

GLOBAL HEALTH SECURITY AGENDA ROADMAP

SENEGAL

Prevent

Antimicrobial Resistance

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.	Support work being coordinated by WHO, FAO,OIE to 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) each country 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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. Enhanced infection prevention and control in health facilities 2. Development of AMR capacity in select laboratories 3. Development of AMR national strategic plan 	USAID - Technical Assistance CDC – Technical Assistance	Ministries of Health, Agriculture and the Environment	Potential partners in WHO, FAO, OIE
Year 2	<ol style="list-style-type: none"> 1. Implementation of AMR national strategic plan 2. Laboratories performing AMR Testing 	US Government activity to be determined	Ministry of Health - Reagent procurement, active data collection, tools development	Potential partners in WHO, FAO, OIE
Year 3	<ol style="list-style-type: none"> 1. Capacity to routinely detect AMR in humans at national level demonstrated 2. Country-wide tuberculosis multi-drug resistance MDR detection and surveillance expanded 3. Operationalize AMR National Strategy 4. Evidence of basic level diagnostic capability at National Level 	CDC - Technical Assistance USAID - Infection Prevention and Control (IPC) 2016-2021 health portfolio	Ministries of Health, Agriculture and the Environment	Potential partners in WHO, FAO, OIE

	Laboratory (most likely CPHL/NHL) established 5. Infection control assessment completed and strategy for infection prevention and control developed			
Year 4	1. Demonstrated capability to detect AMR at central level National Referral Hospital	CDC - Technical Assistance	Ministry of Health	Potential partners in WHO, FAO, OIE
Year 5	1. Demonstrated timely recognition, diagnosis and timely reporting of AMR in humans 2. Demonstrated laboratory capacity AMR in at least two (2) sub-national hospital laboratories and the National Animal Health Laboratory (LNERV), including transportation and information reporting to the national level 3. Antimicrobial Stewardship Plan to prevent AMR spread completed	CDC - Technical Assistance	Ministries of Health, Agriculture and the Environment	Potential partners in WHO, FAO, OIE

Zoonotic Diseases

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	1. One-Health stakeholders strategically	USAID - Technical Assistance	Ministries of Ag, Livestock,	Potential partners in WHO, FAO,

	<p>identified and a mechanism for multi-sectoral coordination established, aligned with a common mission statement.</p> <p>2. High-risk human/animal interfaces (e.g. "value chains", land-use change, etc.) and their interfaces mapped</p>	USDA - Technical Assistance	Environment, Health EISMV	OIE
Year 2	<p>1. High-risk "nodes" for spillover of zoonotic threats established; behavior and practices that enable spillover identified upon completion of mapping in year 1.</p> <p>2. System for sampling and testing wildlife, livestock, and humans to better define risk from selected zoonotic pathogens in animal reservoirs and disease vectors implemented</p>	USAID - Technical Assistance	Ministries of Ag, Livestock, Environment, Health EISMV	Potential partners in WHO, FAO, OIE
Year 3	<p>1. Plan for institutionalizing a national multi-sectoral coordination mechanism developed and approved by government</p> <p>2. System for sampling and testing wildlife, livestock, and humans evaluated</p> <p>3. Package of One Health "risk reduction" measures targeting high risk practices and behaviors that enable spillover validated</p>	USAID - Technical Assistance	Ministries of Ag, Livestock, Environment, Health EISMV Pasteur Institute	Potential partners in WHO, FAO, OIE
Year 4	<p>1. Capacity of animal health professionals to determine risk based on epidemiology and modeling/analytics demonstrated</p> <p>2. Policy, organizational and operational</p>	USAID - Technical Assistance	Ministries of Ag, Livestock, Environment, Health EISMV Pasteur Institute	Potential partners in WHO, FAO, OIE Wet Lands World Wildlife Fund

	<p>needs for multi-sectoral coordination mechanism established</p> <p>3. Package of One Health "risk reduction" measures targeting high risk practices and behaviors that enable spillover implemented</p>			
Year 5	<p>1. One Health workforce trained in accordance with national zoonotic disease prevention needs</p> <p>2. Package of One Health "risk reduction" measures targeting high risk practices and behaviors that enable spillover sustained</p> <p>3. Coordination mechanism in operation that enables cross-sectors/ministries to collaborate routinely for zoonotic disease prevention</p>	USAID - Technical Assistance	Ministries of Ag, Livestock, Environment, Health EISMV	Potential partners in WHO, FAO, OIE Wet Lands World Wildlife Fund

Biosafety & Biosecurity

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<p>1. Baseline capacities in BS&S established among key laboratories</p> <p>2. In-service training in BS&S initiated</p>	<p>DoD CTR-CBEP - Technical Assistance</p> <p>USAID - Technical Assistance</p>	<p>Ministries of Health, Livestock, Environment, Agriculture</p> <p>LNERV</p> <p>EISMV</p> <p>Pasteur Institute</p>	<p>Potential partners in WHO, FAO, OIE</p> <p>Merieux Foundation</p> <p>AIEA</p>

			National Biosafety Authority	
Year 2	<ol style="list-style-type: none"> 1. Multi-sectoral Biosafety and Biosecurity (BS&S) governance structure created at the national level with representatives at the sub-national level; 2. Strategic Action Plan for biosafety and biosecurity developed 3. Country specific legislation to support national biosafety and security program drafted; 4. Assessment of Biosafety and Biosecurity requirements at key laboratories conducted 	DoD CTR-CBEP can support some biosafety & security activities;	National Biosafety Authority Ministries of Health, Livestock, Environment, Agriculture	Potential partners in WHO, FAO, OIE Merieux Foundation AIEA AFD PBR-UEMOA
Year 3	<ol style="list-style-type: none"> 1. BS&S infrastructure improvements initiated/completed (i.e. enhanced-Biosafety Cabinets (BSC) certification/physical security/transport security) in compliance with WHO and OIE standards 2. Biosafety and Biosecurity focal points in each region established 3. Harmonization of professional training with pre-existing/new BS&S curriculums (i.e. laboratory technicians, physicians, veterinarians, hazardous waste disposal technicians, etc) in compliance with WHO, AIEA, and OIE standards 	DoD CTR-CBEP can support some biosafety & security activities	Ministries of Health, Livestock, Environment, Agriculture National Biosafety Authority ESMV	Potential partners in WHO, FAO, OIE Merieux Foundation AIEA AFD UA-IBAR PBR-UEMOA
Year 4	<ol style="list-style-type: none"> 1. Routine mentoring and supervision for BS&S program developed; 2. Dangerous pathogens identified and consolidated at a central laboratory; 3. System for ensuring lab meets fully functional biosafety conditions and best practices in place 	DoD CTR-CBEP can support some biosafety & security activities	National Biosafety Authority Ministries of Health, Livestock, Environment, Agriculture	Potential partners in WHO, FAO, OIE Merieux Foundation AIEA AFD UA-IBAR

				PBR-UEMOA
Year 5	<ol style="list-style-type: none"> 1. National BS&S plan approved and disseminated which categorizes risks among indigenous agents and provides guidance on best practices; 2. BS&S system evaluation conducted 3. BS&S capacities in animal labs meet WHO/IHR standards 	DoD CTR-CBEP can support some biosafety & security activities	National Biosafety Authority Ministries of Health, Livestock, Environment, Agriculture	Potential partners in WHO, FAO, OIE Merieux Foundation AIEA AFD UA-IBAR PBR-UEMOA

Immunization

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. Improved provision of immunization services, including hard-to-reach populations. 2. Immunizations for nation-wide coverage increased among children under the age of five to reach GOS target of 95% in 2016. 	USAID – Technical Assistance	Ministry of Health - Microplan integrated in annual work plan (PTA); human resources; logistics; vaccine supply	GAVI UNICEF WHO
Year 2	<ol style="list-style-type: none"> 1. Cold chain supply maintenance plan implemented. 2. *Immunizations for nation-wide coverage increased among children under the age of five to reach GOS target of >95%. 3. Targeted vaccination program for animal health surveillance and care workers established 	USAID – Technical Assistance	Ministry of Health - human resources Ministry of Livestock	GAVI UNICEF WHO OIE FAO
Year 3	<ol style="list-style-type: none"> 1. *Immunizations for nation-wide coverage increased among children under the age of five to reach GOS 	USAID - Technical Assistance CDC – TA	Ministry of Health - human resources; electronic bulletin for feedback	GAVI UNICEF WHO

	<p>target of >95%</p> <p>2. IT Database to inform country actions in vaccine preventable diseases established</p>			
Year 4	<p>1. Vaccine preventable disease (VPD) immunization and impact are routinely monitored and evaluated.</p> <p>2. *Immunizations for nation-wide coverage increased among children under the age of five to reach GOS target of >95%.</p>	USAID - Technical Assistance CDC – TA	Ministry of Health - human resources; equip health facilities with cold chain materials	PATH GAVI UNICEF WHO
Year 5	<p>1. *>90% coverage of nation-wide 15 month old population vaccinated with government routine vaccinations.</p>	USAID - Technical Assistance CDC – TA	Ministry of Health - human resources; electronic bulletin for feedback	GAVI UNICEF WHO

*MOH targets are only available until 2016. Roadmap will be updated.

Detect

Laboratory Systems

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<p>1. Mapping of multi-sectorial laboratory capacity including pathogen testing and animal health completed</p> <p>2. Multi-sectorial nation-wide Laboratory strategic plan and policy</p>	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – funded partners</p>	<p>Ministry of Health - Form LTWG; QA cross-training and mentorship, laboratory audit, NPHL procurement , human resources; Establish technical</p>	<p>WHO, FAO, OIE, UEMOA, UA IBAR, CEDEAO, RESOLAB, WB, AU IBAR, PRAPS</p>

	<p>established;</p> <ol style="list-style-type: none"> National and/or international sample referral network system established Priority pathogens and diseases identified (including zoonotic diseases) Quality assurance (QA) across all levels of the NPHL and LNERV network reinforced Identify laboratories for strengthening diagnostic capacities for priority zoonotic diseases 		<p>guidelines; safe specimen package and transport for both animals and humans Other activity to be determined</p>	
Year 2	<ol style="list-style-type: none"> Nationwide tiered laboratory network needs identified National human and animal health laboratory strategic plan and policy reviewed/updated with action items for broader-based capacity building Lab quality management system (QMS) and Quality Assurance towards certification across all levels of the NPHL and LNERV system reinforced Diagnostic testing implemented and optimized for viral pathogens in wildlife, livestock, and humans. 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – funded partners</p>	<p>Ministry of Health - workforce training, equipment, data collection</p> <p>Ministry of Agriculture</p>	<p>Potential partners in WHO, FAO, OIE, CEDEAO, RESOLAB, AIEA</p>
Year 3	<ol style="list-style-type: none"> Nationwide laboratory network formalized and established; National Public Health Laboratory (NPHL) capacity at all levels for coordination and specimen collection, handling, shipment and referral established LNERV capacity at all levels for coordination and specimen collection, 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – funded partners</p>	<p>Ministry of Health - Reinforce NPHL system for pathogen detection and specimen handling</p> <p>Ministry of Agriculture</p> <p>LNERV</p>	<p>Potential partners in WHO, FAO, OIE, CEDEAO, RESOLAB, AIEA</p>

	<p>handling, shipment and referral established</p> <p>4. National laboratory strategic plan and policy operationalized</p> <p>5. Laboratory information management system (LIMS) selected and implemented at NPHL.</p> <p>6. LIMS selected and implemented at LNERV and harmonized with NPHL</p>			
Year 4	<p>1. National Public Health Laboratory (NPHL) operationalized and functional</p> <p>2. Accreditation/certification of NPHL process launched.</p>	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – funded partners</p>	<p>Ministry of Health - National Laboratory Network</p> <p>Ministry of Agriculture</p> <p>LNERV</p>	<p>WHO, FAO, OIE, UA IBAR, CEDEAO, AIEA</p>
Year 5	<p>1. Accreditation/certification of Regional laboratories in-process</p> <p>2. Evidence of increased capacity in laboratory staff in risk characterization and bioinformatics</p>	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – funded partners</p>	<p>Ministry of Health - National Laboratory Network</p> <p>Ministry of Agriculture</p> <p>LNERV</p>	<p>WHO, FAO, OIE, UA IBAR, CEDEAO, AIEA</p>

Surveillance Systems

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. Community-based surveillance (CBS) structures established 2. Capacities and gaps of IDSR and electronic disease surveillance systems assessed (both human and animal health). 3. Strengthened IDSR activities for investigation and response to epidemics 4. Strengthened personnel, logistics and communication capacity for IDSR at all levels 5. Coordinating framework established for the implementation electronic health information systems 6. Public health emergency plans and standard operational procedures in place at international airports, seaports and major land crossings, in accordance with international best practices, agreements, and the IHR (2005) 7. International agreements on animal exportation and animal health data sharing evaluated 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID – Technical Assistance/ Disease surveillance activities</p> <p>DoD CTR-CBEP – Technical assistance/Disease surveillance activities</p>	<p>Ministry of Health - Public health surveillance communication tools (community level)</p> <p>Ministries of Health, Transportation, Interior will be implicated in border health activities</p> <p>Ministries of Interior, Transport, Livestock, and Environment</p>	<p>WHO, IOM, CORDS likely to be partners on border health activities</p> <p>OIE, FAO, CEDEAO-RESEPI, CIRAD-EMVT</p>
Year 2	<ol style="list-style-type: none"> 1. National CBS plan established, with priority border communities and geographic areas identified for implementation 2. Hospital and laboratory surveillance data integrated in routine DHIS-2 reporting system 3. Strengthened real-time surveillance 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>DoD CTR-CBEP - Technical assistance/Disease surveillance activities</p>	<p>Ministries of Health, Transportation, Interior will be implicated in border health activities</p> <p>Ministries of Livestock, Agriculture</p> <p>LNERV</p>	<p>WHO, IOM likely to be partners on border health activities</p> <p>OIE, FAO, CEDEAO-RESEPI, CIRAD-EMVT</p>

	<p>at the lower health levels</p> <ol style="list-style-type: none"> Public health agreement between Senegal and neighboring countries for cross-border public health information sharing, specimen sharing and cross-border transport drafted or revised One Health surveillance strategy is agreed upon by all stakeholders 	USAID- Technical Assistance/Disease surveillance activities		
Year 3	<ol style="list-style-type: none"> Community-event based surveillance initiated in priority border districts Timely surveillance data reported from at least 80% of districts for all IDSR priority diseases Timely surveillance data reported from at least 80% of districts for all animal health priority diseases Medical, animal health, and surveillance officers trained in IDSR in 60% of the health districts In-service surveillance teams trained and deployed in accordance with One Health surveillance strategy 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>DoD CTR-CBEP - Technical assistance/Disease surveillance</p> <p>USAID - Technical Assistance/Disease surveillance activities</p>	<p>Ministries of Health, Transportation, Interior will be implicated in border health activities</p> <p>Ministries of Livestock, Agriculture</p> <p>LNERV</p>	<p>WHO, IOM likely to be partners on border health activities</p> <p>OIE, FAO, CEDEAO-RESEPI, CIRAD-EMVT</p>
Year 4	<ol style="list-style-type: none"> Zoonotic diseases relevant to human health integrated into routine surveillance Specimen transportation and DHIS-2 network functioning in at least 80% of districts for IDSR diseases Evidence indicating that suspected outbreaks are notified to central level within two days of surpassing epidemic threshold At least one medical or surveillance officers trained in IDSR at the district level. 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID - Technical Assistance</p>	<p>Ministries of Transportation, Interior will be implicated in border health activities</p> <p>Ministries of Livestock, Agriculture</p> <p>LNERV</p>	<p>WHO, IOM likely to be partners on border health activities</p> <p>OIE, FAO, CEDEAO-RESEPI, CIRAD-EMVT</p>

Year 5	<ol style="list-style-type: none"> 1. Functioning surveillance system of three core syndromes indicative of public health emergencies 2. Surveillance data translated into regional surveillance policy and recommendations 3. Evidence of effective use of electronic systems in public health information sharing 4. Compliance with IHR and/or mechanisms in place that support international best practices at ports of entry and border crossings 5. Systems to continually monitor and address gaps in preparedness at port of entry/land border crossings for public health events in place 6. Sustained One Health surveillance 	<p>CDC - Technical Assistance/some activities supported through MoH Co-Ag</p> <p>USAID- Technical Assistance/Disease surveillance activities</p>	<p>Ministries of Transportation, Interior will be implicated in border health activities</p> <p>Ministries of Livestock, Agriculture</p> <p>LNERV</p>	<p>WHO, IOM likely to be partners on border health activities</p> <p>OIE, FAO, CEDEAO-RESEPI, CIRAD-EMVT</p>
--------	---	--	---	--

Workforce Development

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. At least one key health officer and/or surveillance officer from 50% (38) of all 76 Health Districts has completed FETP Tier One training 2. 9-month Intermediate FETP curriculum developed 3. Participants in West Africa regional Advanced FETP have conducted 	<p>CDC - Funding to support FETP/Technical Assistance</p> <p>USAID – Technical Assistance</p>	<p>Ministry of Health - Identify/convene training participants; provide mentors; support coordination & planning; participate in outbreak investigations</p> <p>Ministries of Environment, Agriculture, LNERV</p>	<p>WHO - Identify trainers</p> <p>FAO – training</p> <p>OIE</p>

	<p>outbreak investigation and/or served as trainers</p> <p>4. Pre-service/in-service training opportunities related to surveillance, research, and lab testing identified</p> <p>5. Enhanced capacity and awareness of Infection prevention and control for Ebola and similar threats in health facilities</p>			
Year 2	<p>1. At least one key human and animal health officer and/or surveillance officer from remaining Health Districts has completed FETP Tier One training</p> <p>2. Four Residents graduated from 2015-17 cohort of advanced regional West African FETP, and placed in key posts in appropriate ministries</p> <p>3. At least one key human and animal health officer and/or surveillance officer from all 14 Health Regions has completed FETP Intermediate Tier training</p> <p>4. FETP Intermediate level training incorporated into professional training curriculum and/or routine continuing education plan for recently graduated medical doctors, veterinarians and other health professionals</p> <p>5. Training Plan to incorporate public health laboratorians and veterinarians in tiered FETP strategy completed</p> <p>6. Cross-border surveillance module fully integrated into tiered FETP approach in Senegal</p>	<p>CDC - Funding to support FETP/Technical Assistance</p> <p>DoD CTR-CBEP - Funding to support FETP</p> <p>USAID – Technical Assistance</p>	<p>Ministry of Health - Identify/convene training participants; provide mentors; support coordination & planning; training and continuing education</p> <p>Ministry of Livestock, E.I.S.M.V: Collaborate on curriculum</p> <p>Ministries of Environment, Agriculture, LNERV</p>	<p>FAO – training</p> <p>WHO, OIE, CEDEAO-RESEPI</p>

Year 3	<ol style="list-style-type: none"> 1. Training Plan to establish FETP Advanced in Senegal completed 2. At least one cohort of first two tiers (Basic/Intermediate) of FETP incorporating laboratorians and veterinarians completed for key regional and district health personnel and/or surveillance officers not previously trained 3. District surveillance officers in border region supervise community-event-based surveillance in their districts 4. National Park Service and district veterinary service surveillance officers design and supervise community based surveillance in animal health 5. Cadres of animal and human health professionals provided in-service training in requisite One Health skills ongoing 	<p>CDC - Funding to support FETP/Technical Assistance</p> <p>DoD CTR-CBEP - Funding to support FETP</p> <p>USAID – Technical Assistance</p>	<p>Ministry of Livestock, E.I.S.M.V: Identify/convene training participants, collaborate on curriculum</p> <p>Ministries of Environment, Agriculture, LNERV</p>	<p>FAO - training</p>
Year 4	<ol style="list-style-type: none"> 1. Launch of first cohort of FETP 2-year Advanced 2. At least one cohort of first two tiers (Basic/Intermediate) of FETP incorporating laboratorians and veterinarians completed for key regional and district health personnel and/or surveillance officers not previously trained 	<p>CDC - Funding to support FETP/Technical Assistance</p> <p>DoD CTR-CBEP - Funding to support FETP</p>	<p>Ministry of Health - Identify/convene training participants; provide mentors; support coordination & planning</p> <p>Ministries of Environment, Agriculture, LNERV</p>	<p>Other activity to be determined</p>
Year 5	<ol style="list-style-type: none"> 1. FETP Tiered strategy integrated into appropriate ministries and/or other permanent mechanisms for training highly qualified public health 	<p>CDC - Funding to support FETP/Technical Assistance</p> <p>USAID – Technical Assistance</p>	<p>Ministry of Health, Livestock, EISMV: Identify and convene training participants</p> <p>Ministries of Environment,</p>	<p>FAO - training</p>

	<p>workforce in Senegal</p> <p>2. At least one cohort of first two tiers (Basic/Intermediate) of FETP incorporating laboratorians and veterinarians completed for key regional and district health personnel and/or surveillance officers not previously trained</p> <p>3. One Health workforce has been trained in accordance with national One Health disease “detection” needs.</p>		Agriculture, LNERV	
--	--	--	--------------------	--

Reporting

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 FAO requirements.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<p>1. Assessment of general IHR and OIE reporting capacity</p> <p>2. Established national framework for sharing biological and behavioral surveillance data across all sectors</p> <p>3. Plan of action established for timely and accurate disease reporting based on IHR and OIE evaluation reports</p>	<p>USAID - Technical Assistance as needed</p> <p>CDC – TA</p>	<p>Ministry of Health - National Laboratory Network</p> <p>Ministry of Agriculture</p> <p>LNERV</p>	Potential partners in WHO, FAO, OIE, CEDEAO
Year 2	1. Two-way reporting of diagnostic results from wildlife, livestock, and people developed	USAID - Technical Assistance as needed	<p>Ministry of Health - National Laboratory Network</p> <p>Ministry of Agriculture</p> <p>LNERV</p>	Potential partners in WHO, FAO, OIE, CEDEAO
Year 3	1. Evaluation of reporting requirements at national level established	USAID - Technical Assistance as needed	Ministry of Health - National Laboratory Network	Potential partners in WHO, FAO, OIE, CEDEAO

			Ministry of Agriculture LNERV	
Year 4	1. Collaboration between various national data sources that contribute to public health reporting requirements (i.e. IHR, OIE)	USAID - Technical Assistance as needed	Ministry of Health - National Laboratory Network Ministry of Agriculture LNERV	Potential partners in WHO, FAO, OIE, CEDEAO
Year 5	1. Reporting protocols updated/ revised based on current best practices and IHR to improve data quality (timeliness, completeness, accuracy)	USAID - Technical Assistance as needed	Ministry of Health - National Laboratory Network Ministry of Agriculture LNERV	Potential partners in WHO, FAO, OIE, CEDEAO

Respond

Emergency Management

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> Established public health emergency management authority through the development of policies, protocols, and guidelines. Increased public health emergency management capacity to respond to public health threats at the national level. Improved evidence for decision-making in public health emergency management One Health preparedness framework 	<p>CDC - Technical Assistance</p> <p>DTRA DoD CTR-CBEP — Health EOC design and construction (ongoing)/training. Integration with All-Hazards EOC.</p> <p>USAID - Funding interim EOC lease starting August 1, 2015</p> <p>DoD AFRICOM – DPP – All Hazards EOC training, design or</p>	<p>Ministry of Health - Policy for Health EOC authority; core staff and training for Health EOC</p> <p>Ministry of Interior (and inter-ministerial) – Policy for All-Hazards EOC; core staff and training for All-Hazards EOC;</p>	<p>UNICEF - Equipment (interim Health EOC) WHO — Health EOC Training</p> <p>Bill and Melinda Gates Foundation - Funding interim Health EOC lease</p>

	<p>developed for multi-sectorial rapid response by the Health EOC.</p> <p>5. All-Hazards EOC personnel identified, trained, SOP developed</p>	<p>upgrade (ongoing). Integration with Health EOC</p>	<p>development of SOPs</p>	
Year 2	<p>1. Emergency Operations framework for the MOH EOC developed</p> <p>2. Construction and equipping of MOH EOC completed</p> <p>3. Integration of All-Hazards EOC and Health EOC</p>	<p>DoD CTR-CBEP DTRA - Health EOC construction/staff training, integration with All-Hazards EOC</p> <p>CDC - Health EOC staff training/ Technical Assistance</p> <p>USAID - Funding interim Health EOC lease starting August 1, 2015</p> <p>AFRICOM-DPP – All-Hazards EOC design or upgrade (ongoing). Integration with Health EOC</p>	<p>Ministry of Health -Policy for EOC authority; core staff and training for Health EOC</p> <p>Ministry of Interior (and inter-ministerial) – Policy for All-Hazards EOC; core staff and training for All-Hazards EOC; development of SOPs</p>	Other activity to be determined
Year 3	<p>1. Initial operational capacity of Health EOC achieved</p> <p>2. Information from laboratory, surveillance, and information systems developed integrated into the Health EOC</p> <p>3. Strengthening and maintenance of Health EOC including facilities, staff, and systems</p> <p>4. Health EOC plans and procedures validated</p> <p>5. Integration of All-Hazards EOC and Health EOC</p>	<p>DoD CTR-CBEP - Technical Assistance for simulation/exercises, maintenance of Health EOC, equipment, integration with All-Hazards EOC</p> <p>AFRICOM-DPP – Technical Assistance for simulation/exercises, maintenance or All-Hazards EOC and integration of Health EOC.</p>	<p>Ministry of Health- Staff participation in development of SOPs, trainings and exercises; IT expertise for Health EOC</p> <p>Ministry of Interior (and inter-ministerial) – Policy for All-Hazards EOC; core staff and training for All-Hazards EOC; development of SOPs</p>	Other activity to be determined
Year 4	<p>1. Strengthening and maintenance of All Hazards and Health EOCs including facilities, staff, and systems</p> <p>2. Test, validate, and improve All-Hazards and Health EOCs plans and procedures</p>	<p>CDC/ DoD CTR-CBEP/AFRICOM-DPP - Technical Assistance, integration of Health EOC with All-Hazards EOC</p>	<p>Ministry of Health - Staff participation in development of SOPs, trainings and exercises</p> <p>Ministry of Interior – Staff participation in refinement of</p>	Other activity to be determined

	3. Integration of All-Hazards EOC and Health EOC		SOPs, training, and exercises	
Year 5	<ol style="list-style-type: none"> 1. Strengthening and maintenance of Health and All-Hazards EOCs including facilities, staff, and systems 2. Test, validate, and improve Health and All-Hazards EOC plans and procedures 3. National capacity for multi-sectoral preparedness and response established and functional 4. Integration of All-Hazards EOC and Health EOC 	CDC/ DoD CTR-CBEP/AFRICOM - Technical Assistance integration of Health EOC with All-Hazards EOC	<p>Ministry of Health - Staff participation in development of SOPs, trainings and exercises</p> <p>Ministry of Interior – Staff participation in refinement of SOPs, training, and exercises</p>	Other activity to be determined

Linking PH and Law Enforcement

GHSA Goal	GHSA Objective	GHSA 5-Year Target		
Respond Rapidly and Effectively	Developing an interconnected global network of EOCs and multi-sectorial response to biological incidents: Promote establishment of public health EM programs, including EOCs; trained, functioning, multi-sectorial 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-sectorial 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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. Capacity of Léopold Sédar Senghor International Airport to respond in the event of a public health emergency assessed 2. Emergency response plan (ERP) at Léopold Sédar Senghor International Airport in place; airport personnel 	CDC - Technical Assistance/some activities supported through Partner Co-Ag	<p>Ministries of Health, Transportation, Interior will be implicated in border health activities</p> <p>National Biosecurity Authority</p> <p>Ministry of Livestock</p>	<p>WHO, IOM (and others) likely to be partners on border health activities</p> <p>OIE</p>

	and other related authorities trained/drilled on ERP			
Year 2	<ol style="list-style-type: none"> 3. Initial assessment of the linkage between public health and law enforcement completed 1. Formalized partnerships established among public health, military and law enforcement institutions 2. Exercise/testing of Emergency Response Plan for Public Health Event at Léopold Sédar Senghor International Airport conducted on routine basis 	CDC - Technical Assistance/some activities supported through MoH Co-Ag	Ministries of Health, Transportation, Interior will be implicated in border health activities	WHO, IOM (and others) likely to be partners on border health activities OIE
Year 3	<ol style="list-style-type: none"> 1. System for creating effective health messaging for in-bound and out-bound travelers when public health event occurs established and in place 2. Other ports of entry (seaports, airports other POEs) assessed for IHR compliance 3. Plan developed for integrating public health, military and law enforcement institutions in a joint response to a public health threat 	US Government activity to be determined	Ministries of Health, Transportation, Interior, Livestock will be implicated in border health activities	WHO, IOM (and others) likely to be partners on border health activities OIE
Year 4	<ol style="list-style-type: none"> 1. Test, validate and improve plans and procedures 2. MoUs, joint protocols and threat assessment tool developed for joint investigation. 	Technical Assistance	Ministries of Health, Transportation, Interior, Livestock will be implicated in border health activities	WHO, IOM (and others) likely to be partners on border health activities OIE
Year 5	<ol style="list-style-type: none"> 1. Multi-sectoral response to a biological event of suspected or confirmed deliberate origin demonstrated 	Technical Assistance	GOS activity to be determined	Other activity to be determined

	2. Public health, military and law enforcement integration tested by simulation exercises.			
--	--	--	--	--

MCM and Personnel Deployment

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.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	<ol style="list-style-type: none"> 1. Key agencies involved in MCM importation, deployment and regulatory approvals for use during public health emergencies identified 2. National preparedness plans for use of non-medical measures involving zoonotic disease (available through regional stockpiles) developed 3. Distribution, management and supervision systems for supplies needed during public health emergencies strengthened and improved 	USAID – Technical Assistance CDC – TA	Ministry of Health	Other activity to be determined
Year 2	<ol style="list-style-type: none"> 1. Key agencies convened and need for policy development established (national) 	Technical Assistance	Ministry of Health	Other activity to be determined
Year 3	<ol style="list-style-type: none"> 1. Policy development for MCM importation, deployment and regulatory approvals for use during public health emergencies initiated 2. Regional agreements for rapid cross border deployment of personnel and materiel drafted 	USAID – TA	Ministry of Health	Other activity to be determined

Year 4	1. Plans and procedures for MCM importation, deployment and regulatory approvals for use during public health emergencies tested and validated	USAID – TA	Ministry of Health	Other activity to be determined
Year 5	1. National framework for sending and receiving medical countermeasures and public health and medical personnel from and to international partners during health emergencies is established 2. Regional agreements for rapid cross border deployment of personnel and material finalized 3. Capacities and skills required for implementation of National preparedness plans for use of non-medical countermeasures involving zoonotic disease (available through regional stockpiles) in place	USAID – Technical Assistance	Ministry of Health	Other activity to be determined

Summary of Overarching Priorities for 2015-2019

In March 2015, an interagency team consisting of representatives from CDC, USAID, DoD CTR-CBEP conducted a visit to assess the GOS’ interest in participating in GHSA and to begin identifying their interests and needs vis-a-vis GHSA. This follow-up mission included technical experts to more fully explore and detail the GOS and USG’s areas of collaboration and to develop key GHSA country planning documents.

In June 2015, a series of meetings with GOS representatives and other key stakeholders such as WHO, FAO, universities and the private sector, were held to identify gaps, challenges and priorities for GHSA in Senegal. The team began to map out specific activities and develop a five year roadmap in the 11

areas which the USG can provide assistance. A baseline assessment was also conducted to facilitate the process of developing GHSA country-specific milestones and identify existing strengths.

Stakeholders have a strong interest in the GHSA framework and appreciate USG support in the achievement of IHR and Organization for Animal Health requirements. In ongoing discussions stakeholders have identified the need for improved coordination across GHSA technical areas to ensure effective communication and collaboration. There is consensus that leadership is needed to advance multi-sector capabilities for preparedness and response.

Based on initial discussions which will be validated in subsequent years, the following priority areas for GHSA involvement have been identified:

- Emergency Management
- Surveillance Systems and Reporting
- Laboratory Systems
- Zoonotic Diseases
- Workforce Development
- Biosafety and Biosecurity

With additional areas of ongoing involvement from GHSA and non-GHSA funded activities

- Antimicrobial Resistance
- Immunization
- Linking Public Health to Law Enforcement
- Medical Counter Measures and Personnel Deployment