiet and outbreak periods.	Coordinate with MOH Office, Department of Communication and Reward, GDPM, NCHEC, MSA in the development and evaluation	OHP members

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	during both the peace time and the outbreak period.	cooperation capacity when necessary.	Timing: 2018-2020	of communication materials	
D.	Laboratory system				
1.9	<i>Strengthening of laboratory capacity and quality management system</i>				
1.9.1	Provide appropriate resources for conducting experiments and applying quality management systems	The laboratories of the Veterinary System have trained testers and current laboratories apply quality management systems	<ul style="list-style-type: none"> 1. Training and retraining laboratory staff for testing techniques and biosafety; 2. Maintaining the application of quality management system. 3. Reviewing Vietnamese standards, procedures and testing standards for 05 communicable diseases mentioned in Joint Circular No. 16; 4. Promulgation of Viet Nam standards for the diagnosis of some diseases in wildlife with potential for emerging pandemic in humans. <p>Implementing agencies: DAH, NAFIQAD and relevant agencies in MARD.</p> <p>Expected result: The resources</p>	<ul style="list-style-type: none"> International technical assistance and funding are needed to train human resources as well as to apply quality management systems 	<ul style="list-style-type: none"> MONRE FAO and other international partners <p>Coordinate with GDPM, NIHE for collaborating and sharing</p>

Objectives based on OHSP strategy		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.9.2	All Health and Veterinary laboratories meet national certification standards, biosafety requirements, and the corresponding international certifications (eg ISO 15189, 17025, 17043), along with established processes, and referenced laboratories obtain equivalent international certifications (e.g. ISO 15189, 17025, 17043), along with established processes to ensure the quality of ongoing activities.	Continuing to maintain a system of veterinary laboratories that meet national certification standards, biosafety requirements and the equivalent international certification standards (eg ISO 15189, 17025, 17043), along with established processes to ensure the quality of ongoing activities.	The diagnostic procedures should be updated to suit the situation in the country and abroad	Coordinate with GDPM, NIHE	FAO, OIE, US DTRA, USAID EPT/PREDICT and other international organisations
1.9.3	A network of An online reporting system	1. Training and using the online	Need international support	International or-	Coordi-

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
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		laboratories meets national standards on the minimum reporting requirements of infectious diseases which must be reported nationally (diagnostic, reference pathway of sample, quality assurance, data collection and reporting)	has been developed from central to local level in the veterinary network	reporting system from central to local level in the animal health system; 2. Integrated use of this system for reporting and sharing information on communicable diseases.	nate with GDPM, NIHE
1.9.4	Review the structure of the Health Laboratory network including functions and number of laboratories as well as the methodologies to improve the performance.	[Activity for the Human Health sector]			

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.10	<i>Strengthening the data management system for rapid analysis and sharing of results between sectors and between countries.</i>					
1.10.1	Establish mechanisms to share information between Veterinary and Health laboratories	There was information sharing between the Veterinary and Health laboratories following Circular 16 / TTLT-BYT-BNNPTNT.	Improve the information sharing mechanism between Veterinary and Health laboratories. Implementing agencies: DAH and related agencies in MARD. Expected result: There is document on the establishment of the information sharing mechanism between Veterinary and Health laboratories. Timing: 2018-2020	There should be regulation on time to share information, information type, including diagnostic methods	Coordinate with GDPM and NIHE	International organization such as OIE, FAO, WHO, USCDC, OUCRU
1.10.2	Establish information sharing mechanism between countries	Information has been shared between countries in accordance with OIE, WHO, ASEAN countries.	Guide and strengthen mechanisms for sharing information between countries in accordance with OIE and WHO and ASEAN countries. Implementing agencies: DAH and related agencies in MARD. Expected result: There is document on the establishment of the information sharing mechanism between countries Thời gian thực hiện: 2018-2020	There should be regulation on time to share information and information content	Coordinate with MOH, GDPM, NIHE	ASEAN countries and international organization such as OIE, FAO, WHO, USCDC
E. One Health human resources are well-trained						

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
<i>1.11 Having sufficient professional staff who are well-trained and get enough capacities and skills to implement One Health</i>					
1.11.1	Apply One Health Education Curriculum, make One Health becoming a formal component of the FETP and AVET training curriculum.	An Introductory course in One Health Public Health/ Field Epidemiology (FETP) and Applied Veterinary Epidemiology Training (AVET) were introduced to veterinary staff. The Department of Veterinary Medicine, VNUA has also begun to put One Health into the curriculum.	FAO will engage in capacity development and implementation of Field Epidemiology Training Programme for Veterinarians (FETPV) and AVET in China, Viet Nam, Indonesia and Thailand in March 2018. Continue to apply One Health Education Curriculum, make One Health becoming a formal component of the FETP and AVET training curriculum.	Official adoption of training curricula and certification. Need the financial support from international organizations (WHO, FAO and other organizations) so that these training activities will be more frequent and sustainable.	Coordinate with MOH, GDPM to develop and apply One Health Education Curriculum,
1.11.2	Separation and cooperation of Field epidemiology training programs (FETP)	Organize training courses on: Applied Veterinary Epidemiology Training (AVET); Investigating animal diseases in wildlife; Introductory Course on One	Separating and cooperating Field epidemiology training programs (FETP) and Applied Veterinary Epidemiology Training, which applies to staff of MOH and MARD and related	Official adoption of training curricula and certification. Need the financial support from international organizations (WHO, FAO and other organizations)	Coordinate with MOH, VOHUN, OIE, FAO, WHO, US CDC

Objectives based on OHSP strategy		Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	Main gaps	MOH	Other ministries, international partners, etc
	and Applied Veterinary Epidemiology Training, which applies to staff of MOH and MARD and related agencies.	Health and Public Health / Field epidemiology training programs (FETP) for veterinary staff; Interdisciplinary training on outbreak investigation; Interdisciplinary training on rabies control; Interdisciplinary training on avian influenza A / H7N9.	agencies. Implementing agencies: DAH, VNUA, and other relevant agencies in MARD. Expected result: Report on the results of FETP and AVET. Timing: 2018-2020			OIE, FAO, WHO, USCDC
1.11.3	Complete the development of the VO-HUN curriculum for undergraduate and postgraduate courses including the addition of risk communication components.	Organize training courses on: Applied Veterinary Epidemiology Training (AVET); Investigating animal diseases in wildlife; Introductory Course on One Health and Public Health / Field epidemiology training programs (FETP) for veterinary staff; Interdisciplinary training on outbreak investigation; Interdisciplinary training on rabies control; Interdisciplinary training on avian influenza A / H7N9.	Continue to complete the development of the VOHUN curriculum for undergraduate and postgraduate courses including the addition of risk communication components. Implementing agencies: Relevant agencies in MARD, VNUA, University of Agriculture 4.	Official adoption of training curricula and certification. Need the financial H51 support from international organizations (WHO, FAO and other organizations)	Coordinate with MOH, VOHUN to develop and complete the curriculum. Hanoi Medical University, HSPH, HCM and Can Tho Medical Universities.	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
1.11.4	Continue to develop the number of well-trained human resources in One Health area through VOHUN with the support of the EPT-2 program, including the extension of training to One Health area through VOHUN with the support of the EPT-2 program, including the extension of training to students who will work in the environmental health area and in-service training on Core Competencies of One Health in the Preventive Medicine and Animal Health sectors, as well as rangers responsible for captive management and transportation of wildlife. Evaluate the impact of this training program in practice as well as outputs of zoonotic diseases.	There was a number of well-trained human resources in One Health area through VOHUN with the support of the EPT-2 program, including the extension of training to students who will work in the environmental health area and in-service training on Core Competencies of One Health in the Preventive Medicine and Animal Health sectors, as well as rangers responsible for captive management and transportation of wildlife. Evaluate the impact of this training program in practice as well as outputs of zoonotic diseases.	In 2018-2019, CITES, together with FAO, DAH via USAID's project will train 800-1000 forest rangers in the province and FPDs on: zoonotic diseases and prevention. Continue to increase the number of well-trained human resources in the One Health area through VOHUN with the support of the EPT-2 program, including the extension of training to students who will work in the environmental health area and in-service training on Core Competencies of One Health in the Preventive Medicine and Animal Health sectors, as well as rangers responsible for captive management and transportation of wildlife. Evaluate the impact of this training program in practice as well as outputs of zoonotic diseases.	Need financial support of international organizations (WHO, FAO and others) and budget from central and local governments	Coordinate with VOHUN Office, Hanoi Medical University, HSPH, HCMC University of Medicine and Pharmacy, and Can Tho University of Medicine and Pharmacy

Implementing agencies: Relevant agencies in MARD such as DAH, VNUA, and University of Agriculture 4.

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	tors, as well as rangers responsible for captive management and transportation of wildlife. Evaluate the impact of this training program in practice as well as outputs of zoonotic diseases.	Report on the number of well-trained human resources in One Health area through VOHUN with the support of the EPT-2 program, including the extension of training to students who will work in the environmental health area and in-service training on Core Competencies of One Health in the Preventive Medicine and Animal Health sectors, as well as rangers responsible for captive management and transportation of wildlife. Evaluate the impact of this training program in practice as well as outputs of zoonotic diseases.	Timing: 2018-2020	There should be collaboration with the GDPM, NIHE, universities and training institutions in the country.	Coordinate with GDPM and NIHE to identify the number of epidemiology staff across the country.	FAO, WHO, US-AID EPT/OHW
1.11.5	Identify the number of national epidemiologists in Human Health and Animal Health areas who were trained in core competence for the International Health Regulations and Veterinary Services up to 2020.	There was data on the number of national epidemiologists in Human Health and Animal Health areas who were trained in core competence for the International Health Regulations and Veterinary Services	Will identify the number of national epidemiologists in Human Health and Animal Health areas who were trained in core competence for the International Health Regulations and Veterinary Services performance up to 2020.			

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		who were trained in core competence for the International Health Regulations and Veterinary Services performance up to in 2020 however, not yet completed.	<p>Implementing agencies: Relevant agencies in MARD, VNUA, University of Agriculture 4.</p> <p>Expected result: Accurate data on the number of national epidemiologists in Human Health and Animal Health areas who were trained in core competence for the International Health Regulations and Veterinary Services performance up to in 2020.</p> <p>Timing: 2018-2020</p>	VOHUN, Hanoi Medical University, HSPH, HCM and Can Tho Medical Universities	VOHUN, Hanoi Medical University, HSPH, HCM and Can Tho Medical Universities
F. Appropriate Researches in the One Health area					
1.12	<i>Carry out necessary research to support the application of One Health into policy and practice, including studies on specific diseases</i>			Coordinate with MOH, VOHUN	OIE, WHO, FAO, US CDC
1.12.1	Identify gaps in current information, knowledge, mobilize funding, conduct research and regularly share research results with stakeholders including	Not yet implemented	Identify information gaps, mobilize funding, conduct research and regularly share research results with stakeholders including policy makers (annual conferences).		
			Implementing agencies: NIVR, National Diagnosis Center, relevant agencies in MARD.		
			Expected result: Research results shared with policymakers		

Objectives based on OHSP strategy		Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	policy makers (annual meetings)	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.12.2	Introduce national prioritized research themes for zoonotic diseases, including studies in Human health and Livestock production systems, social and ecosystem health aspects which play an important role in the emergence, prevention and control of zoonotic diseases. In addition, new tools for monitoring and preventing antibiotic resistance will be applied.	Not yet implemented	DAH, NIVR, GDPM, NIHE will introduce national prioritized research themes for zoonotic diseases, including studies in Human health and Livestock production systems, social and ecosystem health aspects which play an important role in the emergence, prevention and control of zoonotic diseases. In addition, new tools for monitoring and preventing antibiotic resistance will be applied.	There should be funding from Central, financial and technical support from international organizations such as OIE, WHO, FAO, US CDC, VOHUN	Coordinate with GDPM and NIHE to develop research projects	WHO, FAO CDC, OIE, OUCRU, CIRAD, ILRI and other international organizations

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
1.12.3	Establish a mechanism for researchers to periodically inform policy makers about emerging issues as well as the application of research results in policy formulation and application.	Not yet implemented	DAH cooperates with GDPM, NIHE to establish a mechanism for researchers to periodically inform policy makers about emerging issues as well as the application of research results in policy formulation and application.	There should be funding from Central, and financial support from international organizations such as FAO, WHO, USAID	Research centers, MOIT, MONRE, MPS, MOIC, MOET WHO, FAO, CDC, OUCRU, CIRAD
1.12.4	Annual One Health forum	Annual One Health forum was organized	Implementing agencies: Relevant agencies in MARD, such as DAH, NIVR. Expected result: There is a mechanism for researchers to periodically inform policy makers about emerging issues as well as the application of research results in policy formulation and application. Timing: 2018-2020	Continue to organize annual One Health forum. Implementing agencies: OHP Secretariat and relevant agencies	OHP Members Need technical support of international organization and budget to organize and maintain this forum Coordinate with GDPM, NIHE

Objectives based on OHSP strategy		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.12.5	Participate in important regional and global meetings to further promote the application of the One Health approach	<p>In 2017, Viet Nam has worked closely with countries such as Indonesia and Senegal to develop the Terms of Reference for the Coordination Mechanism of the Zoonotic Disease Action Plan (ZDAP) of the GDSA program, and also hosted and chaired the 3rd International Conference on Zoonotic Diseases in Da Nang City on 29 and 30/8/2017; In addition, Viet Nam has participated in many other important meetings on the application of the One Health approach and Global Health Security at regional and global levels.</p> <p>Expected result: Provide appropriate recommendations to the Government. Timing: 2018-2020</p>	<p>in MARD such as DAH, NIVR, DLPP, NAEC.</p> <p>Expected result: Provide appropriate recommendations to the Government. Timing: 2018-2020</p>	<p>Main gaps (areas that need more investment/support)</p>	<p>MONRE VOHUN OIE, WHO, FAO, US CDC and other international organizations</p>
				<p>Need budget to participate and provide presentation to share the results and lessons learnt with other countries</p> <p>Implementing agencies: OHP Secretariat and relevant agencies in MARD.</p> <p>Expected result: For a safer world against emerging and dangerous diseases.. Timing: 2018-2020</p>	<p>Coordinate with GDPM and NIHE</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
<i>Selectively conduct a number of environmental health studies to supplement knowledge of factors leading to disease outbreaks and risk mitigation measures, thereby provide appropriate guidance to practitioners. E.g. promote land use planning in the livestock sector (refer to focus area 3)</i>					
1.13					
1.13.1	Investigation of livestock production sites and consideration of the potential for emergence, development and spread of diseases (e.g. the impact of developing new live-stock areas)	DLP cooperates with DAH to develop safe livestock production areas. The investigation and consideration of the potential for emergence, development and spread of diseases are conducted by specialized agencies of DAH and the system of sub-DLP and sub-DAH at the provincial level.	Continue to investigate some livestock sites and consider the potential for emergence, development and spread of diseases. Implementing agencies: DAH, DLP, NAEAC. Expected result: Report on some livestock sites and consider the potential for emergence, development and spread of diseases. Timing: 2018-2020	Need the support from international organization and funding from local government	Coordinate with MONRE (VEA/ Department of Pollution Control) on the environmental quality, and the management and treatment of livestock waste discharged into the environment. FAO, USAID EPT/PREDICT
1.14	G. Prevention and control activities <i>Other objectives</i>				
1.14.1	Develop processes of infection	[Health sector activity]			

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
	control and antibiotic management programs in all provincial hospitals					
1.14.2	Establish and operate biosafety measures in animal raising farms and large wild-life breeding farms as well as animal transport, strengthened disinfection work at animal farms and markets.	Implemented Good Animal Husbandry Practices following the VietGAHP Procedures issued under Decision 4653/QĐ-BNN-CN dated 10 November 2015 by MARD In addition, MARD has issued regulations on biosafety in livestock production (issued under Circular No. 04/2010/TT-BNNPTNT). DLP is working on a project with FAO, FHI 360 (USAID) on biosafety	Continue to establish and implement biosafety measures in large scale castle and wildlife farms as well as in animal transportation; enhance sanitation and sterilization at farms and markets. Implementing agencies: DAH, DLP, NAECC, CITES MA and relevant agencies in MARD, WCS, livestock facilities/producers. Expected result: Biosafety measures in large scale castle and wildlife farms as well as in animal transportation are implemented..	Need the support from international organization and funding from local government and farm owners/producers. More efforts should be given to encourage the participation of the private sector.	Coordinate with MONRE (VEA/ Department of Pollution Control) on the environmental quality, and the management and treatment of livestock waste discharged into the environment.	
1.14.3	Prepare	DAH has advised MARD	Developing guidelines for the	Need the support from interna-	Coordinate	MOH, OIE, WHO,

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		guidelines for antibiotic use in livestock production, improve and promote implementation of regulations on antibiotic use in animals	to develop Circular No. 13/2016/TT-BNNPTNT on management of veterinary medicines, chemicals and antibiotics in animal feeds (feed for terrestrial and aquatic animals) products will be regularly updated to the list of prohibited production. In addition, MARD has a roadmap to reduce the use of antibiotics in feeds, specifically in this stage only allows the use of antibiotics in the diet when there is doctor's prescription, do not use more than two types of antibiotics in a feed product, these antibiotics must be on the list of authorized use specified by MARD and specifically used only for the treatment purpose or prevention of disease in young cattles.	national organization and funding from central budget with the Drug Administration of Viet Nam	FAO, USCDC

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
1.14.4	Reduce illegal trade of wildlife animals	DAH has collaborated with FAO to train rangers on the risk of wildlife disease transmission to humans through illegal trading activities. Directives 03 and 28, the Forest Law, the Customs Law issued relating to the illegal raising, marketing and transportation of wildlife. CITES MA in collaboration with General Department of Viet Nam Customs, Ministry of Justice, NGOs, associations such as WCS, Traffic, HSI conducted investigation and checks.	CITES - Focus on further improving the subordinate documents, guiding law enforcement, international cooperation, information sharing, training, communication through project. - Continue to implement USAID Project: control of wildlife trade in Viet Nam - Advise competent agencies to promulgate policies and laws relating to illegal wildlife trade	Need to have traceability systems, semi-wild farms, trans-national, regional ... raising awareness, propaganda: do not use food from wildlife ... Need support from the international organization and the central budget, especially for wildlife traceability	Coordinate with GDPM, NIHE	MPS FAO, WCS, Traffic, HIS and other international organisations

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		animals. CITES in collaboration with Customs, Justice, NGOs, associations such as WCS, Trafic, HSI conducted: - Building programs that support the implementation of the law CITES MA participate in the Wildlife Enforcement Network Project			
1.14.5	Improve tools to evaluate environmental risks and emergence of zoonoses.	DLP advised the Government on policies to attract investment in agriculture and rural areas in general. In particular, there were orientations in the revision of regional and local planning to limit and ban livestock in densely populated areas; Training on environmental risk assessment tools and the emergence of zoonotic diseases; Apply tools to identify high risk cases and information about projects on economic development	Continue to train and enhance environmental risk assessment tools and the emergence of infectious zoonotic diseases. Apply tools to identify high-risk cases and information on economic development projects, livestock sector restructure, and changes in land use. Implementing agencies: DAH, DLP, NAEC and relevant agencies in MARD.	Need the support from international organization and funding from central budget	Coordinate with MONRE, VEA on the environmental quality, and the management and treatment of livestock waste discharged into the environment. Implementing agencies: DAH, DLP, NAEC and relevant agencies in MARD. Expected result: Report on environmental risk assessment tools and the emergence of infectious zoonotic diseases.

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	restructuring of livestock production and changes of land use	changes in land use.	Timing: 2018-2020			
1.14.6	Establish national standards on environment with consideration of agricultural land use and with consent on land absorbability assessment method for safe agriculture production	[No activities yet identified in the agriculture sector] Implementing agencies: Relevant agencies in MONRE, MARD, and MOH, VOHUN, OIE, WHO, FAO, US CDC, WCS. Expected result: Timing: 2018-2020				
1.14.7	Evaluate emissions of heavy metals and dangerous substances		[No activities yet identified in the agriculture sector] Implementing agencies: Relevant agencies in MONRE, MARD, and MOH, VOHUN, OIE, WHO, FAO, US CDC,		MOH	MONRE

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		emitted from industrial production and impacts on the environment as well as human and animal health. Carry out control and management measures	WCS. Expected result: Timing: 2018-2020		Other ministries, international partners, etc
1.14.8	Enhance capacity to control environmental pollution	The Animal Health and Human Health sectors regularly coordinated for pollution control and environmental protection at disease prevention and control facilities for animal and human foundations for disease prevention and control in humans and animals	Continue to strengthen capacity for pollution control and environmental protection at animal and human disease prevention and control facilities. Implementing agencies: Relevant agencies in MARD, MOH, and MONRE, VOHUN, OIE, WHO, FAO, US CDC, WCS.. Expected result: Timing 2018-2020	Need funding from Central budget and funding from local budget for implementation	Coordinate with MONRE (VEA and other relevant agencies) Coordinate with GDPM, NIHE
H. Monitoring and Reporting					

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
<i>1.15 Upgrade surveillance system</i>						
1.15.1	Establish electronic reporting system on communicable diseases for human health laboratories and public health establishments	[Health sector activity]				
1.15.2	Establish an indicator based surveillance system for 42 priority diseases in humans	[Health sector activity]				FAO, WHO, US CDC
1.15.3	Establish an event-based surveillance system through evidences	Regular coordination in the surveillance and investigation of zoonotic diseases according to the Joint Circular 16/2013.	A monitoring system based on events and phenomena will be established through evidence collected from Animal and Human Health investigations.	Established intensive and focused surveillance system between humans and animals (including wildlife) for 5 prioritized zoonotic diseases and selective surveillance systems	Coordinate with GDPM, NIHE	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
	obtained from human and animal health investigation.		<p>Implementing agencies: DAH, CITES, GDPM, NIHE.</p> <p>Expected result: Roadmap and documents on surveillance system to be issued and implemented.</p> <p>Timing: 2018-2020</p>	for high-risk animal group	Other ministries, international partners, etc
1.15.4	Establish surveillance system for avian influenza and rabies has been set up. However, there are no official documents issued jointly between the two sectors.	Surveillance system for avian influenza and rabies has been set up. However, there are no official documents issued jointly between the two sectors.	<p>Intensive and focused surveillance system between humans and animals (including wildlife) will be set up for 5 prioritized zoonotic diseases and selective surveillance systems for high-risk animal group.</p> <p>Implementing agencies: DAH, CITES, GDPM, NIHE.</p> <p>Expected result: Established intensive and focused surveillance system between humans and animals (including wildlife) for 5 prioritized zoonotic diseases and selective surveillance systems for high-risk animal group.</p> <p>Timing: 2018-2020</p>	Established intensive and focused surveillance system between humans and animals (including wildlife) for 5 prioritized zoonotic diseases and selective surveillance systems for high-risk animal group	WHO, USCDC, FAO, USAID EPT/ PREDICT Coordinate with GDPM, NIHE
1.16	<i>Strengthen information sharing</i>				

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
1.16.1	Improve compatibility between animal health and human diagnosis surveillance systems as well as surveillance information collecting systems in order to support the needs for quick information sharing and toward better compatible systems	Piloting of the online Animal Disease Reporting System (ADRS) in RAHO2. Collect and share information on test results of avian influenza and Rabies surveillance programs between the Animal Health and Human Health sectors.	Roll out the ADRS to collect and share information on the test results of the animal disease surveillance programs, including the 5 communicable diseases regulated in Joint Circular No. 16 / TTLT-BYT-BNNPTNT. Implementing agencies: DAH, National Diagnosis Center, NIVR, Regional Sub-Departments of Animal Health and relevant agencies in MARD and MOH. Expected result: Established compatibility system between veterinary and health diagnostics as well as collection systems of monitoring data and the need for information sharing. Timing: 2018-2020	Only for AI and rabies, it is necessary to expand the collection and sharing of information on other communicable diseases.	Coordinate with GDPM, NIHE FAO, WHO, USC-DC, CIRAD
1.16.2	Improve information sharing across borders at key points and joint plans to reduce	Frequently update and share information on animal diseases (as in case of avian influenza A / H5 and A / H7N9) between Viet Nam and neighboring countries such as China, Laos, Cambodia..	Continue to update and share information on communicable animal diseases (eg, Avian Influenza A / H5 and A / H7N9) between Viet Nam and neighboring countries. Implementing agencies: Rel-	Coordinate with GDPM, NIHE FAO	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
	spread of disease across the border		event agencies in MARD and MOH. Expected result: Timing: 2018-2020		OIE, WHO, other international organizations
1.16.3	Report to OIE on the list of diseases detected and to WHO on the public health cases of the world concern in certain period of time	Frequent updates and detailed reporting of disease information to OIE. Reporting time is 1-3 days after the outbreak.	Continue to update and provide detailed report of disease information to OIE. Implementing agencies: Relevant agencies in MARD and MOH. Expected result: Report to OIE and WHO. Timing: 2018-2020	Coordinate with GDPM, NIHE	OIE, WHO, other international organizations
1.16.4	Improve capacity to analyze and interpret surveillance information in human and animal health sector	Organize training courses to improve epidemiology capacity (from basic to advanced levels) for central and provincial veterinary and health workers. Funding for training courses is provided by the US CDC, FAO and mobilizing from other resources.	Regularly organize training courses to improve epidemiology capacity (from basic to advanced levels) for central and provincial veterinary and health workers. Funding for training courses is provided by the US CDC and FAO.	USCDC, FAO, ILRI	Coordinate with GDPM, NIHE

Objectives based on OHSP strategy		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
		event agencies in MARD and MOH. Expected result: Timing: 2018-2020			
I. Management and Response to emergencies					
1.17	<i>Capacity to manage and respond to emergency cases</i>				
1.17.1	Establish the national Emergency Operation Center with equal structures in all regions	[Not yet implemented in the Agriculture sector] [Not yet implemented in the Agriculture sector]	Implementing agencies: Relevant agencies in MARD, MOH, and MONRE, VOHUN, OIE, WHO, FAO, US CDC, WCS. Expected result: Timing: 2018-2020	Coordinate with GDPM, NIHE	VOHUN, OIE, WHO, FAO, US CDC, WCS
1.17.2	Practice for checking functions of the emergency operation centers and national plans for pandemic/ all threat response including at least one	Not yet implemented Participated in the simulation and activation of the PHEOC to evaluate functions for EOC emergency response organized by MOH	Implementing agencies: Relevant agencies in MARD Expected result: Timing: 2018-2020	Coordinate with GDPM, NIHE	VOHUN, OIE, WHO, FAO, US CDC, WCS

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
	case practicing emergency cases to check impacts beyond health issues and responses from all the whole society				
1.17.3	At least there is one program to evaluate International Health Regulations (IHR) (together with similar evaluation program or at least relating to animal health services)	DAH and the agriculture sector participated in the JEE organized by MOH GDPM in cooperation with WHO.	Continue to invest and enhance national disease prevention and control. Implementing agencies: Relevant agencies in MARD, OHP, international partners. Expected result: Well-implementing national disease prevention and control. Timing: 2018-2020	Coordinate with GDPM, NIHE	WHO, OIE, World Bank
1.17.4	Evidence of joint outbreak in	Implementing the Joint Circular No. 16/2013 / TTLT / BYT-BNPPTNT, DAH	Continue to implement the Joint Circular No. 16/2013 / TTLT / BYT-BNPPTNT to carry out	Need funding from government and local budgets, Technical and financial support from	FAO, WHO, OIE, USCDC

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	vestigations and zoonoses management	and GDPM have directed the implementation of the outbreak investigation such as avian influenza, rabies, asthenia, strep.	joint outbreak surveillance program for management of zoonotic diseases, as well as develop guidelines on joint outbreak investigation and management of zoonotic diseases. Implementing agencies: Relevant agencies in MARD, MOH, and MONRE (DAH, GDPM, NIHE, VEA). Expected result: Report on the results and developed circular to guide investigation, such as drafted for rabies. Timing: 2018-2020	international organization (WHO, FAO, US CDC, WCS) in the development of guideline circular	NIHE to develop documents	
1.17.5	Update guidelines for diagnostic and clinical activities for priority zoonoses	MARD has issued Circular No. 07/2016 / TT-BNNPT-NT on the prevention and control of terrestrial animal diseases, including 5 prioritized zoonotic diseases (avian influenza, rabies, streptococcal and leptospirosis), MOH had circular guiding the surveillance of human rabies No. 622 / TT / BYT	MARD and MOH continue to issue the standard and clinical guidelines for the management of communicable disease from prioritized animals Implementing agencies: Relevant agencies in MARD, MOH and MONRE. Expected result: The standard and clinical guidelines for the management of communicable disease from prioritized animals are issued. Timing: 2018-2020	Need the collaboration between MOH and MARD, funding from Central budget, technical and financial support from international organizations like FAO, WHO, USAID, US CDC.	Coordinate with GDPM, NIHE	

FOCUS AREA 2. Applying One Health approaches in zoonotic disease control

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
2.1	<i>Steering committee on emergency disease will be operational</i>				
2.1.1	Decisions by Prime Minister on establishment of the coordinating mechanisms	[See activity 1.1.1]			
2.2	<i>Xác định vai trò đầy đủ của các Bộ ngành khác bên cạnh BYT</i>				
2.2.1	Determine roles of other ministries in the event of a disease that does not spread to humans (for example: H7N9 is detected in poultry but not yet in humans)	MARD has coordinated with MOH to conduct research, review and advise the Government on a plan for the establishment of a coordinated and unified national coordination mechanism on One Health under the chair of the Deputy Prime Minister. However, the current conditions (according to the Law on Prevention and Control of Infectious Diseases and the Veterinary Law) are not appropriate to implement this activity.	Organize workshops to define the role of other Ministries in cases where the epidemic has not spread to humans for other strains of avian influenza virus and other zoonotic diseases. Implementing agencies: MARD, DAH.	Difficulty in controlling illegal trade of poultry across the border Need funding from Central budget and international organization such as FAO, WHO, USAID	Coordinate with MONRE (VEA) Coordinate with GDPM, NIHE
			Expected result: Define the role of other Ministries in cases where the epidemic has not spread to humans. Timing: 2018-2020		

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others			
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
2.3	<i>Emergency management center is fully equipped for responding to all hazards.</i>					
2.3.1	Finalize guideline for establishing the Emergency Operation Center and the standard operation procedure for establishing the Emergency Operation Center as its 5 key functions; key personnel is required for training to carry out this activity	Organized Workshop on the Operational Guidelines of the Emergency Operation Office of the MOH (EOC) with the participation of Departments, Institutes of MOH, DAH, MARD. Proposed to rename and add members to the EOC according to five main functions of the center.	Continue to finalize the implementation guidelines for the EOC and the Standard Procedures for the implementation of the EOC in accordance with the five main functions of the Center; It is necessary to have key personnel trained to implement this activity. Implementing agencies: MARD, DAH.	Need trained professional staff, following SOP. Need funding from Central budget and international organization such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC SoPsHuman resources	Coordinate with GDPM, NIHE	Coordinate with MONRE (VEA) MPS, MOD, MOIC, MOIT
2.3.2	Establish regional emergency operation centers or similar communication centers to manage regional response	Not yet implemented in the Agriculture Sector. May consider establishing EOC/Center for zoonotic diseases within DAH, in order to strengthen national capacity for prevention and	Establish regional Emergency Operation Centers or similar communication centers to manage the regional responses. Implementing agencies: MARD, DAH. Expected result: Regional	Need funding from Central budget and international organization such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC	Coordinate with GDPM, NIHE Collaborate with the EOC system	Coordinate with MONRE (VEA) MPS, MOD, MOIC, MOIT WHO, US CDC, FAO, OIE, other international organizations

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
	activities	control of zoonotic diseases	Emergency Operation Centers or similar communication centers to manage the regional responses are established. Timing: 2018-2020	of the Human health sector	
2.3.3	Surveillance and response team of the emergency operation centers are trained with full functions	Sent officials to attend workshops and training courses in ASEAN and other countries in the world	Continue to send staff to attend workshops, training. Organize training for emergency response and surveillance teams by foreign experts. Implementing agencies: MARD, DAH. Expected result: Surveillance and Response team of the EOC are trained with sufficient functions Timing: 2018-2020	Need funding from Central budget and international organization such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC Surveillance capacity needs to be strengthened	Coordinate with MONRE (VEA) MPS, MOD, MOIC, MOIT WHO, US CDC, FAO, OIE, other international organizations
2.4	<i>Review and trial preparedness plan by all population to a pandemic</i>		Active rehearsal of prevention and control of influenza A / H7N9 and other dangerous virus strains in MongCai, QuangNinh, Ha Vy market, Thuong Tin, Ha Noi to provide different situations.	Continue conducting rehearsals, renew current plans, examine through rehearsals or practical outbreak situations. Implementing agencies: MARD, DAH. Expected result: Report on the	Need trained professional staff Need funding from Central budget and international organization such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC
2.4.1	Renovate existing plans, check via simulation exercises or via actual situations.				Coordinate with MONRE (VEA), MPS, MOD, MOIC, MOIT WHO, US CDC, FAO, OIE, other international organizations

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	MOH	Other ministries, international partners, etc
2.5		lessons learnt from rehearsals. Timing: 2018-2020	Coordination procedure need to be transparent and strengthened		
2.5.1	Capacity of emergency operation centers to collect, analyze and report timely information, and rapid and timely response activities are required to be developed and implemented	Once the Center is established, the EOC's capacity to promptly collect, analyze and report information as well as rapid and timely response activities need to be developed and implemented.	MARD needs to establish Emergency Operations center (EOC). Need well-trained professional staff, particularly in Epidemiology surveillance Need funding from Central budget and international organization such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC Surveillance capacity needs to be strengthened Implementing agencies: MARD. Expected result: Report on the activities of EOC such as: promptly collect, analyze and report information, rapid and timely response activities to be developed and implemented. Timing: 2018-2020	Coordinate with GDPM, NIHE	Coordinate with MONRE (VEA), MPS, MOD, MOIC, MOIT WHO, US CDC, FAO, OIE, other international organizations
2.6		<i>Risk communications for outbreaks</i>	Organized workshop on standard procedures for risk communication that is developed in accordance with five basic principles of risk	Need well-trained professional staff Need funding from Central budget and international organization	Coordinate with GDPM, NIHE
2.6.1	Trained personnel participate in preparing risk communication pack-		Organize training on risk communication for different sectors, and develop appropriate risk communication packages for many emergency cases.		Coordinate with MONRE (VEA), MPS, MOD, MOIC, MOIT WHO, US CDC,

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others			
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	ages suitable for emergency diseases	communication including: early warning, transparency, listening during epidemic, detailed planning for each stage of the epidemic, and ensuring trust among community.	<p>Implementing agencies: MARD.</p> <p>Expected result: There are many trained communication specialists, many risk communication packages are developed appropriately for many emergency cases.</p> <p>Timing: 2018-2020</p>	<p>zation such as FAO, WHO, USAID, USCDC and technical assistance from experts of WHO, FAO, USCDC</p> <p>Uneven quality in human resources</p>		FAO, OIE, other international organizations

FOCUS AREA 3. Apply One Health approaches for controlling zoonotic agents with pandemic potentials that are not yet to emerge, especially in wildlife

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
3.1	<i>Identify zoonotic and potential pandemic agents in animals before their emergence</i>	<p>DAH will continue to receive technical assistance and equipment enhancements from FAO to diagnose a variety of pandemic viruses of animal origin, often with FAO experts providing technical assistance and training to RAHOs.</p> <p>Implementing agencies: DAH, National Center of Veterinary Diagnosis and laboratories of RAHOs, NIVR, Nha Trang Veterinary Institute.</p> <p>Expected result: Laboratories of DAH, NIVR, Nha Trang Veterinary Institute are able to test a variety of pandemic-potential viruses</p> <p>Timing: 2018-2020</p>	<p>The diagnostic capacity of laboratories is limited, requiring the technical and equipment assistance of international organizations.</p> <p>Coordinate with NIHE on information sharing and technical assistance</p>	FAO, USAID EPT/PREDICT	Coordinate with NIHE on information sharing and technical assistance
3.1.2	Testing of at least 4 virus families will	Rapid diagnosis using Pen-side PCR, risk assessment, WCS.	At least four families of viruses in all relevant animal species will be tested, including corona-viruses		USAID EPT/PREDICT, WHO, FAO, USCDC and

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	be undertaken in related animal species - coronaviruses, filoviruses, paramyxoviridae and influenza virus (refer to zoonotic viruses).	<p>viruses, filoviruses, paramyxoviridae and influenza viruses.</p> <p>Implementing agencies: NCVD and laboratories of RAHOs.</p> <p>Expected result: At least four families of viruses in all relevant animal species are tested, including coronaviruses, filoviruses, paramyxoviridae and influenza viruses.</p> <p>Timing: 2018-2020</p>	trained, requiring the technical and equipment assistance of international organizations.	Other international organizations	other international organizations
3.2	<i>Improve capacity for early detection of spread to humans of potential pandemic infectious agents</i>				
3.2.1	Undertake testing of humans working in association with animals, especially clinical cases	[Health sector activity]			
3.2.2	Establish and strengthen key surveillance in humans and animals, prioritizing 5	In the implementation of Joint Circular No. 16/2013 / TT LT Circular No. 16/2013 / TT LT / BYT-BNNPTNT, direct the localities to strengthen sentinel surveillance, with priority given to 5 zoonotic diseases, and se-	For remote areas in mountainous provinces, Central Highlands, particularly border provinces, the veterinary network is still thin and weak, the accessibility is remaining	Coordinate with GDPM, NIHE on information sharing and	WHO, FAO, USAID EPT/PREDICT, USCDC and other international organizations

Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Main gaps (areas that need more investment/support)	Other ministries, international partners, etc
	zoonotic disease and selected surveillance in high risk animal groups.	<p>conduct clinical surveillance and prioritized surveillance for 5 diseases, especially avian influenza, H5N1, H7N9 viruses, including live poultry market, periodic serological surveillance for leptospirosis in high risk breeding facilities.</p> <p>Implementing agencies: DAH, National Center of Veterinary Diagnosis, RAHOs, NIVR, Nha Trang Veterinary Institute, Provincial Sub-DAHs, Provincial Sub-DLPs.</p> <p>Expected result: Results of sentinel surveillance in live-stock and poultry for 5 zoonotic diseases</p> <p>Risk based</p> <p>Timing: 2018-2020</p>	<p>lected surveillance of high-risk animal groups.</p> <p>difficult. Local budget support is required for surveillance of zoonotic diseases.</p> <p>Complete the identification of risk interaction and intervention recommendations, including development of detailed guidelines of preventive measures for each sector</p>	<p>MOH</p> <p>technical assistance</p>
3.2.3	Evidence of collection, recording, sharing and analyzing of data among sectors.	<p>Implementation of Joint Circular 16/2013 / TT LT / BYT-BNNPTNT and Circular 07/2016/TT-BNNPTNT, DAH and the health sector have shared information on infected cases and outbreaks in animals, specifically the date of detection, the first suspected case or confirmed case that can be transmitted to humans; infected animal; number of infected cases, mortality, and infected herds; Clinical signs of suspected or confirmed animal; Testing results, testing</p>	<p>For remote areas in mountainous provinces, Central Highlands, the veterinary network is still thin and weak, the accessibility is remaining difficult and it's challenging to collect information and data. Local budget support is required for collecting the data of zoonotic disease outbreaks.</p>	<p>WHO, FAO, USAID EPT/PREDICT, USCDC and other international organizations</p> <p>Coordinate with GDPM, NIHE on information sharing and technical assistance</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
3.3	<i>Implement measures to minimize emergence of novel agents in specific industries</i>	<p>mortality, and infected herds; Clinical signs of suspected or confirmed animal; Testing results, testing methods, number of sample tested, number of positive and negative test results.</p> <p>Implementing agencies: DAH, NCVD, RAHOs, NIVR, Nha Trang Veterinary Institute.</p> <p>Expected result: Identify zoonotic disease outbreaks with sufficient information collected and recorded. Share and analyze sectoral data.</p> <p>Timing: 2018-2020</p>			<p>Coordinate with GDPM, NIHE on the implementation of zoonotic disease prevention and control</p>
3.3.1	Develop and introduce industries sectors specific guidance on preventive measures	<p>DAH has advised MARD on the issuance of Circular 07/2016 / TT-BNNPT-NT-TY on the prevention and control of terrestrial diseases in which there was a list of communicable diseases between animals and humans, regulations on epidemic report, diagnosis, outbreak investigation, forced handling of infected animals.</p>	<p>Strengthening inspection and supervision localities in implementing the Circular No. 07/2016 / TT-BNNPTNT-TY.</p> <p>Implementing agencies: DAH, RA-HOs</p> <p>Expected result: Local authorities implement the prevention and control of zoonotic diseases according to the Circular No. 07/2016 / TT-BNNPTNT in a serious and effective manner</p> <p>Timing: 2018-2020</p>	<p>For remote areas in mountainous provinces, Central Highlands, the veterinary network is still thin and weak, the accessibility is remaining difficult, so it is quite challenging to implement prevention measures. Local budget support is required for the prevention and control of zoonotic diseases.</p>	

FOCUS AREA 4: Applying One Health approaches to control zoonotic influenza

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others			
		Update on progress during 2016-2017	Expected activities and results in 2018-2020		Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
4.1			<i>Surveillance program for Highly pathogenic avian influenza H5 and H7N9 (and other strains) and swine influenza virus</i>				
4.1.1	Regular surveillance at high risk areas and species (see specific targets in National Strategies).	Conduct regular surveillance of highly pathogenic avian influenza H5N1 and H7N9 viruses and swine influenza virus in high risk areas according to Decision No. 1206 / QD-BNN-TY dated 4/7/2017, Regular surveillance by FAO/USAID funding.	Passive surveillance: Clinical surveillance and sampling to send to laboratory sampling/ Active monitoring of highly pathogenic avian influenza H5N1 and H7N9 and swine influenza viruses in high-risk areas NIHE collaborate with RAHOs to strengthen detection and surveillance capacity for influenza H7N9 of veterinary and health divisions in Bac Giang and Ha Noi.	Certain types of poultry were infected with no clinical signs Funding support from central, local and international organizations for sampling is required Need diagnostics equipment for labs Strengthen surveillance network	Sharing surveillance information to GDPM and NIHE	WHO, USAID EPT/PREDICT, USCDC, FAO, OIE and other international Organizations	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
4.1.2	Continuing efforts to reduce poultry smuggling or through the enforcement or creation of legal trade channels with neutrality cost	Coordinate with Market Surveillance Agency (MOIT) to set up inspection teams to check the illegal trade of poultry in high risk provinces in order to prevent avian influenza virus spreading across the border and to other provinces.	Continue to set up inspection teams to check the cross-border trading of poultry in high risk provinces, preventing disease transmission. Implementing agencies: DAH Expected result: Detection of smuggled poultry. Detection of pathogens and timely treatment to prevent infectious diseases. Timing: Feb-April and Oct-Dec , 2018-2020.	Cost of the destruction of smuggled poultry should be supported by central and local budgets Support from International organizations	MPS Market Surveillance Agency, Border Guard, Provincial Public Security, Transportation in border provinces and poultry smuggling points. WHO, USAID EPT/PREDICT, USCDC, FAO, OIE and other international Organizations
4.1.3	Manage the introduction of H7N9 viruses according to contingency plans	MARD issued Decision No. 1206 / QĐ-BNN-TY dated 07/4/2017 on the “National Program on Avian Influenza Surveillance”. DAH implemented surveillance	Continue to implement Decision No. 1206 / QĐ-BNN-TY dated 07/4/2017 for clinical surveillance of H7N9 virus and taking samples at live poultry market Division of Epidemiology, DAH	Control of cross-border smuggling and wild birds' movement Funds by central government and international organizations are required Risk communication	Coordinate with GDPM to implement Joint Circular No. 16/2013/ WHO, USAID EPT/PREDICT, USCDC, FAO, OIE and other international Organizations

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
		<p>lance according to Decision 1206 / QD-BNN-TY.</p> <p>DAH implemented surveillance activities for H5N1 and H7N9 viruses with FAO support</p>	<p>is developing action plan for avian influenza.</p> <p>Implementing agencies: DAH, RAHOs.</p> <p>Expected result: Minimize the risk of H7N9 influenza virus penetrating</p> <p>Early detection and timely treatment of H7N9 influenza virus entering into Viet Nam</p> <p>Reduce the risk of H7N9 virus infecting to poultry and humans.</p> <p>Timing: Months in 2018-2020</p>		TTLT-BYT-BN-N&PTNT
4.1.4	Better understand the range of swine influenza viruses in Viet Nam, including their potential for pandemic.	Swine influenza surveillance in high risk areas (USAID project) to reduce the risk of infection	Continuing to update information on virus strains through surveillance of avian influenza in pigs in high risk areas.	Swine, avian influenza virus are always changing	Coordinate with GDPM to implement Joint Circular No. 16/2013/ TTLT-BYT-BNN&PT-NT
4.1.5	Response the outbreaks	DAH has directed the implementation of the SOP	Continue to implement the SOP to quickly report, rapidly	Training the animal health system at high risk provinces	Coordinate with GDPM to guide MONRE to guide

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
4.2	<i>Effective vaccination programs for poultry</i>	<p>through national plans, regulations and guidelines / standard implementation procedures (see specific objectives in the National Strategies).</p> <p>to promptly report, rapidly destruct infected and contacted poultry with the compensation payment, transportation management, thorough investigation of the outbreaks. Implement the reporting regime in accordance with Circular No. 07/2016 / TT-BNNPTNT on prevention and control of terrestrial animal diseases</p> <p>Implementing agencies: DAH, RAHOs</p> <p>Expected result: Early detection of outbreaks to prevent disease spreading, reduce the damage caused by the disease.</p> <p>Do not let the disease spread to humans.</p> <p>Timing: During epidemic period in 2018-2020</p>	<p>destruct infected and contacted poultry with compensation payment, transportation management, thorough investigation of the outbreak. Implement the reporting regime under Circular 07/2016 / TT-BNNPTNT on the prevention and control of terrestrial animal diseases.</p> <p>Implementing agencies: DAH, RAHOs</p> <p>Expected result: Early detection of outbreaks to prevent disease spreading, reduce the damage caused by the disease.</p> <p>Do not let the disease spread to humans.</p> <p>Timing: During epidemic period in 2018-2020</p>	<p>to implement Joint Circular No. 16/2013/ TTLT-BYT-BN-N&PTNT</p>	WHO, USCDC, FAO, OIE, other international Organizations
4.2.1	To review and study vaccination programs to determine the effectiveness of the discharge the virus of vaccines injected on duck flocks.	<p>DAH has directed the high-risk provinces to carry out vaccination of avian influenza for poultry species relevant with the pathogenic virus; determined the suitable vaccines with the virus strain.</p>	<p>Carry out vaccination in high-risk areas; determine the suitable vaccines with the virus strain.</p> <p>Implementing agencies: DAH, NCVD, Sub-DAHs and Sub-DLPs in high-risk provinces.</p> <p>Expected result: Identification of vaccines, vaccination targets,</p>	<p>Coordinate with GDPM to implement Joint Circular No. 16/2013/ TTLT-BYT-BN-N&PTNT</p>	FAO

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
4.3	<i>Towards the elimination of highly pathogenic avian influenza virus H5 strains</i>		vaccination time, and vaccines against avian influenza effectively prevent disease and the spread of disease. Timing: Vaccination in Feb-April and Aug-Oct annually. Vaccination of outbreaks when happening.		
4.3.1	Carry out the necessary work to determine the feasibility of establishing a safe area, disease-free area, if possible, to implement measures to build the southeast area into a safe area.	DAH has directed the high-risk provinces to carry out vaccination of avian influenza for poultry species relevant with the pathogenic virus; determined the suitable vaccines with the virus strain.	Implement the Circular No. 14/2016 / TT-BNNPTNT dated 2 June 2016 on the regulations on animal disease-free zones and establishments. Inspect establishments and areas without outbreaks; conduct biosafety livestock production; guide and carry out procedures for recognizing disease-free zones and establishments for localities.	Difficulties in controlling transportation so it is difficult to prevent virus intrusion Avian influenza viruses are always transformed, vaccines are not suitable for disease prevention. There should be funding from central and local to support	Coordinate with GDPM to implement Joint Circular No. 16/2013/TTLT-BYT-BNN&PTNT FAO

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
4.3.2	Annual surveillance on status (in high-risk,		<p>Organize biosafety forums, broadcast information on mass media such as VTC 16.</p> <p>Transboundary transportation of poultry, biosecurity for hatcheries in border provinces.</p> <p>Continue to participate in the FAO Project on Biosafety for Livestock</p> <p>Implementing agencies: DAH, DLP, NAECC.</p> <p>Expected result: Step by step manage and control the disease spreading on a large scale, to actively build avian influenza-free establishments.</p> <p>Established an avian influenza free zone. NAECC has developed 70 biosafety, disease-free and antibiotic-free farms in several provinces and will continue to expand to other provinces.</p> <p>Timing: Months during 2018-2020</p>		FAO
			DAH has directed, checked and requested local authorities to do clinical surveillance in accordance with Circular 07/2016/TT-BNNPTNT	Nâng lực giám sát còn hạn ché	

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
	low-risk areas, and temporary areas without epidemics)	lance and proactive surveillance in high risk areas, low risk areas and areas temporally without diseases.	on Regulations of prevention and control of terrestrial animal diseases and Circular 4/2016 / TT-BNNPTNT) Implementing agencies: DAH, NCVD Expected result: In order to early detect outbreaks, take appropriate measures and preventions to reduce the spread and economic damage and ensure the people's health. Timing: Months during 2018-2020		
4.4	<i>Monitor respiratory infections in humans to early detect new avian influenza viruses</i>				
4.4.1	Review and unify the monitoring program in human.	[Health sector activity]			
4.4.2	Investigates all human cases of influenza to assess disease source and spread.	[Health sector activity]			
4.5	<i>Other key objectives and activities (specific)</i>				

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
4.5.1	Apply the tripartite hazard assessment tools to high risk sectors selected for risk assessment and development of risk management plan.	The DAH has directed the localities to apply tripartite risk assessment tool to selected high risk sectors in order to assess the risks and develop a risk management plan.	Continue to instruct localities to apply tripartite risk assessment tools to selected high risk sectors in order to assess risks and develop a risk management plan. Implementing agencies: DAH, RAHOs, and some sub-DAH& sub-DLPs Expected result: Results of risk assessment available Timing: 2018-2020	This is a new task that needs attention from the relevant agencies, including funding for this activity, especially in the upland provinces and the Central Highlands. Need the support from international organizations in terms of expertise and funding.	Coordinate with GDPM, NIHE to share information according to the Joint Circular No. 16/ TT LT-BY T-BN-NPTNT
4.5.2	All livestock farms > 2000 birds meet bio-safety standards	DAH has directed local authorities to implement Decision No 438 / QD-BNN-TY dated 13 March, 2014 National Action Plan on Avian Influenza 2014-2018 All livestock farms > 2000 poutries apply bio-safety production. DLP has implemented the Project on Improving On-site Poultry Breeding Capacity in the Northern mountainous provinces	Continue to direct local authorities to implement the Decision 438 / QD-BNN-TY and develop the next plan. Implementing agencies: DAH, DLP, RAHOs, and provincial sub-DAH & sub-DLPs Expected result: Almost all livestock farms > 2000 poutries meet biosafety standards Timing: 2018-2020	The remote communes and districts in the mountainous and highland provinces need the attention of the central government and the support of the local budget.	Coordinate with GDPM, NIHE to share information according to the Joint Circular No. 16/2013/ TT LT-BY T-BNNPTNT

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others			
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
		(being implemented by NAE/C); Implement the project “Strengthening state management capacity for animal breeding to 2020” issued in conjunction with Decision No. 680 / QD-BNN-CN dated 07/4/2014 of MARD Continue to support the awareness raising on biosafety production for poultry breeding establishments and enhancing disease-free measures in hatchery establishments. Good implementation of Ministry guidelines: + Decision No. 1057/QD-BNN-CN dated 10/5/2013 of MARD promulgating guidelines for implementation of minimum biosecurity measures for household hatcheries. + Implement Good Animal Husbandry Practices in accordance with VietGAHP Procedures issued under				

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		Decision 4653 / QD-BNN-CN dated 10/11/2015 of MARD. These measures focus on improving the capacity of livestock producers. In addition, MARD has issued regulations on bio-safety production (issued in accordance with Circular 04/2010/TT-BNNPTNT).			
4.5.3	Improve cleaning and disinfection in farms and markets	DAH regularly advised MARD to issue official documents to direct the localities to implement the sanitation and disinfection, especially in farms and markets.	DAH continues to advise MARD to issue official documents to direct the localities to implement the sanitation and disinfection, especially in farms and markets, developing SOPs, sanitation and disinfection procedures at farms and markets.	The remote communes and districts in the mountainous and highland provinces need the attention of the provincial Sub-DAH&DLP, local authorities, including the funds for sanitation and disinfection Implementing agencies: DAH, DLP, and provincial sub-DAH & sub-DLPs Expected result: Sanitation and disinfection of farms and markets are strengthened. Timing: 2018-2020	Coordinate with DAH, NIHE to implement the sanitation and disinfection Conduct frequent sanitation and disinfection activities at farms and markets Lack of SOP and limited sanitation and disinfection procedures.

FOCUS AREA 5: Applying One Health approaches to control rabies

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	(areas that need more investment/support)	Main gaps	MOH
5.1			<i>Strengthening vaccination for dogs and responsibilities of dog owners</i>			
5.1.1	Support the implementation of vaccination campaigns at the provincial and district levels and ensure that the vaccination rate is maintained at over 70%	The Prime Minister issued the “National Programme for Rabies Control and Progress towards Elimination during the period 2017 - 2021” according to Decision No. 193/QĐ-TTg dated 13/02/2017. The Prime Minister issued Directive No. 31/CT-TTg dated 6/7/2017 regarding urgent measures to strengthen rabies prevention and control. Decree No. 90/2017/NĐ-CP of the Government dated 31/7/2017 was issued, including fines for dog owners that don't carry out vaccination of their dogs. MARD issued a number of guiding documents, including Document No. 3596/BNN-TY dated 09/05/2016, Document No. 5635/BNN-TY dated 01/07/2016, and Document No. 6821/BNN-TY dated 12/8/2016).	<ul style="list-style-type: none"> - Complete legal documents on rabies prevention. - Communicate the dangers of rabies - Implement the Thai Nguyen model of domestic dog management (registration for domestic dog, dogs kept in family area, dog vaccination) - Issue Ministry directives before the annual vaccination to the People's Committees of provinces, cities 	<p>Difficulties in dog population management and dogs registration</p> <p>Communes in mountainous provinces often raise free-range dogs and dog owners do not cooperate with veterinary offices to vaccinate dogs, so it is very difficult to get them vaccinated.</p> <p>Local government attention is needed, including funding for vaccination</p> <p>The implementation, data collection and reporting on vaccination and dog management systems are inaccurate and uneven across the country.</p> <p>Need to raise dog vaccination rate in order to reduce the burden of vaccines/anti rabies serum for the human health sector.</p>	<p>Coordinate with GDPM, NIHE, Provincial Preventive Medicine Centers to communicate on the dangers of rabies, the benefits of vaccination and compulsory dog vaccination</p>	<p>Collaborate with MOIC to communicate on the dangers of rabies, the benefits of vaccination and compulsory dog vaccination FAO</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		DAH established working groups that carried out inspections in 33 localities in 2016 (Document No. 877/TY-DT dated 06/5/2016 of DAH). Information on the rabies situation has been periodically updated and shared, identifying challenges and difficulties and guiding localities on prevention and control of rabies.	Communication activities are carried out, people know that rabies is a dangerous disease The owner do registration when raising dog, and carry out the annual dog vaccination. The rate of vaccination for the dog herd over the total population increases gradually to 70% in 2021 Timing: 2018-2020		Other ministries, international partners, etc

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
	MARD has established the Rabies Animal Vaccination Fund, which in 2017 provided 90,000 doses of vaccine to support ring vaccination during outbreaks. DAH in cooperation FAO expanded training and communication activities to prevent rabies in 6 more districts of PhuTho and Thai Nguyen. DAH in cooperation with FAO developed dog management model in 2 districts (Pho Yen, Dong Hy), Thai Nguyen province. The Guideline for domestic dog management has been drafted. Seminar on the results of model implementation, guidelines for domestic dog management was organized for the Regional Sub-DAH and 30 provinces. DAH in cooperation with US CDC organised training to strengthen capacity for rabies prevention and con-				

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		trol for veterinary officers in Phú Thọ province. It is expected that the above models will be introduced in 6 other provinces (Hà Giang, Quảng Ninh, Nam Định, Quảng Nam, Bà Rịa – Vũng Tàu and An Giang) in 2017		Limited communication. Very few local areas conduct communication campaigns about the risks of not vaccinating dogs, not taking PEP when being bitten by dogs.	DAH coordinates with MoJIC to guide the media to prioritize the communication activities on rabies prevention and control
5.1.2	Conduct behavior change communication aim to minimize free-range dogs while boosting vaccination and dog registration	DAH working group inspections (see 5.1.1. above) have assessed the implementation of public awareness raising communications at the local level.	Continue to support the organization of the Annual World Rabies Day and media campaigns in priority provinces.	The remote communes do not have information media such as loudspeakers, so communication to dog owners are difficulties.	DAH coordinates with GDPM and NIHE in the Annual World Rabies Day campaign in selected high risk provinces.

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
		<p>the media (TV: VTV1 and VTV14; Radio: VOV1; newspapers: Nông-nhiệp Việt Nam, Tiền Phong, etc.).</p> <p>Communication campaigns on rabies have been organised in Phú Thọ, TháiN-guyên and HòaBinh prov-inces.</p> <p>DAH in cooperation with FAO has implemented a KAP survey of people raising dogs on rabies prevention and control activities in PhúThọ province. The results have assisted this locality to understand the situation and to develop prevention and control mea-sures, especially for aware-ness raising to increase the rate of dog vaccination coverage.</p> <p>The rabies communica-tion model developed by GDPM and DAH together with MOET in schools in PhúThọ province has been expanded to 16 provinces during 2016 and 2017.</p>	<p>Documented model -> manual -> expand to other provinces</p> <p>Implementing agencies: DAH</p> <p>Expected result: Animal owners are aware that rabies is dangerous, the dog must be registered and managed in the family area and vaccinated, and that they need to commit to the local government. By 2020, more than 90% of dog owners will register their dogs and reduce the number of free-range dogs.</p> <p>Timing: 2018-2020</p>		

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
5.1.3	70% of the villages can control the number of dogs (through the dog control program and the responsibility of the owner)	Surveillance, diagnosis and testing systems of rabies in animals have been invested and operational (3 more rabies testing laboratories of the animal health sector). Developing rabies management software, to be tentatively implemented across the country from 2018	Animal owners are aware that rabies is dangerous, the dog must be registered and managed in the family area and vaccinated, and that they need to commit to the local government. By 2020, more than 90% of dog owners will register their dogs and reduce the number of free-range dogs.	Communes in remote and mountainous areas of the Central Highlands are less aware of the dog managements, their long-standing free-ranging practices are difficult to change. Need of the attention from local authorities and mass organizations, including funds for the domestic dog management	Collaborate with MOIC, the provincial Department of Information and Culture to communicate on the dangers of rabies, dog raising must be registered, locked up, managed in the family premises, not free ranging. WHO, USCDC, FAO, OIE, other international organizations
5.2	Establishment of treatment centers in high risk areas, minimizing travel	[Health sector activity]	Implementing agencies: DAH Expected result: Guidelines for the regulation of domestic dog management are issued. Provinces carry out the domestic dog management under the national program. The domestic dog management model of FAO is reproduced in most provinces and cities throughout the country. Timing: 2018-2020	<i>Post-exposure prophylaxis (PEP) packages for people being bitten by dog (or other animal bites) suspected with rabies</i>	

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
5.3	Identify high risk groups and implement vaccination	during PEP treatment			
5.3.1	National program has proposed high-risk groups required vaccination against exposure	Implementation the National Program for proposing high-risk groups in the Agricultural area, people that regularly contact with dogs get vaccinated against exposure	Implementing agencies: DAH, NCVD, RAHO V, VI Expected result: High-risk groups are identified to propose vaccination against exposure Timing: 2018-2020	Public awareness is limited, people do not vaccinate their dogs, or do not go to the health clinics for PEP, or go to non-licensed clinics for rabies treatment after being bitten; Bitten victims feel afraid and think that the vaccination will affect their health. People groups with large numbers are unlikely to have the funds for vaccination which requires the local government's attention, and budget of Central government, the People's Committee of the province, the District People's Committee, the Commune People's Committee Pre-exposure prophylaxis for high-risk groups (including dog vaccinator) was included in national action plan, however, since then, it has not been applied.	WHO, USCDC, FAO, OIE, other international organizations Coordinate with GDPM, NIHE

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
5.4	<i>Strengthen the diagnostic capacity of rabies</i>	Establishing, maintaining the testing capacity for accurate detection of rabies in humans and animals	DAH has established rabies laboratories within the agriculture sector, including: NCVD, RAHO V, VI and Hochiminh Sub-DAH DAH in cooperation with US CDC conducted active surveillance of dogs suspected of having rabies that were slaughtered for sale in markets in three districts of Phú Thọ in 2016 and 2017.	<p>Strengthen and maintain the animal rabies surveillance</p> <p>Regularly conduct training, improvement of diagnostic procedures</p> <p>Strengthen equipment and biosafety for 4 rabies-diagnostic laboratories</p> <p>Implementing agencies: DAH, NCVD, RAHO V, VI</p> <p>Expected result: Suspected dogs are sent to the laboratory for diagnosis</p> <p>Diagnostic staff are trained</p> <p>Sufficient equipment for testing</p> <p>Complete diagnostic procedures</p> <p>Timing: 2018-2020</p>	<p>Laboratory staff are further trained</p> <p>Need to support of international organization (FAO, CDC)</p> <p>Coordinate with GDPM and NIHE on information sharing and experience exchange</p> <p>WHO, USCDC, FAO, OIE, other international organizations</p>

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020 (areas that need more investment/support)	MOH	Other ministries, international partners, etc
5.5	<i>Other key objectives and activities (specify)</i>	<p>and FAO and distributed to RAHOs, SDAHs, GDPM, NIHE, NIVR, VNUA, VO-HUN members and international organisations.</p> <p>DAH in cooperation with US CDC has organised surveillance for rabies in wild animals in Cát Tiên National Park.</p>			<p>WHO, USCDC, FAO, OIE, other international organizations</p> <p>Coordinate with GDPM, NIHE to share the information on human</p>
5.5.1	Establishment of rabies-free zones	<p>A rabies safe zone has been established in Ho Chi Minh City (Decision No. 129/QĐ-TY-DT dated 10/4/2017 of DAH) covering 12/24 districts in the city.</p> <p>A rabies-free zone has been established in Côn Đảo district of Bà Rịa-Vũng Tàu. Circular 14/2016/TT-BNNPTNT dated 2018 regulating the disease-free zones and establishments was issued</p>	<p>Continue supporting and encouraging cities and townships in tourist areas to build rabies-free areas according to Circular No. 14/2016 / TT-BNNPTNT (such as Phu Quoc (KienGiang), Nha Trang (KhanhHoà), Da Nang, ThuaThien Hue, Ha Long (QuangNinh), Cat Ba (Hai Phong), etc.</p> <p>DAH will evaluate and issue certificates of accreditation to local authorities (communes, wards, districts, provinces and cities) for rabies-free.</p> <p>Implementing agencies: DAH</p>		

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
5.5.2	Development of domestic dog vaccine production	Hanvet company in cooperation with NIHE and National Biological Company 1 has been conducting the research on production of domestic rabies vaccine for dogs in experimental stage.	<p>Continue testing for production and use of vaccine at pilot and mass scales.</p> <p>Implementing agencies: DAH, NIHE, Havet Company, National Biological Company 1.</p> <p>Expected result: Domestic rabies vaccine is used with cheap price.</p> <p>Timing: 2018-2020</p>	<p>Need to support from the international organizations for research and investment to develop the production capacity of rabies vaccine for cats and dogs.</p>	<p>Coordinate with GDPM, NIHE</p>
5.5.3	Strengthening the implementation of Joint Circular No. 16/ TTLT-BYT-BNNPTNT (on collaboration, joint investigation and response to zoonotic diseases) in relation to rabies.	GPDM and NIHE) has organised many training courses to disseminate Joint Circular No. 16/ TTLT-BYT-BNNPTNT at the provincial level.	<p>DAH will continue to strengthen the implementation of Joint Circular No. 16 / TTLT-BYT-BNNPTNT from the provincial level down to the lower levels.</p> <p>Implement the model supported by WHO, FAO and USAID EPT /P&R.</p> <p>The pilot evaluation of Joint Circular No. 16/ TTLT-BYT-BNNPTNT implementation at the provincial level, conducted by DAH (including RAHO2,</p>	<p>Some mountainous provinces, Central Highlands and remote areas find it difficult to implement Circular 16/ TTLT-BYT-BNNPTNT</p> <p>Need funding from local government and international organizations.</p>	<p>WHO, USCDC, FAO, OIE, other international organizations</p> <p>Coordinate with GDPM, NIHE to implement the Circular 16/ TTLT-BYT-BNNPTNT</p>

Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020 (areas that need more investment/support)	MOH Other ministries, international partners, etc
5.4	RAHO3 and RAHO4) with support from WHO, FAO and USAID EPT/P&R, found that sharing of information on bite cases with possible rabies risk was still limited.	ities have well-implemented the Joint Circular No. 16/TTLT-BYT-BNNPTNT (on co-operation, co-investigation and response to zoonotic diseases) related to rabies. Timing: 2018-2020	DAH and GDPM collaborated to organise a simulation/table top exercise on rabies cross-sectoral collaboration at the provincial level, with support from FAO, WHO and USAID EPT/P&R. Draft standard operating procedures for rabies investigation and response were also developed	Some Central Highland, remote and mountainous provinces find it difficult to access One Health. Need local government and international funding support
5.5.4	Appropriate review of national control efforts, supported by research and sharing of findings and evidence for effective rabies prevention and	A scientific conference and sharing of experiences on prevention and control of rabies was organised in Nghê An province in September 2016.	DAH will organize annual review meetings on national programs of control and towards elimination of rabies. One Health Partnership Secretariat through the USAID SCOH2 project in collaboration with DAH (and SCOH2 Technical Advisory Committee) to implement rabies control and prevent-	WHO, USCDC, FAO, OIE, other international organizations Coordinate with GDPM, NIHE on rabies prevention and control

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
	control. [Link to Focus Area 1: H. Appropriate One Health Research]		<p>tion in agricultural sector.</p> <p>Implementing agencies: DAH</p> <p>Expected result: Rabies control and prevention is effective with close collaboration among relevant agencies.</p>		
5.5.5	Participation in global and regional rabies elimination efforts B14		<p>With support from the One Health Partnership Secretariat through USAID/SCOHH2, a consultant will be mobilized to assist Viet Nam's role in coordinating the overall monitoring of ASEAN Rabies Elimination Strategy (ARES).</p>	<p>Inspection of dog transportation in border provinces should be carried out strictly, including transport of dogs from Viet Nam to other countries.</p> <p>There is no plan for active prevention and control against rabies according to the Circular No. 07/2016 / TT-BNNPTNT on prevention and control of terrestrial animal diseases, there is no active surveillance plan.</p>	<p>Coordinate with GDPM and NIHE on information sharing and collaboration on rabies control and prevention</p> <p>Collaborate with other departments such as the MOT, Border Guard, Ministry of Public Security to control the transport of dogs.</p> <p>WHO, USCDC, FAO, OIE, other international organizations</p>

FOCUS AREA 6: Applying One Health approaches for Antimicrobial Resistance Management

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc	
<i>Limit the use of antibiotics in animals, while enhancing control of the use of antibiotics necessary for humans</i>							
6.1	6.1.1	Assess the effectiveness and feasibility of the ban on use of antibiotics that have a growth promotion effect on livestock and import-ant drugs for human use. If possible, issue and enforce bans, request to sell prescription drugs	The Government issued Decree No. 39/2017/NĐ-CP dated 04/04/2017 on the management of animal feeds, which regulated the ban on the use of antibiotics for the purpose of stimulating the growth of livestock from 2018. Some measures to prevent the use of unused chemicals (banned substances) in livestock: - Promulgating the list of banned use in livestock production including melamine, beta-agonist and some chemicals and antibiotics (Circular No. 01/2016/TT-BNNPTNT, Circular No. 28/2014/TT-BNNPTNT, 42/2015/TT-BNNPTNT). - Program of Signing commitment not to use banned substances in livestock produc-tion, organized by DLP in the localities. - Improving the sanctioning levels and the handling of	Organize the inspection and supervision of conditions for import and production of veterinary drugs; Organize the sampling of veterinary drugs produced and circulated to check the quality of veterinary drugs; Organize the monitoring of trading conditions, quality of veterinary drugs, the trading and use of veterinary drugs.	Provide expert assistance and funds to organize the review and removal of the veterinary drugs that have already been granted circulation permits containing antibiotic active substances that are in the List of important use for people at high-risk or already drug resistance. In order to improve the use of antibiotics in contraven-tion of regulations, it is neces-sary to intensify the inspection, inspection and handling of violations in the trading and use of veterinary drugs in con-travention of regulations.	Medical Service Administration provide DAH-MARD with the List of important antibiotics for people at high-risk or already drug resistance.	FAO

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		using banned substances in livestock. Decree on sanctioning administrative violations No. 119/2013 / ND-CP dated 09/10/2013, is being revised.	supervised and examined for veterinary drug trading; 100% (only observation) of livestock and poultry slaughterhouses are monitored and checked for the use of veterinary drugs, especially sedatives before slaughter. On 21/6/2017, Minister of MARD issued Decision No. 2625/QĐ-BNN-TY issued the “National Action Plan on management of antibiotic use and control of antibiotic resistance in livestock and aquaculture production in 2017-2020” with the overall objective of minimizing the risk of antibiotic resistance to the community through controlling the use of antibiotics in livestock and aquaculture in Viet Nam, specific goals including: 1.1 Review, amend and enforce regulations and policies related to antibiotic resistance and antibiotic use in livestock and aquaculture. 2.2. Raising awareness about the use of antibiotics and the risk of antibiotic	Food safety risk: toxic residues. Timing: 2018-2020	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
			<p>resistance formation for technicians and professionals working in agriculture and food; for farmers and consumers.</p> <p>2.3. Implement good practices in medical treatment, good practices in the production of animal feed, good practices in livestock and aquaculture production.</p> <p>2.4. Monitor antibiotics use, antibiotic residues and antibiotic resistance in livestock and aquaculture production.</p> <p>2.5. Facilitate interdisciplinary cooperation on antibiotic resistance management</p> <p>To achieve the above objectives, the Plan proposed 44 activities for relevant agencies under MARD from 2017 to 2020.</p> <p>MARD has issued Decision No. 5208/QD-BNN-TY dated 14/12/2017 on the plan for examining and reviewing veterinary drug business in 2018-2020; Decision No. 2803/QD-BNN-TY dated</p>		Other ministries, international partners, etc

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		7/7/2016 on management and supervision of imported antibiotic materials for veterinary drug production in 2016-2020.			
6.1.2	Develop guidelines for prescribing and using antibiotics for animals	Not-yet implemented	<p>Develop guidelines for prescribing and using antibiotics for animals.</p> <p>Implementing agencies: DAH.</p> <p>Expected result: Guidelines for prescribing and using antibiotics for animals are issued.</p> <p>Thời gian thực hiện: 2019</p>	<p>Assist the expert to develop the draft and fund two meetings with the relevant agencies in the Ministry and localities.</p>	Medical Services Administration support the expert and participate in the development of the guidelines
6.1.3	Update a list of antibiotics allowed for use in animals Issued	Promulgated List of veterinary drugs prohibited for circulation in Viet Nam in Circular No. 10/2016/TT-BNNPTNT.	<p>Submit to the Ministry for promulgation the List of veterinary drugs permitted for circulation in Viet Nam (updated, amended and supplemented).</p> <p>Implementing agencies: DAH</p> <p>Kết quả mong đợi: The list of veterinary drugs permitted for circulation in Viet Nam is promulgated by the Ministry.</p> <p>Timing: Annually</p>	MARD issued Circular No. 20/2017/TTBNNPTNT guiding the implementation of Government Decree No. 39/2017/NĐ-CP on animal, aquaculture feed management.	FAO

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
6.1.4	Establish and enforce residual limits	Drafted a List of maximum limits of residue allowed in animal products	<p>The list of veterinary drugs permitted for circulation in Viet Nam is promulgated by the Ministry.</p> <p>Implementing agencies: DAH, NAFIQAD</p> <p>Expected result: The list of maximum residue limits allowed in animal products is issued by MOH.</p> <p>Timing: 2018</p>	<p>Provide financial support to DAH to carry out sampling for surveillance of veterinary drug residues in animal products</p>	<p>Pursuant to the list of veterinary drugs permitted for circulation and banned use in Viet Nam, MOH shall promulgate the list maximum residue limits allowed in animal products.</p> <p>FAO</p>
6.1.5	Establish an appropriate antibiotic use National monitoring system	MARD has issued Decision No. 5208/QD-BNN-TY dated 14/12/2017 on the plan for checking and reviewing veterinary drug business in 2018-2020; Decision No. 2803/QD-BNN-TY dated 07/7/2016 on management and supervision of imported antibiotic materials for veterinary drug production in 2016-2020.	<p>Organize the inspection and supervision of conditions for import and production of veterinary drugs; Organize the sampling of veterinary drugs produced and circulated to check the quality of veterinary drugs; Organize the monitoring of trading conditions, quality of veterinary drugs, the trading and use of veterinary drugs.</p> <p>Implementing agencies: DAH</p>	<p>Provide funding for the central and local animal health agencies to inspect the use of drugs and take samples for quality control of veterinary drugs.</p> <p>Risk assessment</p> <p>National program for annual implementation</p> <p>FAO</p>	

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
6.1.6	Strengthening of biosecurity measures and the promotion of GAHP	<p>The MARD has issued Biosafety Regulations and GAHP</p> <p>Implementing agencies: DLP, Directorates of Fisheries</p> <p>Expected result: The number of</p>	<p>Encourage livestock and aquaculture facilities to apply biosafety measures, GAHP.</p> <p>Implementing agencies: DLP, Directorates of Fisheries</p> <p>Expected result: The number of</p>	<p>Need more involvement of private companies applying biosafety measures</p>	

		Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH Other ministries, international partners, etc
6.2	<i>Limit and improve the use of antibiotics in humans</i>		livestock and aquaculture farms applying biosecurity measures, GAHP increased annually. Timing: 2018-2020		
6.2.1	Widespread implementation of antibiotic management programs and community behavior change campaigns	Implement widely the antibiotic management programs and community behavior change campaigns	Continue to coordinate with MOH, FAO and WHO to implement a behavior change communication campaign. Implementing agencies: DAH, Veterinary Department-VNUA, Expected result: The awareness of farmers and livestock owners is improved, the use of antibiotics in livestock is limited. Timing: 2018-2020	Need expert support, funding for this activity	Coordinate with MSA and with CHEC to implement the communication activities
6.2.2	Develop training materials	Develop training materials	Coordinate with Medical Services Administration - MOH and the International Organizations (FAO, WHO) to develop training materials. Implementing agencies: DAH, Veterinary Department-VNUA Expected result: Training materials are available. Timing: 2019-2020	Need technical and financial support for developing the material	MONRE (VEA/ Department of Pollution Control) WHO, FAO US-CDC Coordinate with MSA

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
6.2.3	Develop communication materials	Develop communication materials	Continue to coordinate with Medical Services Administration - MOH, FAO, WHO to develop communication materials. Implementing agencies: DAH, NAEC Expected result: Many communication materials and messages are disseminated. Timing: 2018-2020	Need technical and financial support for developing the communication material	Coordinate with CHEC
6.2.4	Organizing communication activities	Collaborated with FAO, WHO to celebrate the World Antibiotic Awareness Week	Continue to collaborate with FAO, WHO to organize the celebration of the World Antibiotic Awareness Week and implement communication activities. Implementing agencies: DAH, NAEC, QG Expected result: Many communication activities are organized in many locations across the country. Timing: 2018-2020	Need funding from localities and support from international organizations	Coordinate with MSA
6.2.5	Assess knowledge of community	Not yet implemented	Collaborate with FAO, WHO to look for funding of a project to assess community knowledge of antibiotics.	Need funding from Central and financial support from international organizations	Coordinate with MSA to implement

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
6.3	<i>Improve information, database on antibiotic use and antibiotic resistance</i>	<p>Implementing agencies: DAH</p> <p>Expected result: Report on community knowledge assessment of antibiotic resistance are available</p> <p>Timing: 2019-2020</p>			
6.3.1	Identify priority pathogens in antibiotic resistance	<p>Prioritized pathogens in antibiotic resistance have been identified in the National Action Plan</p> <p>Implementing agencies: DAH, agencies under DAH and research institutes</p> <p>Expected result: Results of antibiotic resistance surveillance in livestock and aquaculture production are announced annually.</p> <p>Timing: 2018-2020</p>	<p>Organize surveillance of antibiotic resistance to identified prioritized pathogens.</p> <p>Implementing agencies: DAH, agencies under DAH and research institutes</p> <p>Expected result: Results of antibiotic resistance surveillance in livestock and aquaculture production are announced annually.</p> <p>Timing: 2018-2020</p>	<p>Provide funding to agencies to carry out sampling for antibiotic resistance surveillance</p>	<p>MOIT (Market Management Department), MONRE (VEA/Department of Pollution Control) WHO, FAO, US-CDC</p>
6.3.2	Set up surveillance system	Not yet implemented	<p>Develop national surveillance program.</p> <p>Implementing agencies: DAH</p> <p>Expected result: National surveillance program is issued by the Ministry.</p> <p>Timing: 2018-2019</p>	Financial support to organize the consultation meetings	<p>MOIT (Market Management Department), MONRE (VEA/Department of Pollution Control) WHO, FAO, USC-DC, CIRAD</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
6.3.3	Develop and share national policies and guidelines for antibiotic resistance surveillance at hospitals (including susceptibility testing) and for agriculture	Not yet implemented	National policies and guidelines for surveillance of antibiotic resistance in hospitals and agriculture will be developed and shared. Implementing agencies: DAH Expected result: National policies and guidelines for surveillance of antibiotic resistance in hospitals and agriculture are available. Timing: 2019-2020	Cần có hỗ trợ về tài chính từ ngân sách trung ương và các tổ chức quốc tế Implementing agencies: DAH Expected result: National policies and guidelines for surveillance of antibiotic resistance in hospitals and agriculture are available. Timing: 2019-2020	Phối hợp với Cục Quản lý khám chữa bệnh.	WHO, USCDC, FAO, PATH
6.3.4	Develop database on antibiotic use and antibiotic resistance (in humans and animals).	Develop data management software on production and import of veterinary drugs	Develop database on antibiotic use and antibiotic resistance in animals. Implementing agencies: DAH Expected result: Database is established. Timing: 2018-2020	Expert support in developing data management software	Coordinate with MSA	WHO, USCDC, FAO
6.4	<i>Intensive infectious disease control and prevention programs at hospitals (IPC)</i>					
6.4.1	Widely implement IPC programs in hospitals	[Health sector activity]				

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
6.5	<i>Strengthen the laboratory capacity to identify antibiotic resistance genes by high quality programs</i>				
6.5.1	Funding for existing laboratories with ARM testing capabilities and is expected to build in the future	Not-yet implemented			
6.5.2	To build appropriate laboratories including reference laboratories for the veterinary sector - National Centre for Veterinary Hygiene Inspection- and for the health sector - Tropical Hospital	FAO expert conducted capacity and equipment assessment and organized training for laboratory staff of the National Veterinary Hygiene Inspection Center	Supplement equipment and continue to provide staff training for staff. Implementing agencies: DAH Expected result: Laboratories of National Veterinary Hygiene Inspection Center meet the regional standard. Timing: 2018-2020	Need equipment and financial support for staff training Require better coordination among laboratories for screening tests of antibiotics	NIHE to support staff training FAO

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others		
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	
6.5.3	Quality management system for laboratories	Gradually upgrade the laboratory for equipment and train laboratory experts	<p>Develop quality control systems for laboratories.</p> <p>Implementing agencies: DAH, National Veterinary Drug Testing Centers I and II, RAHOs</p> <p>Expected result: Quality control systems for laboratories are established.</p> <p>Timing: 2019-2020</p>		Coordinate with NI-HF-MOH	FAO
6.5.4		Establishment of a national laboratory network with more than 18 laboratories meeting ISO 15189 standards and recognized for surveillance of antimicrobial resistance (medical sector)				6.6 <i>Minimize the presence of antibiotic residues in the environment</i>

Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others	
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Main gaps (areas that need more investment/support)	Other ministries, international partners, etc
6.6.1	Minimize the use of antibiotics in livestock, improve the treatment of waste	<p>Establish inspection teams to monitor the use of antibiotics in livestock production and waste treatment</p> <p>Implementing agencies: DAH, DLP, Veterinary Inspection Centers I and II</p> <p>Expected result: Report on the results of examination and inspection of the use of antibiotic ingredients in livestock production and waste treatment is available.</p> <p>Timing: 2018-2020</p>	<p>Continue to establish inspection teams to monitor the use of antibiotics in livestock production and waste treatment.</p> <p>Implementing agencies: DAH, DLP, Veterinary Inspection Centers I and II</p> <p>Expected result: Report on the results of examination and inspection of the use of antibiotic ingredients in livestock production and waste treatment is available.</p> <p>Timing: 2018-2020</p>	<p>Need a directives of MARD and guidelines of DAH on the use of antibiotics in livestock and waste treatment</p> <p>Implementing agencies: DAH, DLP, Veterinary Inspection Centers I and II</p> <p>Expected result: Report on the results of examination and inspection of the use of antibiotic ingredients in livestock production and waste treatment is available.</p> <p>Timing: 2018-2020</p>
6.6.2	Control of farm waste including antibiotics and drug-resistant bacteria (MONRE)	Not-yet implemented	<p>Establish waste inspection and control team including antibiotics and drug-resistant bacteria that are discharged from the farm.</p> <p>Implementing agencies: DAH</p> <p>Expected result: Report on waste inspection and examination including antibiotics and drug-resistant bacteria that are discharged from the farm.</p> <p>Timing: 2019-2020</p>	<p>Need financial support from Central budget and international organizations for these activities</p> <p>Implementing agencies: DAH</p> <p>Expected result: Report on waste inspection and examination including antibiotics and drug-resistant bacteria that are discharged from the farm.</p> <p>Timing: 2019-2020</p>

FOCUS AREA 7: Applying One Health approaches to control other diseases of animal origin

#	The objectives according to OHSP Strategy	Activities of the agriculturesector: Ministry of Agriculture and Rural Development	Areas need coordination between the agriculturesector and other agencies		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas need more investment / support)	MOH	Other ministries, international partners, etc.
7.1	<i>Kiểm soát bệnh Nhiệt thán</i>	<p>Issued Circular 07/2016 / TT / BNNPTNT on the prevention and control of terrestrial animal diseases with anthrax (Appendix 12).</p> <p>DAH directs the Provincial Sub-DAH in infected provinces, threatened areas, and high-risk areas to do vaccination, implementation of disease reporting, outbreak control when outbreaks happen.</p> <p>Allocation of vaccines to districts supported by program 30a.</p>	<p>Implementation of communication and vaccination in infected areas, threatened areas and high-risk areas.</p> <p>Allocation of vaccines to districts supported by program 30a.</p> <p>Implementing agencies: DAH</p> <p>Expected result: Animal owners in infected areas, threatened and high-risk areas are aware of the dangerous nature of the anthrax, implementation of the compulsory vaccination is over 80% of the total herd.</p> <p>Timing: Before primary vaccination and additional vaccination from 2018-2020</p>	<p>Remote communes of mountainous provinces with difficult access need to have support from the local authorities including fund for vaccination.</p>	<p>Share information on human anthrax in line with Joint Circular 16/TTT/BYT-BNNPTNT at the provincial level.</p> <p>Coordinate with MOH to develop communication messages on anthrax</p>
7.2	<i>Reduce the burden of disease caused by Streptococcus suis</i>	Promulgate Circular No. 07/2016 / TT / BNNPTNT on the prevention and control of terrestrial animal diseases with Streptococcus suis (Appendix 17).	Implement behavior change communication campaigns, especially in the consumption of fresh products from pigs. Direct the monitoring of the implementation of Circular 07/2016 / TT / BNNPTNT.	Remote communes of mountainous provinces with difficult access need to have support from the local authorities including fund for communication	Share information on human Streptococcus suis in line with Joint Circular 16/
7.2.1	Carry out behavior change campaigns (if possible) especially in the consumption				Collaborate with MOIC on Streptococcus suis disease and the consumption of fresh products

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others
	of raw products from pigs	<p>Update on progress during 2016-2017</p> <p>Cooperate with the health sector to investigate and inspect the outbreaks suspectedly caused by <i>Streptococcus suis</i>.</p> <p>Implementing agencies: DAH Expected result: Communication messages are issued Media campaigns are done on the mass media.</p> <p>People are aware of the dangers of <i>Streptococcus suis</i>, and not buying non-inspected meat, uncooked meat and eating pig blood soup.</p> <p>Timing: Food safety day, summer and before Lunar New Year from 2018-2020</p>	<p>Main gaps (areas that need more investment/support)</p> <p>TTLT-BYT-BNNPT-NT at the provincial level. Coordinate with MOH to develop communication messages on <i>Streptococcus suis</i></p> <p>MOH</p> <p>Other ministries, international partners, etc</p>
7.3	<i>Giảm gánh nặng bệnh tật gây ra bởi Leptospirosis</i>	<p>Promulgate Circular No. 07/2016 / TT / BNNPT-NT on the prevention and control of terrestrial animal diseases with Leptospirosis (Appendix 14)</p> <p>Direct localities to do Lepto vaccination</p> <p>Take blood samples for periodic testing in accordance with Circular 07/2016 / TT / BNNPTNT.</p>	<p>Remote communes of mountainous and highland provinces have difficult access and low awareness</p> <p>There is the need to have the attention of the local authorities, funding for communication to provide guidance of preventive measures and not using yellow pork</p> <p>GDPM Share information on Leptospirosis on animal and human in line with Joint Circular 16/TT-BYT-BNNPT-</p> <p>Implementing agencies: DAH.</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others		
#	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
7.3.2	Communication to ensure awareness on the Leptospirosis to the community and to health staff	<p>Expected result: Communication messages are issued.</p> <p>Communication campaigns are done on the mass media.</p> <p>People are aware of the dangers of Leptospirosis, preventive measures to prevent the purchase of yellow meat and eating pig soup</p> <p>Results of laboratory tests are sent to DAH for evaluation.</p> <p>Timing: Months during 2018-2020</p>	NT at the provincial level.		
7.3.3	Strengthen the capacity to diagnose Leptospirosis on human and animal.	DAH has directed localities to implement Circular No. 7/2016 / TT / BNNPTNT on prevention and control of terrestrial animal diseases. Regularly provided training for diagnosis guidance and improve diagnostic procedures of animal Leptospirosis for 7	Continue instructing localities to implement Circular No. 7/2016 / TT / BNNPTNT.	The surveillance system in remote districts and communes in the northern mountainous and Central Highlands provinces is still weak, so no cases of Leptospirosis have been detected. There should be financial support from provincial authorities	Coordinate with GDPM, NIHE to share information of diagnostic results in line

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others
	Update on progress during 2016-2017	<p>Expected activities and results in 2018-2020</p> <p>RAHOs and some provincial Sub-DAHs who has the diagnosis capacity.</p> <p>Implementing agencies: DAH, NCVD.</p> <p>Expected result: Many laboratories of the RAHOs, Sub-DAH&DLP are trained and obtains diagnosis capacity of Leptospirosis disease on animals.</p> <p>Timing: 2018-2020</p>	<p>Main gaps (areas that need more investment/support)</p> <p>for sampling, consolidation of diagnostic equipment for the laboratories of the Provincial Sub-DAHs for the purpose of sampling and identification of disease areas.</p> <p>with Joint Circular No. 16/TTLT/BTY-BN-NPTNT.</p>
7.4	<i>Enhanced traceability and residue testing</i>	<p>Ear numbering were implemented on the farms, lead wire clamps to identify pig origin from transportation quarantine paper to the slaughterhouse.</p> <p>Implementing agencies: MARD, DAH, RAHOs</p> <p>Expected result: Issue official letter and guidance of DAH on the available animal navigation systems.</p>	<p>In mountainous and central highland provinces, implementation of this regulation is difficult, requiring support from the local authorities</p> <p>Coordinate with GDPM, NIHE to share information on farm origins in line with Joint Circular No. 16/TTLT/BTY-BN-NPTNT</p>

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development			Areas where need the collaboration between Agriculture sector and others
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	
7.5			Most pigs on farms are traceable at the slaughterhouse. Timing: 2018-2020		
7.5.1	Carry out a risk assessment to determine exactly the investment needs of the sector.	Assigned risk assessment trainers to give training on risk assessment to RAHOs and some provincials Sub-DAHs.	Continue training on risk assessment and implement of risk assessment of foodborne zoonotic diseases. Implementing agencies: DAH, RAHOs Expected result: Risk assessment is conducted The results of the risk assessment of foodborne zoonotic diseases are available. Timing: 2018-2020	This is a new task that needs attention from the relevant agencies, including funding for this activity, especially in mountainous and Central Highlands provinces.	Coordinate with GDPM, NIHE to share the information
7.5.2	Available animal navigation systems, such as stamping pigs, to identify farm origins or traders for pigs at slaughterhouses.	Sent staff abroad to trainings on risk assessment. Applied risk assessment based on navigation system.	DAH will direct the localities to do risk assessment based on the navigation system of the farms' or traders' origins for pigs at the slaughterhouse. Implementing agencies: DAH, RAHOs Expected result: The risk assessment of foodborne zoonotic diseases is done through	This is a new task that needs attention from the relevant agencies, including funding for this activity, especially in mountainous and Central Highlands provinces.	Coordinate with GDPM, NIHE to share the information in line with Joint Circular No. 16/TTLT-BYT- FAO

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others
	Update on progress during 2016-2017	Expected activities and results in 2018-2020 the navigation systems in some localities Timing: 2019-2020	Main gaps (areas that need more investment/support) BNNPNTN
7.5.3	Complete a risk assessment of food safety, highlighting areas that need improvement to achieve food safety objectives	Sent officials abroad to trainings on food safety risk assessment Organized training on risk assessment for RAHOs and some Sub-Departments on food safety and hygiene given by international experts with funding from international organizations and Central Budget Foreign-funded teaching programs of international organizations and funds from the central budget.	In mountainous and central highland areas, small and scattered farming is difficult to control, so there is the need of support from specialized agencies and local authorities, including funding Implementing agencies: DAH, RAHOs Expected result: Improve risk assessment on food safety and hygiene at the central level and in some localities. Timing: 2018-2020
7.6	<i>Thorough implementation of Joint Circular No. 16 at all levels including reporting on all human and animal cases to both the MARD and the MOH (as well as relevant agencies at the local level)</i>		
7.6.1	See Focus Area 1		
7.7	<i>General objectives</i>		
7.7.1	Continuing research to identify localities to implement	DAH has instructed localities to implement	Continue to direct localities to implement Joint Circular No. 16 This is a difficult task that requires the coordination of
			Coordinate with relevant Ministries

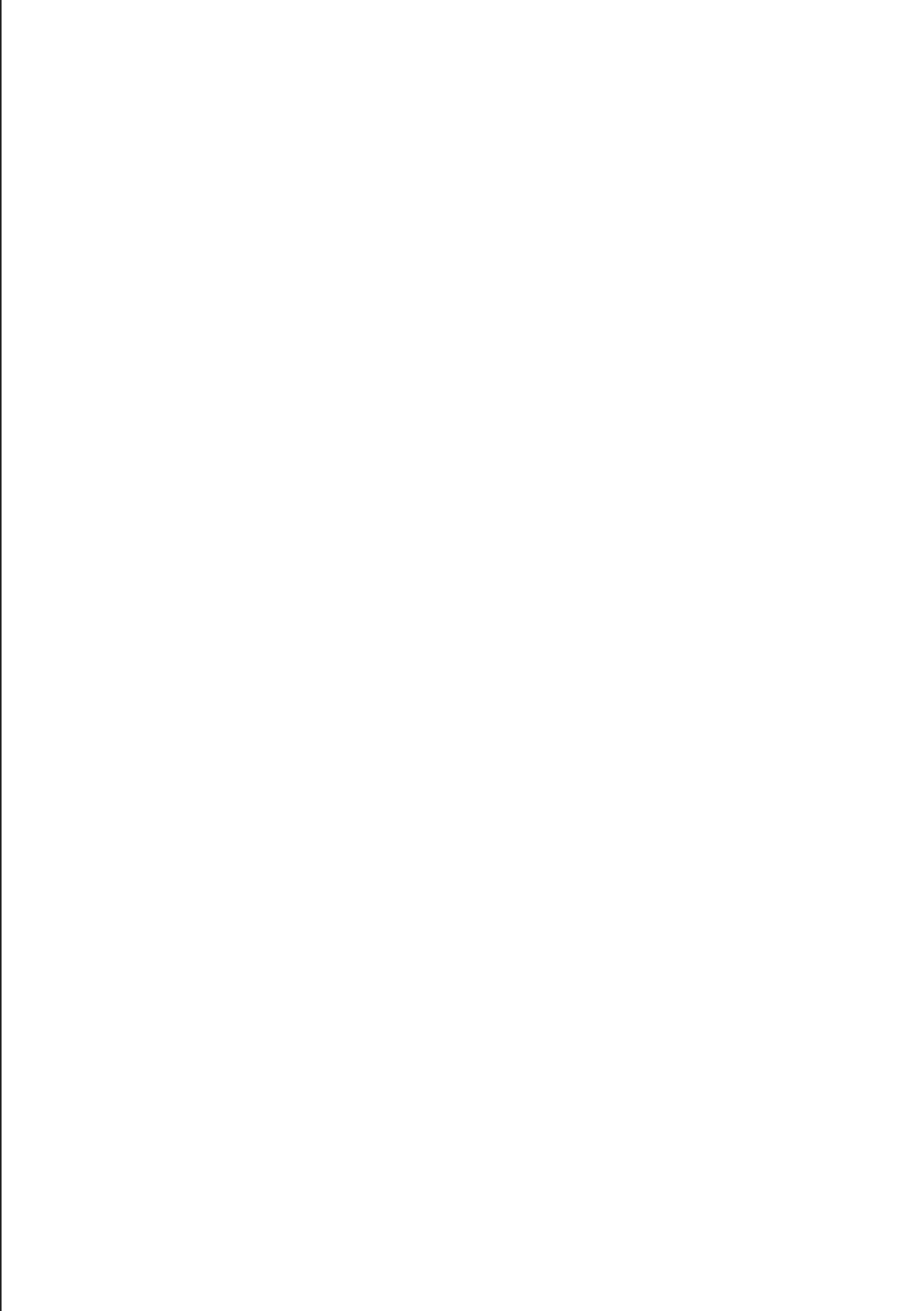
#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development		Areas where need the collaboration between Agriculture sector and others	
		Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH
		tify the scope and extent of the epidemic from which to develop appropriate preventive and control measures, with development from the work done	/TTLT-BYT-BNNPTNT in collaboration with GDPM, NIHE, FAO and WHO to build a model for prevention and control of zoonoses	related agencies, the attention of local authorities, including funding for this activity, especially in mountainous and Central Highlands provinces where access is difficult and people's awareness is limited. Implementing agencies: DAH. Expected result: Obtain research results, identify disease level and develop appropriate preventive and control measures There is a model of prevention and control of zoonotic disease for implementing in many localities. Timing: 2018-2020	GDPM, NIHE for joint implementation in line with Joint Circular No. 16/TTLT-BYT-BNNPTNT
7.7.2		Continue to increase the rate of vaccination for Japanese encephalitis in children under the age of the National Immunization Program, thereby reducing the incidence of Japanese encephalitis.	[Health sector activity]		

#	Objectives based on OHSP strategy	Activities in Agriculture sector: Ministry of Agriculture and Rural Development	Areas where need the collaboration between Agriculture sector and others			
#	Objectives based on OHSP strategy	Update on progress during 2016-2017	Expected activities and results in 2018-2020	Main gaps (areas that need more investment/support)	MOH	Other ministries, international partners, etc
7.7.3	Assess the risk of brucellosis from trading cattle with neighboring countries.	DAH instructed localities to implement Joint Circular No. 16/TTLT-BYT-BNNPT-NT in collaboration with GDPM, NIHE, FAO and WHO to build a model for prevention and control of zoonoses	Continue to direct the RAHOs, the Regional Quarantine Sub-Departments and the provincial Sub-DAHs of border provinces to enhance the quarantine of the cross-border buffaloes and cattle trade in order to prevent diseases from neighboring countries, including infectious abortion diseases. Conduct quarantine of official import, especially cattle breed The main import quarantine is the cattle from foreign countries. Implementing agencies: DAH, RAHOs, Regional quarantine sub-department.	The border line of our country is long and difficult to access, so it is difficult to control the transportation and trading of cattle through the unofficial channels that needs the attention of local authorities. Funding for this activity	Coordinate with GDPM, NIHE to share the information in line with Joint Circular No. 16/TTLT-BYT-BNNPT-NT.	

ANNEX

LIST OF INTERVIEWEES

Organisation	Venue	Contact	Professional/Expected outputs
Department of Animal Health (DAH)	No 15/78 Giai Phong Street, Ha Noi	Mrs. Nguyen Thu Thuy, Deputy Director General Mobile: 0912461552. Email: thuynt.dah@gmail.com Mr. Nguyen Ngoc Tien, Head of epidemiology division Mobile: 0912563551. Email: tien.epi.dah@gmail.com Mrs. Nguyen Thi Diep, epidemiologist Mobile 0912891389 Email: diep.dahvn@gmail.com	Veterinary / epidemiology / avian influenza, rabies and other diseases
Department of Animal Health (DAH)	No 15/78 Giai Phong Street, Ha Noi	Mr. Le Toan Thang, Head of medicine management division Email: letoanthang099@yahoo.com Mrs. Le Thi Hue, Deputy Head of medicine management Mobile 0912177264. Email: lehue1973@gmail.com	Medicine Management / Antimicrobial Resistance
Department of Livestock Production (DLP)	Ministry of Agriculture and Rural Development, 16 Thuy Khue Street.	Mr. Do Van Hoan Mobile 0983751011. Email: dovanhoan01@yahoo.com	Breeding / Biosecurity
National Agriculture Extension Center (NAEC)	Ministry of Agriculture and Rural Development, 16 Thuy Khue Street. Room # 701	Mrs. Ha Thuy Hanh, Deputy Director Mobile: 0913223688. Email: hanhht.tccb@mard.gov.vn Mr. Dinh, Officer. Mobile: 0986948296	Agricultural extension / livestock safety models, training, communication, projects
CITES Office	Ministry of Agriculture and Rural Development, Room #113, B9, No. 2 Ngoc Ha Street	Mr. Vuong Tien Manh, Deputy Director Mobile: 0912008359. Email: hyderabadmanh@gmail.com Mr. Doan, Officer: Mobile 0944256699. Email: doannguyen81@gmail.com	Wildlife animal/management of illegal wildlife trade





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