

**GLOBAL HEALTH SECURITY AGENDA
ROADMAP
VIETNAM**

September 22, 2015

Introduction

The Global Health Security Agenda will accelerate progress toward a world safe and secure from infectious disease threats by preventing, detecting, and rapidly responding to biological threats whether they are naturally occurring, intentional, or accidental, and will elevate this issue as a leaders-level priority. It is an international effort with over 40 countries having made concrete commitments to accelerate action on a national, regional, or global basis. The GHSA targets include the breadth of capacities needed for national and global health security, and they should assist in identifying gaps and provide practical next steps toward measurable goals consistent with country requirements to achieve international standards such as the World Health Organization (WHO) International Health Regulations (IHR). GHSA is designed to help countries implement the IHR, to which all WHO Member States have committed. In addition, GHSA also targets further achievement of capabilities supportive of analogous animal health capabilities, which are managed by the World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) Pathway.

Vietnam is committed in its efforts to leverage international support to build on existing capacities, coordinate with other ministries and global partners, and develop sustainable programs, policies, and capacities for comprehensive programming in support of the GHSA over the next five years. This strategic plan, or Roadmap, serves to guide implementation of this programming in Vietnam. It focuses on reinforcing ongoing efforts to support attainment of the 12 GHSA targets over the next five years (2015/2016 – 2019/2020). By strengthening existing systems and networks, the benefits from this effort will accrue well beyond the five-year plan.

In collaboration with contributing countries and international organizations, Vietnam has made significant strides to apply the One Health approach. Vietnam has in place a multi-sectoral coordination mechanism, which is being revised and expanded, as well as integrated national planning for infectious disease control, information sharing mechanisms across animal and human health sectors, and joint research studies. As a result, Vietnam has made positive contributions toward the prevention and control of avian influenza A (H5N1 and H7N9), pandemic influenza A (H1N1), rabies, and other zoonotic diseases; strengthened its border health quarantine activities and the Field Epidemiology Training Program (FETP); and developed a complementary veterinary and animal health epidemiology training program. The capacity now to prevent, detect, and respond to serious infectious zoonotic disease threats has seen considerable progress in recent years. This same multi-sector, multi-disciplinary effort will remain critical for successful implementation of the GHSA.

Formulation and Elements of the Vietnam GHSA Roadmap

Since the launch of the GHSA, Vietnam has engaged stakeholders for technical support to ensure the country's strategic plan is comprehensive, sustainable, and aligned with national needs and priorities in meeting the 12 GHSA targets. The process for doing so involved numerous bilateral and multilateral discussions within and between Government of Vietnam (GVN) agencies, departments, and their partners. In July 2015 a retreat was held whereby input into strategic direction was consolidated in a joint forum between GVN subject-matter experts and animal and human health sector leadership, together with bilateral and multilateral partners to both sectors. In this forum, participants clearly specified their priority gaps and identified priority objectives, timelines, and key actors for implementation. These priority objectives, the deliverables of which are described as "milestones" or "benchmarks" to achieving the "global" objectives and targets, are described further within this document.

This document will change over time to reflect shifts in priorities and/or resources in Vietnam, as well as the incorporation of new partnerships or efforts to support the GHSA objectives. It is organized by priority areas of programming, or "Action Packages", under the Prevent, Detect, and Respond framework. Under each element, the first box of information contains the overarching GHSA Goal, GHSA Objective, and GHSA target for Vietnam. Each Action Package has a 5-year goal, followed by key milestones, identified in the July 2015 retreat, by year.

List of Acronyms

AMR	Anti-Microbial Resistance
APHL	Association for Public Health Laboratories
BSS	Biosafety and Biosecurity
CBEP	Cooperative Biological Engagement Program
CDC	Centers for Disease Control and Prevention
CTR	Cooperative Threat Reduction Program
DOD	U.S. Department of Defense
DOS	U.S. Department of State
DTRA	Defense Threat Reduction Agency
EOC	Emergency Operations Center
EPT	Emergency Pandemic Threats, USAID program
EQA	External Quality Assessment
FAO	United Nations Food and Agriculture Organization
FBI	U.S. Federal Bureau of Investigation
FETP	Field Epidemiology Training Program
GDPM	General Department of Preventive Medicine
GHSA	Global Health Security Agenda
GVN	Government of Vietnam
IHR	International Health Regulations
IPC	Infection Prevention and Control
ISO	International Organization for Standardization
LQMS	Laboratory Quality Management System
MARD	Ministry of Agriculture and Rural Development
MCM-Personnel	Medical Countermeasures and Personnel Deployment
MERS-CoV	Middle East Respiratory Syndrome-Coronavirus
MOD	Ministry of National Defense
MOH	Ministry of Health
MONRE	Ministry of Natural Resources and Environment
MOST	Ministry of Science and Technology
NGO	Non-Governmental Organization
OIE	World Organization for Animal Health
OUCRU	Oxford University Clinical Research Unit

PAHI	Partnership for Avian and Human Influenza
PH-Law	Linking Public Health and Law Enforcement
POC	Point of Contact
SARI	Severe Acute Respiratory Infection
SARS	Severe Acute Respiratory Syndrome
SOP	Standard Operating Procedure
TBD	To Be Determined
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
VPD	Vaccine Preventable Diseases
WCS	Wildlife Conservation Society (USAID project awardee under USAID/PREDICT 2 project)
WHO	World Health Organization
ZDAP	Zoonotic Disease Action Package

Global Health Security Agenda Overarching Activities

The following is a brief summary of the 5-year goals for each of the 11 Action Packages. These goals and specific activities have incorporated feedback from the partner consultation meeting held in July 2015, including stakeholders from the Government of Vietnam in both the human and animal health sectors and international partners.

Action Package 5-Year Goals in Vietnam

Antimicrobial Resistance: Prevent and control the emergence and spread of AMR through effective and rational use of antimicrobials in humans and animals.

Zoonotic Diseases: Strengthen and integrate prevention, surveillance, laboratory, and response capacities to minimize the spillover and transmission of zoonotic diseases between animal (domestic and wild) and human populations.

Biosafety and Biosecurity: National biosafety and biosecurity system strengthened to ensure that dangerous pathogens are identified, held, transferred, secured and monitored in a minimal number of facilities according to best practices.

Immunization: Prevent measles and other vaccine preventable diseases (VPDs).

Laboratory Systems: Develop a national laboratory system with reference laboratory network that links human and animal health, meets international standards and is capable of safely and accurately conducting priority tests.

Surveillance Systems: Establish timely, reliable, and coordinated cross-sector surveillance systems that enable early detection of EIDs and inform actions and policy.

Reporting: Timely and accurate reporting of high quality data, within Vietnam, regionally and internationally, of events of potential international concern.

Workforce Development: Develop an effective workforce able to prevent, detect, and respond to emerging and re-emerging infectious disease threats with an accredited tiered FETP that includes both human and animal health workers and a program of ongoing in-service education.

Emergency Management: Establish a fully functioning command center for monitoring and coordinating response to emerging and re-emerging public health threats at each appropriate level of administration and assure capacity through tabletop exercises or actual response.

Linking Public Health and Law Enforcement: Capacities and policies in place to respond to a biological event of suspected or confirmed deliberate origin, by effectively and rapidly linking public health authorities with law enforcement, and by engagement of a multi-sectoral response.

MCM and Personnel Deployment: Establish national capacity and mechanisms for transferring medical countermeasures and public health and medical personnel among international partners during public health emergencies.

Prevent

Antimicrobial Resistance

WHO IHR core capacity 3: Surveillance

The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response to these risks. To this end, a sensitive and flexible surveillance system is needed with an early warning function is necessary. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO, and with other countries as needed.

WHO IHR core capacity 5: Preparedness

Preparedness includes the development of national, intermediate, and community/primary response level public health emergency response plans for relevant biological, chemical, radiological, and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, and the development of appropriate national stockpiles of resources and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

WHO IHR core capacity 8: Laboratory

Laboratory services are part of every phase of alert and response activities, including detection, investigation and response, with laboratory analysis of samples performed either domestically or through collaborating centers. States Parties need to establish mechanisms that assure the reliable and timely laboratory identification of infectious agents and other hazards likely to cause public health emergencies of national and international concern, including shipment of specimens to the appropriate laboratories if necessary.

GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Prevent Avoidable Epidemics	Preventing the emergence and spread of antimicrobial drug resistant organisms and emerging zoonotic diseases and strengthening international regulatory frameworks governing food safety.	Develop an integrated and global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a one-health approach), including: a) Vietnam has its own national comprehensive plan to combat antimicrobial resistance; b) strengthen surveillance and laboratory capacity at the national and international level following agreed international standards developed in the framework of the Global Action plan, considering existing standards and; c) improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid, point-of-care diagnostics, including systems to preserve new antibiotics.	
5-Year Goal: Prevent and control the emergence and spread of AMR through effective and rational use of antimicrobials in humans and animals.			
	Key Milestones	Responsible Vietnam Government Body	International Partners

Year 1	<ul style="list-style-type: none"> • AMR testing capacity assessed at provincial and regional labs • AMR priority pathogens identified for the country • Developed and disseminated national policies and guidelines for <ul style="list-style-type: none"> ○ AMR surveillance in hospitals (including susceptibility testing) and agriculture ○ Health care facility infection prevention and control ○ Antimicrobial use monitoring in treatment facilities and agriculture ○ Appropriate use of antimicrobials for clinicians and agriculture workers • Gaps, risks, and priorities identified among key stakeholders of AMR based on existing/new evidence on use of antibiotics for growth promotion in livestock 	MOH MARD	CDC USAID WHO FAO OUCRU PAHI Universities
Year 2	<ul style="list-style-type: none"> • Continued development and dissemination of national policies and guidelines for AMR if not completed in the 1st year • Approved and nationally disseminated information, education, communication (IEC) materials on drug resistance and drug use • Established a national surveillance system at hospitals and community (sentinel surveillance) • Plan to establish national database developed for recording and monitoring drug use/resistance in animals and drug resistance in humans 	MOH MARD	CDC USAID WHO FAO OUCRU PAHI Universities
Year 3	<ul style="list-style-type: none"> • AMR laboratory testing expanded to be able to identify all seven WHO priority AMR pathogens to 30 human clinical labs • Two AMR labs for animal and agriculture sector established • Antibiotic Stewardship Program established • National policies and guidelines updated and implemented • Established platform for coordination and collaboration between human, agriculture sectors National database created for recording and monitoring drug use/resistance in animals and drug resistance in humans 	MOH MARD	CDC USAID WHO FAO OUCRU PAHI Universities
Year 4	<ul style="list-style-type: none"> • Updated the National Action Plan for AMR (2013-2020) • Data from AMR surveillance system used to inform AMR policies • Infection Prevention and Control model hospital achieved • Implemented safe and rational use of drugs in humans and animals • National database for recording and monitoring drug use/resistance in animals and drug resistance in humans finalized for implementation 	MOH MARD	CDC USAID WHO FAO OUCRU PAHI Universities

Year 5	<ul style="list-style-type: none"> Improved safe and rational use of drugs in humans and animals National database for recording and monitoring drug use/resistance in animals and drug resistance in humans rolled out 	MOH MARD	CDC USAID WHO FAO OUCRU PAHI Universities
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Zoonotic Diseases

<p>WHO IHR core capacity 2: Coordination and NFP communications</p> <p>The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the designation of an IHR NFP, which is a national centre for IHR communications, a key requisite for IHR implementation. The IHR NFP should be accessible at all times to communicate with the WHO IHR Contact Points and with all relevant sectors and other stakeholders in the country. The States Parties must provide WHO with annually updated contact details for the national IHR Focal Point.</p> <p>WHO IHR core capacity 4: Response</p> <p>Command, communications, and control operations mechanisms are required to facilitate the coordination and management of outbreak operations and other public health events. Multidisciplinary/multisectoral Rapid Response Teams (RRT) should be established and be available 24 hours a day, 7 days a week. They should be able to rapidly respond to events that may constitute a public health emergency of national or international concern. Appropriate case management, infection control, and decontamination are all critical components of this capacity that need to be considered.</p> <p>WHO IHR core capacity 5: Preparedness</p> <p>Preparedness includes the development of national, intermediate, and community/primary response level public health emergency response plans for relevant biological, chemical, radiological, and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, the development of appropriate national stockpiles of resources, and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.</p>		
GHSA Goal	GHSA Objective	GHSA 5-Year Target
Prevent Avoidable Epidemics	Preventing the emergence and spread of antimicrobial drug resistant organisms and emerging zoonotic diseases and strengthening international regulatory frameworks governing food safety.	Adopted measured behaviors, policies and/or practices that minimize the spillover of zoonotic diseases from lower animals into human populations.

5-Year Goal: Strengthen and integrate prevention, surveillance, laboratory, and response capacities to minimize the spillover and transmission of zoonotic diseases between animal (domestic and wild) and human populations.

	Key Milestones	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Zoonotic disease threats for Vietnam prioritized (human and animal) Zoonotic Disease Action Package (ZDAP) international conference convened and Annual Plan developed National multi-sectoral “One Health” coordination mechanism established and functioning Updated the Integrated National Operational Program on AI, Pandemic Preparedness and emerging Infectious Diseases 	MARD MOH	USAID CDC DoD CTR/CBEP FAO WHO USAID/WCS OIE UNDP USAID/P&R
Year 2	<ul style="list-style-type: none"> Wildlife farming demographics and risks characterized Strengthened technical and biosafety capacity for animal health and human health laboratories to conduct diagnostic investigation of zoonotic diseases Strengthened countries’ commitment for cross-border epizone coordination on zoonotic diseases 	MARD MOH	USAID CDC DoD CTR/CBEP FAO USAID/WCS WHO
Year 3	<ul style="list-style-type: none"> Surveillance gaps for wildlife-livestock-human interface identified National preparedness and response plan updated for outbreaks of zoonotic disease. Cross-sector information sharing mechanisms strengthened. 	MARD MOH	CDC DoD CTR/CBEP USDA USAID/P&R FAO USAID/WCS OIE
Year 4	<ul style="list-style-type: none"> Guidelines developed for safe practices related to wildlife handling and farm management and biosecurity Risk assessment tools and risk communication plan developed 	MARD MOH	USAID CDC DoD CTR/CBEP FAO WHO
Year 5	<ul style="list-style-type: none"> Cross-sector teams able to investigate and respond effectively and timely to outbreaks of zoonotic diseases, especially for veterinarians. Policies established that enable systematic cross-sector collaboration and coordination. 	MARD MOH	USAID CDC DoD CTR/CBEP WHO FAO USAID/P&R

Biosafety and Biosecurity

WHO IHR core capacity 3: Surveillance

The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response to these risks. To this end, a sensitive and flexible surveillance system with an early warning function is necessary. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO, and with other countries as needed.

WHO IHR core capacity 5: Preparedness

Preparedness includes the development of national, intermediate, and community/primary response level public health emergency response plans for relevant biological, chemical, radiological, and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, the development of appropriate national stockpiles of resources, and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Prevent Avoidable Epidemics	Promoting national biosafety and biosecurity systems.	A whole-of-government national biosafety and biosecurity system is in place, ensuring that especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach are conducted to promote a shared culture of responsibility, reduce dual use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing, and pathogen control measures are in place as appropriate.	
5-Year Goal: National biosafety and biosecurity system strengthened to ensure that dangerous pathogens are identified, held, transferred, secured and monitored in a minimal number of facilities according to best practices.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> A comprehensive understanding of biosafety and biosecurity (BSS) management system and leverage points of relevant government agencies obtained Biosafety and bio-risk management capacity strengthened at national level Assessment of current BSS research, practices and teaching methods at academic institutes of human and animal medicines A national BSS framework drafted to secure and consolidate collections of dangerous pathogens and their associated research at a minimum number of secure facilities 	MOH MARD MOD / MONRE/ MOST	CDC USAID DoD CTR/CBEP Academic Institutes WHO USAID/ OHW
Year 2	<ul style="list-style-type: none"> Collaborative revision/upgrade of BSS regulations and guidelines aligned with WHO/OIE standards and core competencies required A national BSS framework piloted to secure and consolidate 	MOH MARD MOD / MONRE/ MOST	CDC USAID DoD CTR/CBEP

	collections of dangerous pathogens and their associated research at a minimum number of secure facilities		
Year 3	<ul style="list-style-type: none"> A national BSS framework established to secure and consolidate collections of dangerous pathogens and their associated research at a minimum number of secure facilities 	MOH MARD MOD / MONRE/ MOST	CDC USAID DoD CTR/CBEP Academic Institutes WHO
Year 4	<ul style="list-style-type: none"> A BSS oversight, audit and accreditation system strengthened and operated to be aligned with WHO/OIE standards and core competencies required 	MOH MARD MOD / MONRE/ MOST	CDC USAID DoD CTR/CBEP Academic Institutes WHO
Year 5	<ul style="list-style-type: none"> 90% of relevant laboratories with biorisk management training completed 90% of relevant laboratories be able to comply with BSL-2 national standards 	MOH MARD MOD / MONRE/ MOST	CDC USAID DoD CTR/CBEP Academic Institutes WHO

Immunization

WHO IHR core capacity 3: Surveillance

The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response to these risks. To this end, a sensitive and flexible surveillance system with an early warning function is necessary. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO, and with other countries as needed.

WHO IHR core capacity 5: Preparedness

Preparedness includes the development of national, intermediate, and community/primary response level public health emergency response plans for relevant biological, chemical, radiological, and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, the development of appropriate national stockpiles of resources, and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

GHSA Goal	GHSA Objective	GHSA 5-Year Target
Prevent Avoidable Epidemics	Reducing the number and magnitude of infectious disease outbreaks.	A functioning national vaccine delivery system – with nationwide reach, effective distributions, access for marginalized populations, adequate cold chain, and ongoing quality control – that is able to respond to new disease threats.

5-Year Goal: Prevent measles and other vaccine preventable diseases (VPDs).			
	Key Milestones	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Behavioral and service delivery barriers to immunization coverage identified Assessment of existing VPD surveillance systems conducted 	MOH	CDC WHO
Year 2	<ul style="list-style-type: none"> VPDs integrated into early warning surveillance system Plan to establish an immunization case management system (for both EPI program and private services) developed High-risk areas/populations for VPD outbreaks identified Plans to improve the cold chain capacity developed Plans to establish national vaccination registry developed 	MOH	CDC WHO GAVI JICA
Year 3	<ul style="list-style-type: none"> VPD outbreaks routinely investigated and causative agent identified Vaccination strategy revised An immunization case management system (for both EPI program and private services) piloted 	MOH	CDC WHO
Year 4	<ul style="list-style-type: none"> Revised vaccination strategies implemented An immunization case management system (for both EPI program and private services) established to introduce new vaccines into the EPI program (rotavirus and pneumococcus vaccine) National vaccination registry developed 	MOH	CDC WHO UNICEF GAVI
Year 5	<ul style="list-style-type: none"> Vaccine delivery infrastructure improved Sustained high level coverage achieved for all vaccines of EPI at 90% of the population A national regulatory authority capable of managing quality of vaccine produced in Vietnam created 	MOH	CDC WHO

Detect

Laboratory Systems

WHO IHR core capacity 8: Laboratory			
Laboratory services are part of every phase of alert and response activities, including detection, investigation and response, with laboratory analysis of samples performed either domestically or through collaborating centres. States Parties need to establish mechanisms that assure the reliable and timely laboratory identification of infectious agents and other hazards likely to cause public health emergencies of national and international concern, including shipment of specimens to the appropriate laboratories if necessary.			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Detect Threats Early	Developing and deploying novel diagnostics and strengthen laboratory systems.	Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.	
5-Year Goal: Develop a national laboratory system with reference laboratory network that links human and animal health, meets international standards and is capable of safely and accurately conducting priority tests.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	For public health, animal health, and clinical labs: <ul style="list-style-type: none"> • Core lab tests and priority pathogens identified • Cross-sector steering group (public health, clinical, and animal laboratories) established to improve coordination and harmonization of lab strategies and activities • Infrastructure and workflow mapped, and software identified for laboratory information system • Checklist and set of requirements for tiered labs (district, provincial, regional level) developed to ensure the quality of testing • Twinning relationship established between U.S. public health laboratory and regional institute • Policy for quality management system developed 	MOH MARD	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 2	<ul style="list-style-type: none"> • Functional linkages identified across the lab network, with established policies for specimen referral and safe transport • National standardized testing algorithms and SOPs developed for selected core tests and pathogens of concern 	MOH MARD	CDC USAID DoD CTR/CBEP WHO

	<ul style="list-style-type: none"> EQA action plan developed 		<p>FAO Other implementing partners</p>
Year 3	<ul style="list-style-type: none"> Plans developed to establish a lab accreditation system within the MOH Reference laboratory network established for selected core tests and priority pathogens, for both animal and public health labs 	<p>MOH MARD</p>	<p>CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners</p>
Year 4	<ul style="list-style-type: none"> Quality management system established, and standards and guidelines in place in all regional institutes and national hospitals EQA fully implemented Functional specimen transport network established 	<p>MOH MARD</p>	<p>CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners</p>
Year 5	<ul style="list-style-type: none"> National and reference laboratories have received national and international accreditation as ISO 15189, ISO 17025, CAP, etc. Laboratory information systems implemented in high volume labs (public health, clinical, and animal health) Lab accreditation system within the MOH established 	<p>MOH MARD</p>	<p>CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners</p>

Surveillance

WHO IHR core capacity 3: Surveillance			
<p>The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response to these risks. To this end, a sensitive and flexible surveillance system with an early warning function is necessary. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO, and with other countries as needed.</p>			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Detect Threats Early	Launching, strengthening and linking global networks for real-time biosurveillance.	Strengthened foundational indicator- and event-based surveillance systems that are able to detect events of significance for public health, animal health and health security; improved communication and collaboration across sectors and between sub-national, national and international levels of authority regarding surveillance of events of public health significance; improved country and regional capacity to analyze and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This can include epidemiologic, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and the OIE standards.	
5-Year Goal: Establish timely, reliable, and coordinated cross-sector surveillance systems that enable early detection of EIDs and inform actions and policy.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Critical gaps and delays in reporting and data quality identified Notifiable events prioritized, triggers defined and case definitions standardized and disseminated for priority infectious diseases Country priorities for national surveillance systems identified 	MOH MARD	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 2	<ul style="list-style-type: none"> Health care providers and lab staff trained to report notifiable events in pilot provinces Alert thresholds defined for routinely reported data. Standardized system for information management and electronic reporting that incorporates clinical and laboratory data established 	MOH MARD	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 3	<ul style="list-style-type: none"> Surveillance systems in place to detect zoonotic transmission of disease at farms, live animal markets 	MOH MARD	CDC USAID

	<ul style="list-style-type: none"> and trading points Data analyzed to inform expansion of sentinel surveillance system 		DoD CTR/CBEP WHO FAO Other implementing partners
Year 4	<ul style="list-style-type: none"> Trained provincial, regional, and national rapid response teams expanded to include all 4 regions and at least 6 provinces Sentinel surveillance system expanded to include additional priority diseases. 	MOH MARD	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 5	<ul style="list-style-type: none"> Surveillance systems in place to detect zoonotic transmission of disease at farms, live animal markets and trading points Early detection system capable of detecting emerging events in a timely manner All sentinel and event-based surveillance fully connected to major treatment facilities, and the diagnostic and preventive medicine laboratory networks. FETP fully integrated into detection and response system 	MOH MARD	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners

Reporting

WHO IHR core capacity 3: Surveillance			
<p>The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response to these risks. To this end, a sensitive and flexible surveillance system with an early warning function is necessary. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO, and with other countries as needed.</p>			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Detect Threats Early	Strengthening the global norm of rapid, transparent reporting and sample sharing in the event of health emergencies of international concern.	Timely and accurate disease reporting according to WHO, OIE, and requirements.	
5-Year Goal: Timely and accurate reporting of high quality data, within Vietnam, regionally and internationally, of events of potential international concern.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Standard procedures established for implementing Circular 16 to strengthen surveillance data sharing among animal and human health sectors and laboratories 	MOH MARD	CDC USAID WHO FAO
Year 2	<ul style="list-style-type: none"> Circular 48 and communicable disease reporting requirements updated and implemented 	MOH MARD	CDC USAID WHO FAO
Year 3	<ul style="list-style-type: none"> National framework established for case-based reporting that integrates the preventive and clinical systems for domestic and international reporting of zoonotic disease events compliant with OIE and WHO standards 	MOH MARD	CDC USAID WHO FAO
Year 4	<ul style="list-style-type: none"> National reporting of zoonotic disease and public health events compliant with OIE and WHO standards 	MOH MARD	CDC USAID WHO FAO
Year 5	<ul style="list-style-type: none"> Policies or legislation developed, as needed, to facilitate international reporting of PHEIC according to the WHO/IHR; and of animal diseases according to OIE 	MOH MARD	CDC USAID WHO FAO

Workforce Development

WHO IHR core capacity 7: Human Resources			
Strengthening the skills and competencies of public health personnel is critical to the sustainment of public health surveillance and response at all levels of the health system and the effective implementation of the IHR.			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Detect threats early	Training and deploying an effective biosurveillance workforce.	A workforce including physicians, veterinarians, biostatisticians, laboratory scientists, and at least 1 trained field epidemiologist per 200,000 population, who can systematically cooperate to meet relevant IHR and Performance of Veterinary Services (PVS) core competencies.	
5-Year Goal: Develop an effective workforce able to prevent, detect, and respond to emerging and re-emerging infectious disease threats with an accredited tiered FETP that includes both human and animal health workers and a program of ongoing in-service education.			
	Key Milestones:	Responsible Vietnam Government Body	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ul style="list-style-type: none"> Existing epidemiology workforce mapped Critical needs for epidemiological training in both human and animal health defined New 5-year plan leading to an accredited, advanced FETP created. 	MOH MARD Ministry of Education	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 2	<ul style="list-style-type: none"> FETP integrated into appropriate detection and response activities of MOH FETP curriculum revised Workforce within the GDPM to support FETP expanded with at least one full time technical lead and one administrative support person. Program for short course training revised and implemented at provincial and district level. 	MOH MARD Ministry of Education	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 3	<ul style="list-style-type: none"> One Health workforce core competencies identified Additional FETP levels introduced as identified in needs assessment. Policy and legislation developed to support/address epidemiological workforce needs 	MOH MARD Ministry of Education	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners

Year 4	<ul style="list-style-type: none"> • Accreditation achieved with the global FETP network • FETP curricula revised to include veterinary epidemiology component 	MOH MARD Ministry of Education	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners
Year 5	<ul style="list-style-type: none"> • One Health workforce trained in accordance with criteria developed • Mentored, in-service training program implemented • Epidemiological curriculum integrated into relevant technical schools, schools of human and veterinary medicine • FETP accredited, fully managed and partially supported by GVN, in both human and animal health, with graduates serving in key national and sub-national institutions 	MOH MARD Ministry of Education	CDC USAID DoD CTR/CBEP WHO FAO Other implementing partners

Respond

Emergency Management

WHO IHR core capacity 2: Coordination and NFP communications

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the designation of an IHR NFP, which is a national centre for IHR communications, is a key requisite for IHR implementation. The IHR NFP should be accessible at all times to communicate with the WHO IHR Contact Points and with all relevant sectors and other stakeholders in the country. The States Parties must provide WHO with annually updated contact details for the national IHR Focal Point.

WHO IHR core capacity 4: Response

Command, communications, and control operations mechanisms are required to facilitate the coordination and management of outbreak operations and other public health events. Multidisciplinary/multisectoral Rapid Response Teams (RRT) should be established and be available 24 hours a day, 7 days a week. They should be able to rapidly respond to events that may constitute a public health emergency of national or international concern. Appropriate case management, infection control, and decontamination are all critical components of this capacity that need to be considered.

WHO IHR core capacity 6: Risk communication

Risk communications should be a multi-level and multi-faceted process which aims to help stakeholders define risks, identify hazards, assess vulnerabilities, and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as outbreaks of disease. For any communication about risk caused by a specific event to be effective, it needs to take into account the social, religious, cultural, political, and economic aspects associated with the event, as well as the voice of the affected population. Communications of this kind promote the establishment of appropriate prevention and control action through community-based interventions at individual, family, and community levels. Disseminating the information through the appropriate channels is also important. Communication partners and stakeholders in the country need to be identified, and functional coordination and communication mechanisms established. In addition, it is important to establish communication policies and procedures on the timely release of information with transparency in decision making that is essential for building trust between authorities, populations, and partners. Emergency communications plans need to be developed, tested, and updated as needed.

GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Respond Rapidly and Effectively	Developing an interconnected global network of EOCs and multi-sectoral response to biological incidents.	Every country will have a public health Emergency Operations Center (EOC) functioning according to minimum common standards; maintaining trained, functioning, multi-sectoral rapid response teams (RRTs) and “real-time” biosurveillance laboratory networks and information systems; and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.	
5-Year Goal: Establish a fully functioning command center for monitoring and coordinating response to emerging and re-emerging public health threats at each appropriate level of administration, and assure capacity through tabletop exercises or actual response.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> EOC operational handbook finalized with SOPs for operating EOC 	MOH	CDC

	<p>across its five functions; key personnel trained to use it</p> <ul style="list-style-type: none"> • Manual for outbreak surveillance and response developed and key personnel trained to use it 	MARD	DoD CTR/CBEP WHO Other implementing partners
Year 2	<ul style="list-style-type: none"> • Staffing structure and standards for EOC created • Mechanism established for reporting unusual events to the EOC • Revised and updated risk communication plans/ SOPs/ messages/ tools • Revised risk communication materials adopted and trained to key staff; reinforced through drills • Regional level EOCs or similar communication centers established in 2 regions to manage regional responses 	MOH MARD	CDC DoD CTR/CBEP WHO Other implementing partners
Year 3	<ul style="list-style-type: none"> • EOC monitoring and response teams trained • Electronic systems established to achieve inter-operability of various reporting streams and inform the activation of trip-wires for rapid response and EOC activation • One Health preparedness framework for multi-sector rapid response developed • EOC infrastructure and operational funds expanded by GVN 	MOH NIHE	CDC DoD CTR/CBEP WHO Other implementing partners
Year 4	<ul style="list-style-type: none"> • Regional level EOCs or similar communication centers established in 2 additional regions to manage regional responses • National policy and guideline on stockpiling completed 	MOH	CDC DoD CTR/CBEP WHO Other implementing partners
Year 5	<ul style="list-style-type: none"> • EOC capability to collect, analyze and report real-time information and initiate appropriate rapid response established and exercised • Regional level EOCs or similar communication centers established in remaining regions to manage regional responses 	MOH	CDC DoD CTR/CBEP WHO Other implementing partners

Linking PH and Law Enforcement

IHR core capacity 4: Response			
<p>Command, communications, and control operations mechanisms are required to facilitate the coordination and management of outbreak operations and other public health events. Multidisciplinary/multisectoral Rapid Response Teams (RRT) should be established and be available 24 hours a day, 7 days a week. They should be able to rapidly respond to events that may constitute a public health emergency of national or international concern. Appropriate case management, infection control, and decontamination are all critical components of this capacity that need to be considered.</p>			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Respond Rapidly and Effectively	Developing an interconnected global network of EOCs and multi-sectoral response to biological incidents: Promote establishment of public health EM programs, including EOCs; trained, functioning, multi-sectoral rapid response teams, with access to a real-time information system; and capacity to attribute the source of an outbreak.	In the event of a biological event of suspected or confirmed deliberate origin, a country will be able to conduct a rapid, multi-sectoral response, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, including to investigate alleged use events.	
<p>5-Year Goal: Capacities and policies in place to respond to a biological event of suspected or confirmed deliberate origin, by effectively and rapidly linking public health authorities with law enforcement, and by engagement of a multi-sectoral response.</p>			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Existing laws and policy documents reviewed Stakeholder meeting convened and buy-in achieved 	MOH MPS MOD	CDC DoD CTR/CBEP FBI (TBC)
Year 2	<ul style="list-style-type: none"> Strategy and framework for linked response drafted Training materials developed for multi-sectoral training 	MOH MPS MOD	CDC DoD CTR/CBEP FBI (TBC)
Year 3	<ul style="list-style-type: none"> Trainings conducted Simulation exercise conducted, linking public health and law enforcement 	MOH MPS MOD	CDC DoD CTR/CBEP FBI (TBC)
Year 4	<ul style="list-style-type: none"> Agreements formalized among relevant ministries for a coordinated response 	MOH MPS MOD	CDC DoD CTR/CBEP FBI (TBC)
Year 5	<ul style="list-style-type: none"> Capacity for linked response further developed and ongoing 	MOH MPS MOD	CDC DoD CTR/CBEP FBI (TBC)

MCM and Personnel Deployment

WHO IHR core capacity 5: Preparedness			
Preparedness includes the development of national, intermediate, and community/primary response level public health emergency response plans for relevant biological, chemical, radiological, and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, and the development of appropriate national stockpiles of resources and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.			
GHSA Goal	GHSA Objective	GHSA 5-Year Target	
Respond Rapidly and Effectively	Improving global access to medical and non-medical countermeasures during health emergencies.	A national framework for transferring (sending and receiving) medical countermeasures and public health and medical personnel among international partners during public health emergencies.	
5-Year Goal: Establish national capacity and mechanisms for transferring medical countermeasures and public health and medical personnel among international partners during public health emergencies.			
	Key Milestones:	Responsible Vietnam Government Body	International Partners
Year 1	<ul style="list-style-type: none"> Conditions or situations identified which may require external assistance from international partners Obstacles and constraints identified to rapid international transfer of medical countermeasures and deployment of personnel and to domestic guidelines and coordination mechanisms 	MOH MOST MOF MOFA	CDC DOS WHO TBD
Year 2	<ul style="list-style-type: none"> National preparedness plans for PHEIC established WHO checklist Assessment of Policy Considerations for Influenza Vaccine Production completed 	MOH MOST	CDC DOS WHO TBD
Year 3	<ul style="list-style-type: none"> National and local stockpile reserves determined, and communications and guidelines for use developed Based on consultation with relevant ministries, procedures developed for expedited issuance of visas and border clearances when international expertise is requested by public health authorities Preparedness drills or simulations conducted 	MOH MOF MOFA	CDC DOS WHO TBD

Year 4	<ul style="list-style-type: none"> • Agreements achieved among relevant ministries for policy development for rapid access to international medical countermeasure and professional expertise when required in Vietnam • SOPs developed for safe clinical management by public health and medical personnel during public health emergencies 	MOH MOST MOF MOFA	CDC DOS WHO TBD
Year 5	<ul style="list-style-type: none"> • Capacities, skills, and mechanisms in place when required for implementation of national preparedness plans regarding use of medical and non-medical counter-measures • Sustainable capacity achieved for selected vaccine manufacture in Vietnam 	MOH MOST MOF MOFA	CDC DOS WHO TBD