GLOBAL HEALTH SECURITY AGENDA 
JOINT EXTERNAL EVALUATION OF 
THE FEDERAL DEMOCRATIC 
REPUBLIC OF ETHIOPIA
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Executive Summary

This assessment is a Global Health Security Agenda (GHSA) assessment using the World Health Organization (WHO’s) International Health Regulation (IHR) Joint External Evaluation (JEE) tool. A multi-sectoral team of experts (nominated by GHSA countries) and advisors [representing International Organizations including the WHO, the World Bank and the Food and Agriculture Organization (FAO) of the United Nations] participated in the week long assessment which took place from 29 February through March 4, 2016 in Addis Ababa, Federal Democratic Republic of Ethiopia (Ethiopia). At the time of the mission, the Government of Ethiopia (GoE) had already completed a self-assessment using the JEE tool. The results of this assessment, including host country self-assessed scores for the 19 Action Packages, were then presented to the External Assessment Team (EAT). The EAT and host country experts participated in a facilitated discussion to assess jointly Ethiopia’s current strengths, areas which need strengthening, and priority actions; scores were developed through a process of consensus. Action Package scores, supporting information, and specific recommendations for priority actions are provided under each of the Action Package sections of this report.

The external assessment commenced on February 29, 2016 with a presentation by Dr. Abyot Bekele. It was explained that Ethiopia volunteered to conduct its GHSA external assessment for several reasons: 1) the MOH wanted to have this assessment to be able to have a strong Public Health Emergency Management (PHEM) system – a system tested during the Ebola outbreak – in order to be better prepared for future disease outbreaks; 2) the MOH wants to spearhead Ethiopia’s implementation of the WHO IHR and to be a model for all of Africa and to understand the country’s strengths and weaknesses; and 3) the MOH wants to embed PHEM in its five-year Health Sector Transformation Plan. The GoE assembled the various relevant sectors to conduct this external assessment, but recognizes its constraints in being able to bring together different ministries and sectors at all levels of government to collaborate as a matter of routine business. The GoE requested this joint assessment by internal and external experts and welcomed the report at the end of the assessment.

The GoE representative presented its strategic Health Sector Transformation Plan which began implementation in 2015. The five-year plan incorporates four major transformational agendas including: the establishment and implementation of a Public Health Emergency Management (PHEM) program; Information Transformation; Quality and Equity; and Health 20 Visioning Plan. The presentation included a review of the Government’s self-assessment across the Action Packages. The week’s discussions included in depth reviews of each Action Package facilitated by a member of the external assessment team with robust discussions between the government officials and the team. Consensus scores and three to five priority areas for action were decided for each Action Package. The full team presented the results of the assessment and observations of the host country’s health security preparedness to the Federal Minister of Health, Dr. Kesetebirhan Admasu at the Ministry of Health in Addis Ababa, Ethiopia, on 4 March, 2016.
Findings from the Joint External Evaluation

Overarching Issues and Priority Actions
Over the course of the week’s discussions, both the Ministry of Health and the Ministry of Livestock and Fishery made clear their strong political will to strengthen Ethiopia’s public health and animal health systems, both to promote Global Health Security and in order to meet obligations under the International Health Regulations. At least three recurring major themes emerged which are considered overarching issues for consideration by the Government of Ethiopia:

Multi-sectoral engagement: Opportunity exists for significantly enhancing multi-sectoral collaboration, information exchange, and cross-disciplinary exchanges between the ministries overseeing the health and health security of humans, animals, and food. The planned establishment of a National Public Health Security Council is noteworthy as a mechanism for collaboration among the relevant ministries at the Federal level; mechanisms should also be established or enhanced to promote systematic policy and technical collaboration between the human and animal health sectors, and other relevant sectors, at all levels of government.

Enhancing Surveillance: Ethiopia is committed to establishing surveillance systems for a number of critical diseases in human and animals and systems for detecting antimicrobial resistant microbes, adulterated food, and counterfeit medicines with the goal to provide early warning of potential threats to human and animal health and monitoring of priority diseases. These systems can be greatly enhanced across all levels of government, especially at the woreda level, by integrating surveillance efforts across human and animal health sectors, and focusing efforts to improve data quality and information management and use.

Enhancing Laboratory Capacity and Workforce: Ethiopia’s national laboratory capacity in both the animal and public health sectors is strong, but opportunities exist to greatly enhance the ability of the Government to prevent and detect human and animal disease outbreaks by further investing in laboratory capabilities and capacity, especially at the subnational levels. Strengthening laboratory resources and trained personnel along with enhanced biosecurity and biosafety measures will benefit the country’s surveillance systems, increase communication between relevant sectors, and promote better health.

Summary of Scores

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Target
States Parties should have an adequate legal framework to support and enable the implementation of all of their obligations and rights to comply with and implement the International Health Regulations (IHR) 2005. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even where new or revised legislation may not be specifically required under the State Party’s legal system, States may still choose to revise some legislation, regulations or other instruments in order to facilitate their implementation and maintenance in a more efficient, effective or beneficial manner.

State parties should ensure provision of adequate funding for IHR implementation through national budget or other mechanism.

Ethiopia Level of Capabilities

Overview of Action Package
The GoE has the legal framework to support and enable the implementation of the country obligations and rights to comply with and implement the IHR. The Ethiopian Government has passed legislation and regulations which govern public health surveillance, emergency preparedness, sharing of information to public, stakeholders and partners, investigation and response to public health emergencies and consequently address the implementation of the International Health Regulations 2005. Examples of existing legislative instruments include: the Ethiopian Public Health Institute (EPHI) Regulation 301/2013 establishing the EPHI as the entity responsible for the IHR implementation; the Ethiopian Food, Medicine and Health Care Administration and Control Authority (EFMHACA) Proclamation 661/2009, Regulation 189/2010, and Regulation 299/2013; and Radiation Protection Proclamation 571/2008.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Establish a National Public Health Security Council at the Prime Minister’s office to coordinate multi-sectoral activities for IHR implementation.
- Review and incorporate into national legislation all relevant components that will facilitate the implementation of the countries’ rights and obligations of the IHR.
- Adopt additional policies within the National Health Sector Plan to facilitate the core and expanded functions of the IHR National Focal Point (NFP).

Indicators and Scores
P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR—Score: 4

Strengths
- The following laws and regulations constitute the main authorities for implementing the IHR across the different sectors: Ethiopian Health Policy (1993); EPHI Council of Minister’s Regulation (301/2013); Radiation Protection Proclamation (571/2008); EFMHACA Proclamation (661/2009); and EFMHACA Council of Minister’s Regulation (299/2013); and the Ethiopian Constitution.
• A Memorandum of Understanding between Kenya and Ethiopia addresses security, access to health services, education, and transportation.
• Other cross-border agreements have been signed with countries and the Regional Economic Community and the Intergovernmental Authority on Development in the greater horn of Africa region.
• An assessment of the various legislation, administrative procedures and instruments has been carried out and implementation is ongoing.

Areas which need strengthening
• Reviewing and incorporating into national legislation all relevant components that will facilitate the implementation of the countries’ rights and obligations of the IHR.
• Adopting additional policies within the National Health Sector Plan to facilitate the core and expanded functions of the IHR National Focal Point (NFP).

P.1.2 The state can demonstrate that it has adjusted and aligned its domestic legislation, policies, and administrative arrangements to enable compliance with the IHR (2005)—Score: 4

Strengths
• National assessments of the available legislation and regulations to implement IHR core capacities were completed, including prior to the establishment of the Ethiopian Public Health Institute and repeated in July 2015. A legislative assessment was done in 2012.
• An independent assessment has been conducted by WHO Regional Office for Africa as part of the overall IHR assessment.

Areas which need strengthening
• Multi-sectoral collaboration for the implementation of the IHR is generally weak (e.g. for chemical events).
• A review is needed of all the key protocols, standards, guidelines, and standard operating procedures (SOP) for the implementation of IHR obligations in the country, across all the relevant sectors, and develop/reinforce these, as appropriate.

Relevant Documentation
• Ethiopian Health Policy 1993
• Ethiopian Public Health Institute Regulation No. 301/2013
• EFMHACA Proclamation No. 661/2009
• EFMHACA Regulation No. 299/2013
• EFMHACA Regulation No. 189/2010
• Radiation Protection Proclamation No. 571/2008
• Public Health Emergency Management Guidelines 2012
**IHR Coordination, Communication and Advocacy**

**Target**

The effective implementation of the IHR (2005) requires multi-sectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the sustainable functioning of a National IHR Focal Point (NFP), which is a national centre for IHR (2005) communications, is a key requisite for IHR (2005) implementation. The NFP should be accessible at all times to communicate with the WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of NFPs, continuously update and annually confirm them.

**Ethiopia Level of Capabilities**

**Overview of Action Package**

The Federal Ministry of Health of Ethiopia has established a structure to coordinate the IHR at the national level and has identified potential partners and stakeholders to support its implementation. A Public Health Emergency Task Force whose role is “to coordinate key stakeholders working on early warning, emergency preparedness, prevention, detection, response and rehabilitation of major public health emergencies in Ethiopia and ensure adequate management of health and nutrition emergencies” and Technical Working Groups have been established with clear terms of reference to support IHR implementation. It seems however that despite the efforts, multi-sectoral collaboration with other relevant ministries is not fully functional. Mechanisms to improve a systematic exchange of information need to be strengthened.

**Joint Host Country/Assessment Team Recommendations for Priority Actions**

- Establish mechanisms for regular information sharing between line ministries. This will include finalizing the Memoranda of Understanding prepared by the Federal Ministry of Health.
- Conduct regular assessment of IHR implementation in all sectors.
- Strengthen advocacy for IHR implementation to all relevant partners in Ethiopia.

**Indicators and Scores**

**P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR—Score: 3**

**Strengths**

- Coordination mechanisms are established at the national level and include a Public Health Emergency Management Task Force and technical working groups.
- Terms of reference for the technical working groups have been clearly defined and action plans prepared; the terms of reference identify responsible agencies for each IHR hazard.
- There exist informal exchanges of information between line ministries, although primarily through personal contacts.

**Areas which need strengthening**

- There should be increased advocacy and awareness of IHR implementation across sectors, with specific policies and standard operating procedures for IHR implementation.
• Multi-sectoral coordination between human and animal health and other sectors is not well functioning and should be systematically strengthened and used, not only during emergencies.
• There is no system for a systematic exchange of information between sectors as reporting to other ministries is not mandatory. Any information is shared based on request. No formal communication mechanism is established to regularly share information between line ministries.

Relevant Documentation
• Terms of Reference IHR Technical Working Groups
• Terms of Reference Public Health Emergency Task Force
• Terms of Reference Disaster Risk Management Technical Working Group
Antimicrobial Resistance

Target
Support work being coordinated by WHO, FAO, and 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.

Ethiopia Level of Capabilities

Overview of Action Package
Ethiopia produced their National Action Plan for Antimicrobial Resistance in 2009 followed by an update to the plan in 2015, the National Strategic Framework for Prevention and Containment of antimicrobial resistance (AMR). A multi-sectoral advisory committee (including Ministry of Health, Ministry of Livestock and Fishery, and others) has been convened to revise the national plan to align with the Global Action Plan for AMR. However, currently, there is suboptimal stewardship in humans and animals and little overall awareness in the country of the importance of controlling and preventing AMR, especially within the animal health and production sectors. As well, there is no sharing of information regarding AMR, nor coordination or collaboration between public health and animal health or other sectors in planning or implementation of AMR detection, surveillance systems, response, etc.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Strengthen AMR surveillance systems within animal health and public health sectors.
- Increase AMR laboratory capacity within animal health and public health sectors.
- Increase AMR infection prevention and control within animal health and public health sectors.
- Inter-sectoral collaboration and conduct continuous stakeholder communication and behavioural change within animal health and public health sectors.
- Implementation of an AMR Stewardship Program within animal health and public health sectors.

Indicators and Scores
P.1.1 Antimicrobial Resistance (AMR) Detection—Score: 3

Strengths
- Both the animal and public health sectors have antimicrobial resistance testing capacity.
- There is ongoing culture and sensitivity testing for more than eight human pathogens from throughout the country based on WHO recommendations.
- The National Animal Health Diagnostic and Investigation Center (NAHDIC) is testing some clinical samples, especially for resistance to Streptococcus and Staphylococcus in milk samples and for Salmonella in poultry.
Areas which need strengthening

- Testing is currently for clinical samples only.

P.1.2 Surveillance of infections caused by AMR pathogens—Score: 2

Strengths

- The three first hospital sentinel sites for public health AMR surveillance are ready to start and the next sites have been identified. These sites currently are doing testing but not in the context of a sentinel surveillance system.

Areas which need strengthening

- There are not yet any functioning sentinel sites for public health AMR surveillance.
- There are no AMR sentinel surveillance sites in the animal health sector.

P.1.3 Healthcare associated infection (HCAI) prevention and control programs—Score: 2

Strengths

- There is a public health HCAI plan.

Areas which need strengthening

- Not all facilities are implementing HCAI programs.
- There are no formal plans in place in the animal health sector or systematic implementation of biosecurity and hygiene measures for farms.
- Guidelines are being developed to improve rational use of antimicrobial medicines in animals.

P.1.4 Antimicrobial stewardship activities—Score: 2

Strengths

- One human health facility has implemented an antibiotic stewardship program.
- There is legislation governing use in humans (e.g. prescriptions).
- There is no local manufacture of antimicrobial agents for animals, and control of imports allowing usage levels to be estimated.
- There are tight controls on safety, quality, efficacy, and potency of antibiotics entering the country for animal health.

Areas which need strengthening

- Except for one facility, over 300 hospitals have not implemented antibiotic stewardship programs/actions.
- Legislation governing use of antimicrobial medicines in humans is not implemented/enforced and these medicines are available over the counter.
- There is currently no legal requirement for prescription for use of antimicrobial medicines in animals and antibiotics are not used based on principles of “rational use”. As there is little susceptibility testing in animals, mostly broad spectrum antibiotics are used.
• Antibiotics are used for growth promotion in chicken, beef, and dairy production.

**Relevant Documentation**
- National Strategic Framework for Prevention and Containment of AMR
Zoonotic Disease

Target
Adopted measured behaviours, policies and/or practices that minimize the transmission of zoonotic diseases from animals into human populations.

Ethiopia’s Level of Capabilities

Overview of Action Package
Certain zoonotic diseases – rabies and anthrax, for example – have big impacts on animal and public health in Ethiopia. There is strong political will both from Ministry of Health (MoH) to improve the public health system (especially in the context of effectively implementing IHR), and from the Ministry of Livestock and Fishery (MoLF) to strengthen the animal health system. Although both health systems are relatively strong with good capacity, especially the diagnostic laboratories, surveillance and response in both systems are in need of some strengthening. Further, communication and collaboration between the animal health and public health sectors is very weak and occurs only on an ad hoc basis. There are no formal or legal linkages, structures, or policies for working together or with other sectors such as wildlife and food.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Establish, with legislative support, a national mechanism or coordinating body responsible for routine communication and collaboration (including priority setting, policy setting, regulatory guideline development, information sharing, supporting joint training and educational programmes, and risk assessment) between the animal health and public health sectors and other relevant sectors.
- Establish an integrated human health and animal health surveillance and response system for routine and emergency zoonotic events and strengthen joint prevention and control capacity for zoonotic diseases, including other agencies (e.g. wildlife) as needed, to act at community, national and regional levels.
- Build and link veterinary and public health laboratory capacity to identify and verify priority zoonotic diseases.
- Build mass health education campaigns on priority zoonotic diseases and improve awareness for working with a “One Health” approach.

Indicators and Scores

P.2.1 Surveillance systems in place for priority zoonotic diseases/pathogens—Score: 4*
*Caveat to score of 4: There is no or only very limited ad hoc interaction between the sectors.

Strengths
- Surveillance systems for five or more zoonotic diseases are in place both for humans and for animals.
- Joint public health/animal health priority zoonotic diseases - rabies, anthrax, brucellosis, leptospirosis, and echinococcosis – were agreed during joint public health/animal health discussions held in September 2015.

Areas which need strengthening
- There is no linkage between public health and animal health surveillance systems and no mechanisms or structures for sharing of zoonotic disease information.
• There is no linkage between public health and animal health diagnostic laboratory systems and no mechanisms for sharing specimens between public health and animal health laboratories.

P.2.2 Veterinary or Animal Health Workforce - Score: 3

Strengths
• There are at least some veterinarians working in the MoH. There is good engagement at the national level.
• Veterinarians are included in country Field Epidemiology Training Program (FETP) training.
• There is sufficient animal health workforce capacity to support public health at the national level, once coordination mechanisms are in place.
• The veterinary workforce and all veterinary capacities have been evaluated in an World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) evaluation and an OIE PVS gap analysis and this information is available to the Ethiopians government.

Areas which need strengthening
• No training program is offered to public health staff in controlling zoonotic diseases coming from animal populations.
• There is insufficient engagement of the veterinary sector with public health at the subnational level and in the field.

P.2.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional- Score: 2

Strengths
• Both the animal health and public health sectors (separately) respond to zoonotic disease events.
• Contingency and preparedness and/or response plans, including mechanisms for communication and joint response [for Rift Valley fever (2009), avian influenza (2006), and pandemic influenza (2010)] exist, and the animal health and public health sectors have worked together on these diseases. For Ebola, animal health and public health came together to share laboratory capacity using the facilities at the National Animal Health Diagnostic and Investigation Center (NAHDIC).

Areas which need strengthening
• There is no strategy, plan, or mechanism for establishing multidisciplinary interagency response teams in the event of a suspected zoonotic disease outbreak.
• Diseases in animals are often not reported by farmers/owners to community health workers or veterinarians. Reporting is required for early detection and response. There is no plan to encourage reporting of animal diseases or address factors which might prevent farmers/owners from reporting.

Relevant Documentation
• Epidemiological Bulletin Volume 2/Number 6, February 2016 (Ethiopian Public Health Institute, Public Health Emergency Management Centre/PHEM)
• Zoonotic Diseases for Intersectoral Engagement in Ethiopia, September 2015 (US CDC, Ethiopia Public Health Institute, and Ministry of Agriculture)
• Agricultural Sample Survey Report on Livestock and Livestock Characteristics (private peasant holdings), Statistical Bulletin 570, April 2013 (Federal Democratic Republic of Ethiopia Central Statistics Agency)
• Ethiopia Field Epidemiology Training Program Information Bulletin, September 2012 (Federal Ministry of Health)
• PVS Gap Analysis Report, Ethiopia, September 2012 (OIE)
• Public Health Emergency Management, February 2012 (Ethiopian Health and Nutrition Research Institute, Public Health Emergency Management Centre/PHEM)
• PVS Evaluation Report, Ethiopia, May 2011 (OIE)
• Pandemic Influenza Preparedness and Response Plan, 2010 (Federal Democratic Republic of Ethiopia, Ministry of Health)
• Rift Valley Fever Contingency and Preparedness Plan for Ethiopia, June 2008 (Ministry of Agriculture and Rural Development)
• Policy for Highly Pathogenic Avian Influenza Surveillance, December 2006 (Ethiopian Health and Nutrition Research Institute)
Food Safety

Target
State parties should have surveillance and response capacity for food and water borne diseases’ risk or events. It requires effective communication and collaboration among the sectors responsible for food safety and safe water and sanitation.

Ethiopia Level of Capabilities

Overview of Action Package
The Government of Ethiopia (GOE) is in the process of updating and modernizing the country’s food safety, animal and plant health systems. This ongoing and evolving modernization process is, in part, attributed to the nation’s fast-paced, export-oriented economic growth, which has spurred a rising number of retail and wholesale food outlets, restaurants, and food manufacturers, especially in and around the capital city, Addis Ababa. The GOE has subsequently taken steps to regulate these establishments to ensure the food they produce, distribute or sell is safe and wholesome. The assessment team was briefed on the legal authorities of the GOE which define the food safety mechanisms.

Broadly speaking, the country’s food safety regulatory system is authorized and mandated in Parliamentary Proclamation – Ethiopian Food, Medicine, and Healthcare Administration and Control Authority Proclamation No. 661/2009. This legislation provided the legal authorities for the government to consolidate the pre-existing food regulatory system with the aim of better protecting the public from health risks emerging out of unsafe and poor quality food. In particular, the Proclamation authorizes the setting of standards and regulations for locally-produced and imported foods, in areas such as production, promotion, storage, packaging and labeling, distribution, and laboratory testing.

In a subsequent Parliamentary Proclamation – Ethiopian Food, Medicine and Healthcare Administration and Control Authority Regulation No. 189/2010 – the Ethiopian Food, Medicine, Healthcare and Control Authority (EFMHACA) was established, under the purview of the Ministry of Health, as the competent authority responsible for setting and enforcing food safety standards and regulations. Under this proclamation, food is defined food as “any raw, semi-processed or processed substance for commercial purpose or to be served for the public in any way intended for human consumption that includes water and other drinks, chewing gum, supplementary food and any substance, which has been used in the manufacture, preparation or treatment of food.”

EFMHACA was given further statutory authority to enforce and implement food safety and quality regulations as defined in the Food Medicine and Healthcare Administration and Control Councils of Ministers Regulation No 299/2013. This legislation states that food must be wholesome and produced in accordance with the relevant safety and quality requirements. Imported products failing to meet these standards will be returned to the country of origin or destroyed at the point of entry. This regulation also provides broadly-defined requirements dealing with food storage, handling, and transportation, and prohibits counterfeiting and adulteration.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Enhance relevant multi-sectoral collaboration and information sharing among the political, policy, and regulatory entities involved in food safety. The team strongly endorses the establishment of a multidisciplinary team to strength preparedness and response efforts associated with food outbreaks proposed by the EPHI.
- Enhance robust coordination at the technical level for a rapid multi-sectoral operational response to detect and response to food-borne outbreaks. Exercises could be used to test new capabilities.
• Enhance laboratory capacity to diagnose microbiological and chemical agents in all relevant ministries involved in food production, importation, and distribution.

**Indicators and Scores**

**P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination—Score: 2**

**Strengths**

• Strong regulatory system.

**Areas which need strengthening**

• Inter-sectoral Coordination. There are at least four agencies involved in food safety: (1) import/export aspects in Ministry of Trade (the *Codex Alimentarius* focal point); (2) licensing of food products in the Food Registration and Licensing Directorate (under the FMHACA who do some investigation and testing) and are the INFOSAN focal point; (3) outbreak response within EPHI; and (4) animal production and meat inspection in the abattoirs within the MoLF.

• Food borne disease outbreaks are rarely detected, reported, or investigated and rarely traced back to identify the source of the contagion. Dr Daddi is working to establish a team associated with food outbreaks, with diagnostic capabilities (microbiological and chemical) which would be at EPHI.

**Relevant Documentation**

• [Proclamation 661/2009](#)
• [Regulation 189/2010](#)
• [Regulation 299/2013](#)
• [Food directives](#)
Biosafety and Biosecurity

Target
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.

Ethiopia Level of Capabilities

Overview of Action Package

Biosafety and biosecurity (B&B) of laboratories is critical in order to protect the health and safety of laboratory workers, their families and the community. Ethiopia has a National Laboratory System in place for both animal health and public health, and has an existing regulation relating to biosafety in laboratories. Currently, biosecurity lacks a national regulation and is limited in its implementation.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Finalize and implement national B&B legislation.
- Establish a multi-sectoral National Biosafety and Biosecurity Team to enhance collaboration, information sharing about B&B best practices, and to develop and implement B&B policies and guidelines at all levels throughout the country including the private sector’s laboratories.
- Identify, by each ministry, agents/pathogens of concern and facilities housing those agents in order to develop regulations which would be implemented to safeguard the people, the agents, and the facilities working with dangerous pathogens.

Indicators and Scores

P.6.1 Whole-of-Government biosafety and biosecurity system is in place for human, animal, and agriculture facilities—Score: 2

Strengths
- There is a current regulation which applies to Biosafety, Health Safety of Guidelines for Public Health in Ethiopia, June 2010.
- The MoH and MoLF have initiated collaboration since the Ebola outbreak in order to test suspect samples.
- The Government of Ethiopia requires all laboratories to be registered. Part of the registration requires compliance with aspects of biosafety.

Areas which need strengthening
- Regulations need to be developed which cover all of the existing gaps in biosafety and address biosecurity.
- Biosafety and biosecurity regulations should include aspects of physical security, inventory control, and personnel reliability.
- Laboratories with dangerous pathogens and toxins should be registered with the Government of Ethiopia.
P.6.2 Biosafety and biosecurity training and practices—Score: 2

**Strengths**
- Biosafety training is offered by the MoH and the National Animal Health Diagnostic and Investigation Center (NAHDIC) for federal and regional laboratories.
- Biosafety training is also provided as a part of medical school education in Ethiopia.
- Biosafety training, including training for clinicians, was provided during the Ebola outbreak in preparation for potentially positive cases.
- Licensing by the Ethiopian Food, Medicine and Health Care Administration and Authority (EFMHACA) – 110 laboratories are currently being prepared for certification under ISO 151189.

**Areas which need strengthening**
- No specific agents of concern identified for human and agricultural pathogens of concern.
- Facilities housing dangerous pathogens and toxins should be identified.
- Specific legislation for B&B at country level does not exist. The GoE plans to develop legislation.
- Need to identify Biological Weapons Convention Focal Point.
- Development and implementation of facility B&B training and standard operating procedures.

**Relevant Documentation**
- Health Safety of Guidelines for Public Health in Ethiopia, June 2010
- Biosafety Training of Trainers Agenda
- Ethiopian Public Health Institute, The Second Strategic Plan, June 2015
Immunization

Target
A functioning national vaccine delivery system—with nationwide reach, effective distribution, access for marginalized populations, adequate cold chain, and ongoing quality control—that is able to respond to new disease threats.

Ethiopia Level of Capabilities

Overview of Action Package

In Ethiopia, routine immunization was launched in 1980 with six antigens provided for children below two years of age with the objective of increasing the coverage by 10% annually. Vaccines are administered on a voluntary basis. Currently the Expanded Program on Immunization (EPI) targets 10 diseases namely tuberculosis, polio, measles, diphtheria, pertussis, tetanus, pneumococcal pneumonia, rotavirus diarrhea, pneumonia, meningitis due to haemophilus influenza type b, and hepatitis due to Hepatitis B virus. Plans are in place to add additional targets into the routine immunization schedule for children under one year of age. In particular, meningococcal disease and yellow fever have nationally been recognised as significant public health problems and are targeted for immunization during 2016-2020. Ethiopia has a national vaccination action plan, which is aligned with the WHO Global Vaccine Action Plan.

Based on the latest coverage survey (2014), the vaccine coverage of measles-containing vaccine (MCV1) and Diphtheria, Pertussis & Tetanus (DPT-3/Penta 3) were estimated to be 84% and 87%, respectively. There is some discrepancy between the Country Official estimates and the WHO/UNICEF estimates, the latter estimating lower coverages. However, both estimates indicate an increasing trend in coverage over time, which is encouraging.

Ethiopia has a nationwide vaccine delivery system (maintaining cold chain) in most districts and functional vaccine procurement system. The Pharmaceutical Fund and Supply Agency (PFSA) had the national mandate for vaccine storage and delivery.

Note: The indicators of this Action Package focus on human health. Animal health is not extensively covered and thus not taken into account in scoring. However, the National Plan does take into account rabies immunization in humans.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Address the shortcomings in vaccine delivery strategies (cold chain management) and human resource capacity (staff attrition and turn over).
- Strengthen data quality management, archiving and analysis at all administrative levels for improved evidence-based decision making.
- Enhance immunization in specific poor performing regions/zones through education/communication campaigns.

Indicators and Scores

P.4.1 Vaccine coverage (measles) as part of national program—Score: 3

Strengths
- There is strong national leadership and coordination.
• There is strong partnership in immunization activities within country and global partners.
• There is frequent reporting of vaccine coverage estimates and increasing trend in coverage estimates.
• There are quarterly review meetings to assess EPI and surveillance performance.

Areas which need strengthening
• Strategies for improving vaccine coverage in low-coverage regions and hard-to-reach populations. This is crucial as the major concern is the consistently low EPI coverage in pastoralist regions.
• Immunization and surveillance data quality, archiving and analysis. This includes increasing the number of laboratories throughout the country capable of diagnosing vaccine-preventable disease, such as measles, and linking surveillance systems.

P.4.2 National vaccine access and delivery—Score: 4

Strengths
• Vaccine storage and transport capacities are widespread.
• There is co-financing New and Under-utilized Vaccines Implementation (NUVI) vaccines and full funding for the traditional ones.

Areas which need strengthening
• Human resource capacity and training.
• Utilization of new technology and innovations to improve the cold chain and vaccine management.

Relevant Documentation
• Strengthening Routine Immunization in ETHIOPIA, WHO report, 2014
• Ethiopia National Expanded Programme on Immunization, Comprehensive Multi Year Plan, 2011-2015 and 2016-2020
Target

*Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.*

Ethiopia Level of Capabilities

Overview of Action Package

Ethiopia’s national laboratory capacity is strong, but opportunities exist to greatly enhance the ability of the Government to prevent and detect human and animal disease outbreaks by further investing in laboratory capabilities and capacity, especially at the peripheral levels. Strengthening laboratory resources and trained personnel along with enhanced biosecurity and biosafety measures will benefit the country’s surveillance systems, increase communication between relevant sectors, and promote better health.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Ensure the quality of all delivery services particularly laboratory services.
- Organize capacity building for laboratory for public health emergencies, including biosecurity and biosafety aspects.
- Subject matter expert training/workshops for specific diseases (HIV, etc.).

Indicators and Scores

**D.1.1 Laboratory testing for detection of priority diseases—Score: 4**

*Strengths*

- National laboratory system capable of detecting six of the ten core tests identified by the International Health Regulations (HIV, TB, Polio, Influenza, Salmonella, and plasmodium).

*Areas which need strengthening*

- The remaining four tests are to be identified based on the major national public health concerns of the country.
- Equipment management.
- Procurement and Supply chain management.
- High turnover of trained staff.

**D.1.2 Specimen referral and transport system—Score: 3**

*Strengths*

- Laboratory referral linkage is implemented.
- Specimen transportation mechanism exists for only HIV through courier contracts supported by the MoH.
Areas which need strengthening

- No mechanism in place for outbreaks of diseases or other routine diseases under surveillance.
- No linkage with international laboratory network.
- Poor data sharing on zoonotic diseases between human and animal health.

D.1.3 Effective modern point of care and laboratory based diagnostics—Score: 3

Strengths

- All Health facilities are linked to next level health facility in the tier system.
- Tier-specific diagnostic testing strategies exist.
- Country proficient in classical diagnostic techniques including bacteriology, serology and PCR in selected laboratories.
- Country is using point-of-care diagnostics for country priority diseases such as HIV and TB.

Areas which need strengthening

- Tier-specific diagnostic testing strategies need to be fully implemented.

D.1.4 Laboratory Quality System—Score: 2

Strengths

- One laboratory is certified by WHO and other laboratories are being prepared for ISO 15189 and 17025 accreditation.
- Laboratory Quality Management System (QMS) is being implemented in most health facilities.
- Existing External Quality Assessment exists for all the six core tests.
- System of licensing of health laboratories is in place.
- Laboratory master plan exists.

Areas which need strengthening

- Biosecurity and biosafety within the National Laboratory System is weak.
- Weak support for QMS at some management levels.
- QMS implementation considered as an additional activity in some facilities.

Relevant Documentation

- Weak support for QMS at some management levels. 1st Edition June 2010
Real-Time Surveillance

Target
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 analyse 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.

Ethiopia Level of Capabilities

Overview of Action Package
Ethiopia has well developed structures for disease surveillance and early detection of pathogens of public health importance.

In the public health sector, the Indicator-Based Surveillance (IBS) system is robust with 21 diseases including severe acute malnutrition and maternal death reported immediately or weekly from the health facility to district (Woreda), zonal, regional, and national levels. Standard case definitions are available at all health facilities and community case definitions available at health posts for use by health extension workers. Weekly reporting rates exceed 85% for most regions except Afar, Gambella, and Addis Ababa city. Reporting is still paper-based at the health facility level with telephone calls, fax, and emails used between the district and zonal levels. At the zonal level the surveillance data are entered into a database and reported to regional state through email and then to the national level. There are plans at advanced stages to transition the paper-based reporting to electronic reporting in the near future. Event-based and syndromic surveillance systems are present and functional, but in uneven capacities.

In the animal health sector, a surveillance system is in place where animal diseases are reported on a paper-based system monthly. Now the Ministry of Livestock and Fishery (MoLF) is piloting a mobile apparatus-based Animal Disease Notification and Investigation System for 19 diseases prioritised for immediate reporting. The monthly paper-based reporting system is also to be replaced by the web-based reporting system. Paper reports from Kebele (sub district) and Woreda will be fed into a computer at the regional veterinary laboratories and the data are then sent electronically from the regional laboratories to the Federal MoLF. Currently the paper-based reporting rate is about 40% with 19 diseases prioritised for reporting.

The public health and animal surveillance systems operate in silos and are not interconnected or interoperable. There is no formal mechanism for aligning system implementation or sharing of surveillance information between the sectors. The communication is personal, need-based and irregular. Two zoonotic diseases, rabies and anthrax, are reported in both systems.

Joint Host Country/Assessment Team Recommendations for Priority Actions
• Finalize the testing and evaluation of the electronic health reporting systems from all sectors and gradually transition from paper-based to full-time electronic reporting.
• Roll out standardized training on Indicator-based surveillance and event-based surveillance to health facility personnel, health extension workers, and the Health Development Army (HDA).
• Establish mechanisms to share surveillance information among relevant line ministries, e.g. finalize the draft memorandum of understanding, organize scheduled meetings between sectors, link surveillance systems between sectors.
• Scale up community-based surveillance to all regions in the country and standardize it through training and provision of reporting tools.

Indicators and Scores

D.2.1 Indicator and event based surveillance systems—Score: 3

Strengths
Public health sector
• The indicator based surveillance (IBS) system is in place with 21 diseases reported weekly. Fourteen of the 21 diseases are to be reported immediately.
• Facility and community case definitions are available at all sub-national levels.
• Rumour log book is available at all levels to register and verify and rumours from the community.
• Toll-free telephone lines (8335 and 8665) are available for reporting of any health event.
• Surveillance focal persons are available in all reporting sites and are trained in surveillance.
• Reporting rates are high, exceeding 85% for most regions except Afar, Gambella, and Addis Ababa city.
• There is integrated refresher training (IRT) for health extension workers once per year.

Animal health sector
• Case definitions for the 19 priority animal diseases for Animal Disease Notification and Investigation System (ADNIS) are in place and distributed to sub-national levels.
• Disease specific guidelines are available for a number of notifiable diseases including rabies and Rift Valley Fever.
• Officers reporting through the ADNIS have been trained accordingly.

Areas which need strengthening
Public health
• Event-based surveillance system is in place, but not fully functional.
• Surveillance system provides an early warning system but it is not strong at the community and health facility level.
• The majority of health workers and community extension workers have not been trained on disease or syndromic surveillance.

Animal Health
• Reporting rates in animal health sector are low at about 40%.
• Over 90% of reports are based on clinical diagnosis (as is usual for animal health surveillance).

D.2.2 Inter-operable, interconnected, electronic real-time reporting system—Score: 2

Strengths
• Both public health and animal health sector have databases of surveillance data at the national level.
- The MoH in collaboration with Tulane University and other partners have developed a software for electronic reporting now being tested for compatibility.
- The MoLF in collaboration with partners is developing a mobile platform and electronic software for reporting.

**Areas which need strengthening**
- The reporting systems are not interconnected and interoperable.
- A memorandum of understanding between the public health sector and the animal health sector have been developed, but not signed by the two parties yet.
- There is neither linkage nor data sharing between the public health and animal health surveillance systems and other sectors like the Ethiopian Wildlife Conservation Authority (EWCA) and with the EFMHACA for food safety risk assessment data.
- No mechanisms (e.g. one health/ zoonoses office/ staff/ logistics) to bridge the gaps observed in coordination of various stake-holders at human, animal and environmental health interface at all levels.

**D.2.3 Analysis of surveillance data—Score: 3**

**Strengths**
- At the national and regional levels, there is adequate capacity for data analysis. Feedback is shared weekly through bulletins in the public health sector and monthly for the animal health sector. Both sectors have immediate feedback mechanisms through telephone calls and emails.
- Computers are available at the district level and some health facilities for analysis of surveillance data.
- Supporting supervision and review meetings are conducted often to improve data quality.

**Areas which need strengthening**
- In the public health sector, most health facilities’ surveillance focal persons have no computers or share one computer with the Health Management Information System (HMIS) unit. Data analysis at these levels is low.
- Data validation or data quality audits are not done regularly and should be conducted often to ensure data being reported are accurate.

**D.2.4 Syndromic surveillance systems—Score: 4**

**Strengths**
- There are at least four syndromic surveillances (Acute Febrile Illness, Acute Flaccid Paralysis, Febrile Rash cases, Influenza like Illness, and Severe Acute Respiratory Infection) reported to the lowest level of the public health system and more than 10 in the animal surveillance system.
- Laboratory-based surveillance is in place for some syndromes like Influenza-like Illness and fever and rash (measles).
- There are pilot projects ongoing in different regions in the country to implement and expand community-based surveillance in both public health and animal health sectors.
Areas which need strengthening

- Syndromic surveillance is not standardised and formalised in both public health and animal health sector.
- Training of community level health workforce is minimal in both sectors.
- Case definitions of animal diseases for the community level need to be prepared and communicated.
- Laboratory-based surveillance using rapid test kits should be deployed at community levels if possible in both public health and animal health sectors.

Relevant Documentation

- Disease control guidelines (Cholera, Yellow Fever, Dengue Fever, MERS-CoV, Malaria, measles, Influenza, Meningitis, Acute Flaccid Paralysis, NNT)
- Public Health Emergency management supervisory checklist
- IDSR Technical Guidelines
- Animal Health reporting guideline
- IDSR evaluation report, 2012
- IHR core capacity assessment report
- Technical Report on Electronic Health Management Information System (eHMIs), 2013
- PVS Evaluation Report, Ethiopia, May 2011
Reporting

Target
Timely and accurate disease reporting according to WHO requirements and consistent coordination with FAO and OIE.

Ethiopia Level of Capabilities

Overview of Action Package
Ethiopia has designated focal points located in the Ethiopian Public Health Institute (EPHI) for WHO IHR and the Ministry of Livestock and Fishery (MoLF) for OIE WAHIS. Legislation has been passed and training carried out to allow full IHR implementation. The country has demonstrated on a number of occasions its ability to identify a potential Public Health Emergency of International Concern (PHEIC) and file a report to WHO within the expected timing. However, the information sharing mechanisms between ministries at national level and between the different levels within the Ministry of Health and within the MoLF are not optimal and should be strengthened.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Establish formal communication mechanisms between line ministries, followed by exercises to test their effectiveness.
- Establish protocols, processes, and regulations governing reporting and processes for multi-sectorial coordination in response to a potential PHEIC to WHO and, for notifiable animal health events, to OIE.
- Establish a documentation system to file reports to WHO and to OIE within 24 hours, including a reporting system from lower levels to national level.

Indicators and Scores

D.3.1 System for efficient reporting to WHO, FAO and OIE—Score: 3

Strengths
- National focal points have been identified for WHO (EPHI) and OIE (MoLV). No reporting to FAO is required for any country.
- Training on IHR has been conducted at national and regional levels.
- Information is exchanged between line ministries on an ad-hoc basis.
- A list of ministries that the focal points represent is available.

Areas which need strengthening
- The information exchange mechanisms between line ministries are not formalised.

D.3.2 Reporting network and protocols in country—Score: 2

Strengths
- Legislation has been passed for IHR implementation and reporting a PHEIC to the WHO and on notifiable animal health events to OIE (FMHACA proclamation in 2010 and regulation in 2013, EPHI regulation in 2013).
- The National Public Health Emergency Management guidelines (April 2012) include standard operating procedures for reporting a PHEIC.
- Ethiopia has been reporting on a potential PHEIC within 24 hours to WHO, and the last event was EVD and has the capability to report notifiable animal health vents to OIE within 24 hours.
- Ethiopia is developing a National Public Health Counsel, which will have all relevant sectors/Ministries, including Ministry of Livestock and Fishery, and Ministry of Wildlife.
- The country has demonstrated ability to report to WHO within 24 hours at the national level (e.g. influenza, polio, Ebola).
- The country has established some protocols and processes for multi-sectoral coordination in reporting.

Areas which need strengthening
- Information/reporting from subnational level to national level is not available within 24 hours.
- Veterinary, drug, and animal feed administration should be involved in National Task Force Working Group.
- The established protocols and processes for multi-sectoral coordination in reporting are not operational yet.

Relevant Documentation
- TOR for National Task Force Working Group
Workforce Development

Target
State parties should have skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005).

Ethiopia Level of Capabilities

Overview of Action Package
Field epidemiology capacity of Ethiopia is adequate even though the number of personnel are lower than the needs (WHO target) and there is heterogeneity among different regions. Only several regions are fully covered. The public health epidemiology workforce focuses especially on communicable diseases. A specific training, the Ethiopian Field Epidemiology Training Programme (EFETP), started in 2009. Eight universities and 41 field bases have enrolled 118 FETP residents as of September 2015. Up to 90 graduates work in ministries or agencies operating in Ethiopia, with an attrition rate of 14%, but they often hold key positions in the Ethiopian Health system and specifically in the Ministry of Health (MoH) Public Health Emergency Management Center (PHEM). Furthermore, all regional health bureaus (RHB) and zonal health bureaus have EFETP graduates. Today about 100 residents are enrolled.

The eight universities and the 41 field bases provide advanced training courses on Public Health under the supervision of MoH (Ethiopian Public Health Institute/EPHI) and the Government, which supports the expansion of the program with the aim of reaching the target of one epidemiologist per 250,000 population. There is a strong international collaboration in the area of public health training e.g. with United States CDC through Ethiopian CDC. Epidemiologist (postdoctoral), veterinarians (field epidemiology and postdoctoral), doctors (field epidemiology and postdoctoral) and other professionals (e.g. pharmacists, nurses, laboratory workers), who are also recruited from the Armed Forces, are included in the workforce strategy.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Develop and implement a comprehensive workforce development strategy as a key component to sustain best practices of public health services for health security. The implementation of basic level training at sub-national levels (district and below) would strengthen the capacity to prevent, detect and respond to any events or threats.

- Ensure the workforce strategy takes into account the needs of human and animal health (“one health” approach). A workforce gap assessment (in particular on animal health and wildlife sectors) could be useful to define training programs and resource allocation.

- Expand FETP to include a laboratory track, to complement the good implementation level of the current FETP program.

Indicators and Scores

D.4.1 Human resources are available to implement IHR core capacity requirements—Score: 3

Strengths
- There is strong political commitment from the Government of Ethiopia, Ministry of Health, CDC, African Field Epidemiology Network, President's Emergency Plan for AIDS Relief, and GHSA.
• The financial mechanisms are in place to ensure funding for graduate positions.
• There is a regular communication mechanism and a surveillance reporting system (daily and weekly reporting system) that ensures regular communication among Ethiopian epidemiologists from Woreda to zonal level, from zonal level to regions (RHB), and from RHB to MoH and PHEM.
• The WHO will act as mentor/advisor.
• A standard reporting mechanism is established between the different health governance levels during outbreaks.
• Plans to hire resident advisors are in place to guarantee a continuous improvement for training processes and ensuring quality when graduates number increases.

Areas which need strengthening
• Higher number of epidemiologists are required at Woreda/zonal levels.
• To improve workforce capacity across the country, all districts should recruit at least one FETP resident in order to achieve 1 epidemiologist/250,000 population at the State level, aiming to gradually increase the current situation (83 FETP graduates per 93 M; almost 1 epidemiologist per million population at the national level). It is necessary to support specific training for an increased number of epidemiologists.
• A career development path for graduates can be better defined.

D.4.2 Applied epidemiology training program in place such as FETP—Score: 4

Strengths
• Basic and advanced Field Epidemiology Training Program (FETP) trainings are available, including a Masters of Public Health focused on infectious disease field work and other sub-specializations fields. Veterinarians, as well as, different human health professionals participate in these public health courses.
• There is strong international commitment for Field Epidemiology Training Programs in Ethiopia.
• The Advanced FETP has been running for 5 years training more than one hundred epidemiologists with different backgrounds (medical doctors, veterinarians, biologists, etc.).
• FETP has a database of Fellows that can facilitate follow up evaluation.

Areas which need strengthening
• Basic Program has been implemented 2-3 times at the district level but it needs to be enhanced. Additional resources are necessary to support this program.
• Even if there is a database of FETP Fellows there still is a gap in following the exact track of Fellows.

D.4.3 Workforce strategy—Score: 3

Strengths
• Up to 90 of FETP graduates actually work in Ethiopia for government ministries or agencies operating in Ethiopia.
• FETP fellows go back to their states/regions after their graduation and they are asked to serve four years in public health workforce.
• There is an annual review of workforce strategy.
• Different efforts, such as short term training programs, international conference participation etc., are in place to retain public health workforce.

Areas which need strengthening

• Tracking and reporting the workforce strategy and its impact on the public health system could be implemented in order to facilitate the identification of obtained results or gaps.
• The attrition rate is 14%: it could be useful to support a more structured enlarged mentorship process and put in place defined incentives program for workforce specialists.
• An accountability process should be defined in order to involve in training processes all different stakeholders in an integrated manner.
• Standard Operating Procedures processes should be regulated by development of internal and integrated policies, procedures, and protocols.
• It could be useful to define long term goals for overall workforce development strategy.

Relevant Documentation

• Ethiopia Field Epidemiology and laboratory Training Program Surveillance - Training – Intervention Ethiopia Field Epidemiology and Laboratory Training Program (EFELTP)
• Organization structure of the Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP)
• Ethiopia Field Epidemiology and Laboratory Training Program (EFELTP) Operation Manual
Preparedness

Target
The effective implementation of the IHR (2005) requires multi-sectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the sustainable functioning of a National IHR Focal Point (NFP), which is a national centre for IHR (2005) communications, is a key requisite for IHR (2005) implementation. The NFP should be accessible at all times to communicate with the WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of NFPs, continuously update and annually confirm them.

Ethiopia Level of Capabilities
Ethiopia adopted a national policy and strategy on disaster risk management (DRM) in 2013. It includes general directions and major implementation strategies, including on a decentralized DRM system, early warning and risk assessment, information management and capacity building. The Disaster Risk Management Strategic Programme and Investment Framework (DRM-SPIF) is a tool that has been developed to facilitate the effective implementation of the national DRM Policy. In addition, a DRM-SPIF Steering Committee and several Task Forces were established to support in operationalizing the DRM Policy and the DRM-SPIF, including through the development of guidelines and operational documents. According to the National DRM Policy and Strategic Program Investment Framework (SPIF), a multi-sectoral Emergency Preparedness and Response Plan (EPRP) is developed on yearly basis and all line ministries should prepare their own Emergency Preparedness and Response plans. In addition, the Humanitarian Requirement Document which is updated every year with the support of international partners captures the humanitarian needs in the country, including the health sector.

In the health sector, the 5-year Health Sector Transformation Plan developed in 2015 integrated a strong component on health risks and emergencies management. The EPHI has also 5 years Strategic Planning Management (SPM) that includes public health emergency management activities like preparedness, early warning, response. EPHI has developed and regularly updated disease specific emergency preparedness and response plans for Ebola, cholera, measles, meningitis or MERS-CoV based a disease risk assessments.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Conduct a National Vulnerability Risk Assessment (VRAM) or risk mapping of major public health hazards at national, regional and district levels.
- Develop a generic and comprehensive Emergency Preparedness and Response Plan at national level based on identified risk. The generic EPRP would integrate specific diseases EPRP plans as annexes.
- Monitor and document the implementation of the Emergency Preparedness and Response Plan at national level.
- Strengthen multi-sectoral preparedness teams at zonal and district level with clear roles, responsibilities and budget.
- Develop Preparedness and Contingency Plans at district level based on identified risks.
Indicators and Scores

R.1.1 Multi-hazard National Public Health Emergency Preparedness and Response Plan is developed and implemented —Score: 3

Strengths
- The new Health Sector Transformation Plan (2015-2020) which guides the public health strategy for the next 5 years include a strong component on health risks and emergencies management.
- Disease specific preparedness and response plans (Ebola, measles, meningitis, pandemic influenza, MERS etc.) are available and regularly updated by the Ethiopian Public Health Institute.
- A Humanitarian Requirements Document and EPRP are updated every year with the support of partners and includes a health component.
- Domestic budget is allocated every year for emergency response both at national and regional levels.
- Any outbreaks are reported to WHO country office within 24 hours.
- Stockpiles are available for specific priority diseases (measles, meningitis, acute watery diarrhoea) at regional level.
- The country has a training program for epidemiologists (Field Epidemiology Training program supported by CDC) and has built capacity over the last few years.
- Priority zoonotic diseases have been identified and are being monitored in a collaborative manner.

Areas which need strengthening
- There is not a generic Emergency Preparedness and Response Plan available at the Ministry of Health which would address all public health risks identified in Ethiopia.
- Budget allocations at lower levels are mainly for response activities but not for preparedness.
- Coordination to achieve the One Health agenda should be strengthened.
- Collaboration with other sectors beyond the veterinary and agricultural sectors should be strengthened.

R.1.2 Priority public health risks and resources are mapped and utilized. —Score:2

Strengths
- Risk assessments have been conducted at national level for specific priority diseases.
- A disaster risk profiling framework – based on hazards, vulnerability and capacity - has been developed to assess risks at district level.

Areas which need strengthening
- A comprehensive risk mapping has not been conducted at national level for all hazards.
- Mapping of resources is in process but not yet fully finalized.
- An electronic system linking districts, regions and headquarters should be established. Currently, health workers use private phones to contact to report to respective office mainly to district health office whenever there is a suspect case for immediate notification.

Relevant Documentation
- Health Sector Transformation Plan 2015-2020
- National Policy and Strategy on Disaster Risk Management 2013
- Disaster Risk Management Strategic Programme and Investment Framework 2014
- Emergency Preparedness and Response Plan 2012
- MERS Preparedness and Emergency Response Plan 2014
- National Ebola Virus Disease Outbreak Preparedness and Response Plan 2014
- Plan of Action for Meningococcal Meningitis Outbreak 2013
- Response Plan for Measles Outbreak 2013
- Pandemic Influenza Preparedness and Response Plan 2010
- Meningitis Preparedness and Response plan 2016
Emergency Response Operations

Target
Countries will have a public health Emergency Operation Center (EOC) functioning according to minimum common standards; maintaining trained, functioning, multi-sectoral rapid response teams 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.

Ethiopia Level of Capabilities

Overview of Action Package
To improve health emergency and risk management is the second top priority in “Health Sector Transformation Plan 2015-2020”. The Ministry of Health (MOH) and The Ethiopian Public Health Institute (EPHI) of MOH are committed to develop a functioning Public Health Emergency Operation Center (PHEOC) for more effective health emergency response.

The current EOC is a room about 30 square meters, facilitated with desks, computers, internet/network and landline desk phones, two hotlines, and a plasma screen. The EOC is not networked to other operational centres and offices. There is a meeting room near the EOC, capable to host 30 persons at meeting. The meeting room can use LCD projector for displaying information but it is not networked with the EOC. The EOC is in the Public Health Emergency Management Unit (PHEM), under the leadership of a Deputy Director General of EPHI. The information and communications technology (ICT) of the EOC is maintained by the IT team of EPHI. There is no dedicated staff to manage/maintain the EOC.

PHEM staff members are motivated to support EOC functions. During EVD preparedness and response, the EOC was activated to collect information, analyse and disseminate it to relevant experts in the EPHI and authorities in the MOH. The biggest challenge was coordination of operations and information.

With the end of EVD, the EOC’s continued role has not been defined. The incident management system and EOC plans and procedures are not in place yet. There are not regular PHEOC training and exercise programs.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Establish legal authority for public health emergency management and developing PHEOC; develop Concept of Operations that describes incident management structure, roles and responsibilities of involved sectors.
- Develop a national implementing plan for functioning PHEOC, including PHEOC plans and procedures that define PHEOC mission/ objectives, functions and roles, organizational structure fitting its functional roles, function model and staffing level, for both peace time and emergency; develop training and exercises programs to train staff and test PHEOC plans and procedures.
- Further develop PHEOC infrastructure and information system (human resource, hardware, software, operational dataset, data sources, data management, information sharing platform and information products) to improve the availability, accessibility, quality, timeliness and usefulness of emergency operations information.

Indicators and Scores
R.2.1 Capacity to Activate Emergency Operations—Score: 2*
Caveat: some higher level capacities were achieved during Ebola Virus Disease preparedness and response

**Strengths**

- The National Public Health Emergency Management Guidelines (April 2012) describe the triggers for the activation of the PHEOC.
- The IHR focal point is available 24/7 for communication and reporting on events.
- Staff members in PHEM are mostly epidemiologists and are assigned to EOC by default during emergency. Some of them were trained by FETP, and some were trained by CDC on basic emergency management, IMS, and EOC. They can be assigned to EOC during emergency response.
- During Ebola Virus Disease (EVD) preparedness phase, EOC leadership was appointed, incident management structure was established, 24/7 hotlines were maintained.

**Areas which need strengthening**

- No PHEOC plan and procedures exist to define the levels of PHEOC activation.
- There is no designated person to manage the EOC and its hotlines.
- Staff have not yet been identified for 24/7 service coverage to support EOC functions except that a team has been put in place for the EVD preparedness.

R.2.2 Emergency Operations Center Operating Procedures and Plans—Score: 1

**Strengths**

- Ethiopia has established multi-sectoral and multidisciplinary committee for health emergency response at national, regional and zone level.
- There is Emergency Preparedness and Response Plan at national and regional levels, in which multi-sector coordination was addressed. The National Public Health Emergency Management Guidelines (April 2012) include a section that details the activities that need to be carried out at all administrative levels in case of a public health emergency.
- The national surveillance system is accessible to staff in EPHI. Currently the event information is collected through email and telephone from regions. The staffs assigned to follow the outbreak situation are responsible for developing Situation report. The situation reports are shared to decision makers on daily basis and with partners weekly.

**Areas which need strengthening**

- Incident management system for health emergency management is not defined. PHEOC plans and procedures need to be developed and tested to ensure the EOC can perform core functions.
- Staff need to have advanced training on emergency response and PHEOC plans and procedures.
- The EOC is not linked with other offices or system. There is no designated software and process to manage EOC data. Further developing ICT and information system is needed.

R.2.3 Emergency Operations Program—Score: 2

**Strengths**

- A table top exercise on EVD has been conducted in November 2014.
- Exercises have been conducted in the context of EVD preparedness and Avian Influenza at airport level.
- Laboratory capacities have been tested when a suspect case of Ebola detected.
Areas which need strengthening

- The exercises conducted have not fully addressed the coordination aspects of the response.
- There is not specific training program for PHEOC staff and regular exercises to test PHEOC plans and procedures and response capabilities.

R.2.4 Case management procedures are implemented for IHR relevant hazards—Score: 2

Strengths

- Case management guidelines for more than 10 priority epidemic prone diseases are available (cholera, measles, Ebola, etc.).
- The case management guidelines have been disseminated to health workers at all levels.

Areas which need strengthening

- Case management guidelines are not available for chemical and nuclear hazards.
- Guidelines need to take all-hazards approach and case management needs to be integrated into the incident management system.

Relevant Documentation

- National Public Health Emergency Management (PHEM) Guideline
- Health Emergency Preparedness and Response Plan (EPRP)
- Ebola preparedness and response plan
- Sample situation report, data forms
- Floor map of EOC
- Sample case management guidelines
Linking Public Health and Security Authorities

Target

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.

Ethiopia Level of Capabilities

Overview of Action Package

- There was no presentation given by the Ethiopian authorities, and no security authorities were present for the discussion.
- From other discussions, it appears it is only at Points of Entry where public health links with security sector.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Establish legal agreements between ministries responsible for public and animal health and security authorities for outbreak investigation.
- Establish mechanisms for information sharing between ministries responsible for public and animal health and security authorities at national and local levels.

Indicators and Scores

R.2.1 Public Health and Security Authorities, (e.g. Law Enforcement, Border Control, Customs) are linked during a suspect or confirmed biological event—Score: 2 (with caveat*)

Strengths

- Memoranda of Understand are being prepared.
- Guidelines and SOPs were established at PoEs with identified points of contact and triggers between public health, animal health and security authorities.
- Public Health and law enforcement will be a part of the Public Health Security Council once established - Health Minister has already agreed with it.

Areas which need strengthening

*Although they have working day to day relationships, MOUs among agencies have not been prepared or signed.
Medical Countermeasures and Personnel Deployment

Target
A national framework for transferring (sending and receiving) medical countermeasures and public health and medical personnel among international partners during public health emergencies.

Ethiopia Level of Capabilities

Overview of Action Package

The Federal Ministry of Health does not have an independent national countermeasures plan, but these are incorporated in the national epidemic response plan. A national stockpile of medical countermeasures (MCM) is maintained by the Ethiopian Public Health Institute (EPHI) and the Pharmaceuticals Fund and Supply Agency (PFSA), which serve as first points in case of emergency. PFSA procures drugs and supplies based on an Emergency Preparedness Plan. There are several other stockpiles distributed around the country.

For sending and receiving countermeasures from an international source, cross border agreements and regional agreements are in place.

For international deployment of human resources, both from and into Ethiopia, guidelines are under development.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Identify existing collaborations, any gaps, and, where necessary, finalize and exercise plans, guidelines, and relevant agreements for sending and receiving MCM during a public health emergency.
- Elevate the Pharmaceuticals Fund and Supply Agency (PFSA) to the EPHI for national-level coordination and mobilization of the MCM supply chain pre- and post-public health emergency.
- Establish rapid procurement and rapid (overnight) delivery mechanisms for MCM needed during a public health emergency.
- Finalize and exercise plans, guidelines, and relevant agreements for sending and receiving health personnel during a public health emergency.

Indicators and Scores

R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency—Score: 4

Strengths

- National stockpile system is laid out in national epidemic response plan and has been proved to be effective during real events (e.g. Ebola virus disease event).

Areas which need strengthening

- No formal system in place for sending or receiving MCM from outside Ethiopia.
- The country is not part of any formal regional or international MCM sharing or distributing agreements although the GoE had previous experience in requesting support with cholera, H1N1, and polio outbreaks.
• No specific EPHI storage facilities for bulk items (partners’ facilities are currently used). PFSA needs to be elevated to the national level with stronger inventory control.

• No overnight delivery mechanisms.

R.4.2 System is in place for sending and receiving health personnel during a public health emergency—Score: 2

Strengths

• Guidelines are being developed.

Areas which need strengthening

• No system in place for sending and receiving health personnel during a public health emergency. GoE wants to assist other nations should they need Ethiopia’s help. The GoE did support the Ebola containment effort by sending healthcare workers to West Africa.

• Guidelines, once finalised, should be tested for effectiveness.

Relevant Documentation

• National Epidemic Response Plan (the section relevant to countermeasures)
Risk Communication

Target
State parties should have risk communication capacity which is multi-level and multi-faced real time exchange of information, advice and opinion between experts and officials or people who face a threat or hazard to their survival, health or economic or social well-being so that they can take informed decisions to mitigate the effects of the threat or hazard and take protective and preventive action. It includes a mix of communication and engagement strategies like media and social media communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

Ethiopia Level of Capabilities

Overview of Action Package
Risk communication capacity exists in the public health sector within the Federal Ministry of Health and the Ethiopian Public Health Institute. Strategies of communication are diverse and include communications through the traditional (TV, radio, press), social media and community engagement. Engagement with communities is developed through the disease prevention and health promotion directorate at national and regional level while at Kebele level it is done through the health extension workers. Main strategies to reach out to local communities include communication materials in local languages, school programs, and radio which can reach most rural communities. Due to the low literacy rate, other methods could be further developed such as mobile phone communication and health promotion through religious and community leaders. During the health facility visit, the Information, Education, and Communication (IEC) materials for various diseases and risks are available and distributed.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Strengthen multi-hazard communication mechanisms among different sectors.
- Enhance a strong system for listening to and managing rumours.
- Maximize utilization of different media and mechanisms such as mobile services (mobile phone), TV, radio, magazines, social media, and religious organisations.
- Establish monitoring and evaluation system for the implementation of communication strategies based on baseline information.

Indicators and Scores
R5.1 Risk Communication Systems (plans, mechanisms, etc.)—Score: 3*

* Caveat: the communications system has already been tested in real time during an actual emergency (Ebola), but the collaborative aspects are weak.

Strengths
- Dedicated units/directorates have been established at the Federal Ministry of Health and at the Ethiopian Public Health Institute level with trained staff and technical advisors.
- Risk communication is a component which is included in emergency preparedness and response plans. Activities, budget, responsible bodies and partners are identified in these plans.
• Communication strategies (including establishment of a communication committee and collaboration with other agencies) have been tested in real time during the Ebola outbreak and other emergencies.

**Areas which need strengthening**

• Coordination with other sectors at all levels of government in the area of social mobilization and risk communication can be strengthened.

• Consideration could be given to expanding the communication team to include other disciplines to strengthen risk communication.

**R.5.2 Internal and Partner Communication and Coordination—Score: 3**

**Strengths**

• Stakeholders for communication are well identified in the different emergency preparedness and response plans and roles and responsibilities defined.

• Various partners are identified, and provide support on implementation of risk communication strategies.

**Areas which need strengthening**

• Mechanisms to coordinate communication with the private sector, civil societies, and other stakeholders from other sectors, before, during, and after emergencies/outbreaks.

**R.5.3 Public Communication—Score: 4**

**Strengths**

• Spokespersons are identified at MoH (Director of Public Relation and Communication) and EPHI (Head of Public Health Relations).

• Staff in charge of communication are regularly trained by the Government communication affairs on communication material preparation and how to communicate.

• Communication materials are regularly developed and translated in several local languages.

• Coverage of mobile phone network is high in the country; one or two mobile devices are available in every household.

• Press releases have been developed and press conference given during the Ebola outbreak.

• Health development army and health extension workers are able to cover the whole country.

• The risk communication materials for various hazards, risks and events are developed in different languages.

**Areas which need strengthening**

• Coordination with other sectors in the area of social mobilization and risk communication can be strengthened, especially in reaching out the community.

• Use of mobile phones for reaching out community/public through short message text (SMS) alerts can be effective and efficient but messaging must be done carefully to avoid panicking the population.

**R.5.4 Communication Engagement with Affected Communities—Score: 3**
**Strengths**

- At MOH and regional levels there are Disease Prevention and Health Promotion Directorates that are in charge of risk communication and can best target local populations and disseminate materials to local communities.
- At sub-national levels dedicated staff are undertaking social mobilization and health promotion activities (for instance, at Woreda level, the disease prevention and health promotion office and at Kebele level, the health extension workers and health development army are responsible).

**Areas which need strengthening**

- Methods to reach out to communities can be further developed; examples include messaging by mobile phones and engagement of community/religious leaders and the private sector.

**R.5.5 Dynamic Listening and Rumour Management—Score: 3**

**Strengths**

- There is a dynamic system in place to listen and manage rumours; method includes searching for media articles in Internet (in alignment with media monitoring for event based surveillance). This has been demonstrated in a number of occasions when rumours heard within the public were subsequently responded to from the highest level of the Ministry of Health.

**Areas which need strengthening**

- The system for listening to and manage rumours is not yet structured.
- Monitoring and evaluation of the implementation risk communication strategies can be strengthened, which can also assist on rumour management.

**Relevant Documentations**

- Presentations made on 5th March 2016
- Preparedness and Response Plan for Meningococcal Meningitis in Ethiopia.
- National Ebola Virus Disease Outbreak Preparedness and Response Plan
- News reports, footages of Press Releases, use of social media
- Various IEC materials in different Languages
- Leaflets and flyers provided by EPHI and collected from Health Centre visit.
- Draft Report of Health facility visit.
Points of Entry

Target

States Parties should designate and maintain the core capacities at the international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) which implement specific public health measures required to manage a variety of public health risks.

Ethiopia Level of Capabilities

Overview of Action Package

Ethiopia has 18 Points of Entry (PoEs) – six airports and nine ground crossings - under control of Federal Government through six branch offices. It borders with six other countries: Djibouti, Eritrea, Kenya, Somalia, Sudan, and South Sudan.

The Ethiopian Government has issued national legislation to enforce International Health Regulations (IHR) into national implementation including PoEs. The structure to coordinate the IHR that was established by the Federal Ministry of Health of Ethiopia supports IHR implementation at PoEs as a local level operation.

At PoEs, stakeholders are well identified and already collaborating both at routine times and in response to Public Health Events of International Concern, as it was well demonstrated by the Ebola preparedness plans at airports. However, some core capacities and inter-sectorial coordination need to be improved.

Joint Host Country/Assessment Team Recommendations for Priority Actions

- Enhance security at POEs for enhancing IHR Core Capacity (e.g. equipping with cutting edge technologies not just for POEs but to include other elements within the National Preparedness Plan and to enhance communication to the EOC/EPHI).
- Strengthen inter-sectoral collaboration between public health and security authorities at POEs and at different governmental levels for enhancing security at POEs, i.e. regional and national levels.
- Enhance awareness and strengthen communications with border communities to enhance cross-border security.

Indicators and Scores

POE.1 Routine capacities are established at PoE—Score: 2

Strengths

- The Ethiopian Food, Medicine and Health Care Administration and Authority (EFMHACA) regulates and assures passenger, animal, and goods controls.
- PoEs have dedicated facility for sick passengers and can screen for public health-relevant diseases.
- PoEs have equipment and personnel to transport ill travelers.
• PoEs carry out the routine inspections and communicate problems to EPHI either directly (Addis Ababa airport) or through the regional level (other PoEs).
• Designated airports have a vector control program.
• There are animal inspection and quarantine capabilities at all POEs. National Quarantine Inspection Certification Officers are located at every POE, who check the certificate from the Ministry of Agriculture at the country of origin.

Areas which need strengthening

• Regulating the movement at border areas that share similar language and culture is very difficult to manage people movement, animals, and goods through ground crossings.
• Coordination and collaboration both between the different levels of the public health sector – national, regional, and local (PoEs), and with other stakeholders.
• There is a lack of sufficient resources to adequately staff POEs.
• Not all PoEs meet WHO IHR Core Capacity definitions (Annex 1-B).

POE.2 Effective Public Health Response at Points of Entry—Score: 2*

* Caveat: capacity for assessing and quarantine both suspected travelers and animals does not exist evenly across all PoEs (ground crossings).

Strengths

• Public Health Emergency Response Contingency Plan (PHERCP) is addressed in the Health Sector Transformation Plan.
• Port coordination committee includes other stakeholders - immigration, customs, airlines, airport authority, law enforcement, i.e. security, animal health, and it is functional.
• PoEs have facilities for assessing and quarantine both suspected travelers and animals.
• There was a contingency plan (requested) for Ebola that should a suspect passenger be identified, there are transport plans to local hospitals trained to handle a potentially infected person. All persons from the three Ebola affected nations were screened. There is an isolation facility at the airport. Two ambulances were designated at the airport and land crossings. The contingency plan was tested by people with fever showing up on flights and an exercise at Addis Ababa airport which could serve as a Preparedness Plan.

Areas which need strengthening

• PHERCP is not complete to include conveyances.

Relevant Documentation

• Proclamation 661/2009
Chemical Events

Target
State parties should have surveillance and response capacity for chemical risk or events. It requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal.

Ethiopia Level of Capabilities

Overview of Action Package

In Ethiopia, the Ministry of Health, Ministry of Livestock and Fisheries, and Ethiopian Environmental Protection Authority contribute to various aspects of surveillance and response capacity for potential chemical events. However, there is limited coordination mechanism in place for chemical risk assessments, profiling, and responding to potential events. Each sector is responding based on the risk perceived and the events that occur. There Ethiopian Public Health Institute plans to establish a dedicated unit to handle chemical events. The country does not have a poison control center.

Joint Host Country/Assessment Team Recommendations for Priority Actions

• Establish a coordination mechanism for systematic information sharing between the sectors involved in surveillance and response to chemicals events.
• Develop policy and guidelines for the surveillance and response to chemical risks and events.
• Develop capacities for surveillance and response to chemical risks and events.

Indicators and Scores

CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies—Score: 1

Strengths

• Various ministries have the capacity to monitor and respond to various chemical threats across the country. For instance,  
  o Ministry of Livestock and Fisheries handles the regulation and monitoring of insecticides, pesticides, and other toxins;
  o Environmental Protection Authorities handles environment chemical and contamination of the environment; and
  o Ministry of Health handles chemical events that affect human health. Ministry of Health is restructuring its EPHI and there is a plan for dedicated units for chemical events.

• Some of the health facilities at the center level have laboratory capacity for detection of chemical agents and have demonstrated the response capacity in past (i.e. alkaloid poisoning).

Areas which need strengthening

• Establishment of focal unit for chemical events as per the restructuring plan of EPHI.
• Strengthening of capacity for surveillance and response to chemical events with risk profiling of potential chemical agents.
• Development of guidelines and standard operating procedures to detect and respond to chemical events.
CE.2 Enabling environment is in place for management of chemical Events—Score: 1

**Strengths**
- Different ministries and sectors have capacity for ad hoc response to chemical events.

**Areas which need strengthening**
- Establish a coordination mechanism for systematic information sharing between the sectors involved in chemicals and surveillance.
- Develop policy and guidelines for the surveillance and response to chemical risks and events.
- Establishment of poison centres.

**Relevant Documentation**
None
Radiation Emergencies

Target
State parties should have surveillance and response capacity for radio-nuclear hazards/events/emergencies. It requires effective communication and collaboration among the sectors responsible for radio-nuclear management.

Ethiopia Level of Capabilities

Overview of Action Package
A draft National Radiological Emergency Plan has been completed under the leadership of the Ethiopian Radiation Protection Authority (ERPA). In Ethiopia, there is no nuclear power plant, and the major causes of radio-nuclear emergencies are: exposure to radiotherapy nuclides; natural nuclear sources; accidents with radiation transportation; reagents; and satellites with nuclear materials. Materials existing in Ethiopia are category 3. Under radiation emergency, timely and coordinated response are the key, and the plan lays out the relevant agencies (ERPA, Fire brigade, Police, Ministry of Health, Custom office, Ministry of environment, Ethiopian Red Cross) and defines their roles and responsibilities. According to the plan, MoH is responsible for providing medical care to victims, medical advice on the use of radioactive materials, and monitoring the long term health impacts. The scope of this plan depends on the amount of radioactive material involved, its potential impacts on the population, and the size of affected area. A map of the distribution of potential nuclear hazards is available. The plan also includes the control and coordination of information, regarding the condition on site and off site. The plan is to be exercised regularly and the plan sets for the IAEA focal point.

Joint Host Country/Assessment Team Recommendations for Priority Actions
- Systematically exchange information between ERPA and IHR NFP about urgent radiological events and potential risks that may constitute a public health radiological incident of concern.
- Review the communication mechanism among ERPA, medical service department of MoH, and IHR NFP and improve so that IHR NFP is involved in radiation emergency response.
- Review NREP and legislation, expected to be revised in the near future, with more active involvement of IHR NFP and incorporate NFP surveillance function and response plan to major nuclear events.

Indicators and Scores

RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies—Score: 3
Strengths
- Guidelines and SOPs are developed, evaluated and updated for the management emergencies.

Areas which need strengthening
A closer communication and coordination between ERPA and IHR NFP is desirable.

RE.2 Enabling environment is in place for management of Radiation Emergencies—Score: 1
Strengths
- ERPA and the medical devices department of MoH would score level 5. They have focal points, coordination and communication mechanisms, which have been proven to be effective by real events and drill.
- IHR NFP can offer human surveillance function to the plan, which is currently missing.
Areas which need strengthening

- Communication and coordination mechanism among ERPA, medical device department and NFP should be revised and established.

Relevant Documentation

- Draft National Radiological Emergency Plan
Appendix 1: International Health Regulations and JEE Tool

On the 2005 the Fifty-eighth World Health Assembly (WHA) adopted the International Health Regulations (2005) [IHR (2005)] which subsequently entered into force on 15 June 2007. The purpose and scope of the IHR (2005) are “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade.” State Parties are required by the IHR (2005) to State Party obligations to develop certain minimum core public health capacities.

IHR capacity requirements are defined in Article 5 as “the capacity to detect, assess, notify and report events” and in Annex 1 A on “Core capacity requirements for surveillance and response” and 1B on “Core capacity requirements for designated airports, ports and ground crossings”. In addition, the core capacity monitoring framework also has a checklist and indicators which should be used for monitoring progress in the development of IHR Core Capacities in States Parties (http://www.who.int/ihr/publications/checklist/en/).

As stated in Annex1A.2, each State Party shall assess the ability of existing national structures and resources to meet the minimum requirements described in Annex1. As a result of such assessment, States Parties shall develop and implement plans of action to ensure that these core capacities are present and functioning throughout their territories.

In 2012, the World Health Assembly (Resolutions WHA65.23) urged States Parties to take the necessary steps to prepare and carry out appropriate national implementation plans in order to ensure the required strengthening, development and maintenance of the core public health capacities as provided for in the International Health Regulations (2005).

The IHR Review Committee on Second Extensions for Establishing National Public Health Capacities and on IHR Implementation (WHA 68/22 Add.1) suggested that ‘... and with a longer term vision, the Secretariat should develop through regional consultative mechanisms options to move from exclusive self-evaluation to approaches that combine self-evaluation, peer review and voluntary external evaluations involving a combination of domestic and independent experts. These additional approaches should consider, amongst other things, strategic and operational aspects of the IHR, such as the need for high level political commitment, and whole of government / multi-sectoral engagement. Any new monitoring and evaluation scheme should be developed with the active involvement of WHO regional offices and subsequently proposed to all States Parties through the WHO governing bodies’ process.’

The call for the move from ‘exclusive self-evaluation’ to external evaluation comes from the recognition that transparency and mutual accountability in the international community are essential in implementing IHR collectively. A technical consultation meeting on IHR Monitoring and Evaluation Framework post 2015 was organised in Lyon in October 2015 and suggested development of processes and a tool to conduct joint external evaluation.

The call for development of an external evaluation tool came from the recognition that transparency and mutual accountability in the international community are essential in implementing IHR collectively. A technical consultation meeting on IHR Monitoring and Evaluation Framework post 2015 was organised in Lyon in October
2015 and resulted in the development of the Joint External Evaluation (JEE) tool. The JEE tool was developed according to three core principles:

- Preventing and reducing the likelihood of outbreaks and other public health hazards and events defined by IHR (2005) is essential.
- Detecting threats early can save lives.
- Rapid, effective response requires multi-sectoral, national and international coordination and communication.
Appendix 2: Joint External Assessment Purpose & Process

Purpose of the Joint External Evaluation
The JEE tool and external evaluation process share a number of important features, including: voluntary country participation; a multi-sectoral approach by both the external teams and the host countries; use and linking of other assessment reports, transparency and openness of data and information sharing; and the public release of reports. JEE refers to the joint process during an external evaluation (envisioned to take place approximately every 5 years) where a team of national experts first prepares a self-assessment supplied to the external team prior to the on-site visit and the external team uses the same tool for their evaluation, working together with the national team in interactive sessions to jointly develop the final scores and priority actions.

The external evaluation process using the JEE tool facilitates host countries’ bringing all relevant ministries together to identify the most urgent needs within their health security system; to prioritize opportunities for enhanced preparedness, response and action; and to use and link the results of other assessments. It also provides an effective mechanism for host countries to engage in a coordinated manner with current and prospective donors and partners to target resources effectively. Transparency is an important element in order to attract and direct resources to where they are needed most.

Process
The first stage of the evaluation is a country survey completed by the country using self-reported data for the various indicators on the joint external evaluation tool. The approach should be multi-sectoral and include input from public health, animal health, wildlife, security, and other experts as appropriate for all relevant Action Packages. This information is then given to the joint external evaluation team which is a multi-sectoral team of national and international subject matter experts. Review of this self-assessment data provides the team members with a baseline understanding of the country’s health security capabilities. These subject matter experts will then visit the country for facilitated in-depth discussion of the self-reported data as well as structured site visits and meetings organized by the Host Country. The Host Country presents their current level of capability in each of the Action Package areas to the JEE team. A multi-sectoral group of ministries should participate in these discussions as this exchange and coordination of information between all parts of government is a key component of the JEE assessment process. The information presented should include key findings and recommendations from other relevant evaluation and assessments (such as OIE PVS pathway, monitoring and evaluation of disaster risk reduction, and others). These will be used in the development of scores and recommended priority actions. The Host Country will present supporting data and proposed scores to the JEE team. The scores and their justifications will be discussed between JEE team members and Host Country experts. Final scores will be developed jointly by consensus.

After conducting the Assessment Visit, the Assessment team will draft a report which includes overarching issues and priority actions, Host Country level of capabilities for each target area, and scores and priority actions for each indicator. The report will be shared with the Host Country for review and concurrence and then, with permission of the Host Country, various other stakeholders in order to facilitate international support of country
implementation efforts, share best practices and lessons learned, promote international accountability, engage stakeholders, and inform and guide IHR implementation both in the Host Country and internationally.  

**Format**

Every indicator in the evaluation tool has attributes that reflect various levels of capacity with scores of 1-5 (one indicates that implementation has not occurred; five indicates that implementation has occurred, is tested/reviewed/exercised and that the country has a high level of capability for the indicator). For each indicator, a country will receive a single score based on their current capacity. However, where significant differences exist, for example, between the public health and animal health sectors, separate scores might be given. The Technical Area Questions will guide determination of the appropriate score. Most of the measures are descriptive and qualitative. Countries will be asked to provide documentation for some of these items in addition to the responses. The documentation and responses will be reviewed by the evaluators, and will then be discussed during the external assessment. The final report will include scores as well as report narrative identifying existing capacities, gaps, and challenges. The results of the JEE are to guide IHR implementation in the country.

The JEE tool was developed to provide an external mechanism to evaluate a country’s IHR capacity for ensuring health security. This tool draws on the original IHR core capacities and incorporates valuable content and lessons learned from tested external assessment tools and processes of several other multilateral and multi-sectoral initiatives that have supported the building of capacity to prevent, detect, and respond to infectious disease threats.

**Colour Scoring System**

While overlaps exist among the capacity sections of the tool, each will be considered separately in the evaluation exercise. The implementation status of each core capacity will be delineated by a level of advancement or scoring, which reflects the capacity to be institutionalized and sustainable. Followings describe the level of advancement or scoring with colour coding.

- **No Capacity – 1:** Attributes of a capacity are not in place Colour Code: Red

- **Limited Capacity -2:** Attributes of a capacity are in development stage (some are achieved and some are undergoing; however, the implementation has started). Colour Code: Yellow

- **Developed Capacity – 3:** Attributes of a capacity are in place; however, there is the issue of sustainability and measured by lack of inclusion in the operational plan in National Health Sector Planning (NHSP) and/or secure funding. Colour Code: Yellow

- **Demonstrated Capacity – 4:** Attributes are in place, sustainable for a few more years and can be measured by the inclusion of attributes or IHR (2005) core capacities in the national health sector plan. Colour Code: Green

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1In the WHO African Region, the IHR implementation is within the context of Integrated Disease Surveillance and Response (IDSR) Strategy and in Asia Pacific (SEAR and WPR), the IHR implementation is in the context of Asia Pacific Strategy for Emerging Infectious Diseases.
Sustainable Capacity – 5: Attributes are functional, sustainable and the country is supporting other countries in its implementation. This is the highest level of the achievement of implementation of IHR (2005) core capacities.

Colour Code: **Green** -

1. Without achievement of all attributes, at one level it doesn’t progress or advance to another levels (for instance, in order to reach operational level, one has to meet all the attributes of developing and operational).
2. All the positive responses should be documentable.
Appendix 3: Ethiopia Assessment Background

Mission Place and Time
Addis Ababa, Ethiopia; 29 February to 4 March, 2016

Mission Team Members: Experts and Advisers

Experts are nominated by and represent individual countries; advisors represent International Organizations and Non-governmental organizations.

- Karen Sliter, USA, Department of Agriculture (Team Lead)
- Paolo Parente, Italy, Ministry of Health (Co-Lead)
- Issa Mukumbi, Uganda, Ministry of Health (Co-lead)
- Susan Weekly, USA, Department of Defense
- Athman Mwatondo, Kenya, Ministry of Health
- Larry Kerr, USA, Department of Health and Human Services
- Jussi Sane, Finland, National Institute for Health and Welfare (THL)
- Stella Chungong, WHO Headquarters (WHO team lead)
- Maria Joao Martins, WHO Portugal
- Soatiana Rajatonirina, WHO AFRO
- Mohamed Sheriff, WHO AFRO
- Elizabeth Mumford, WHO Headquarters
- Mika Kawano, WHO Headquarters
- Jian Li, WHO Headquarters
- Nirmal Kandel, WHO Headquarters
- Margot Nauleau, WHO Headquarters
- Patrick Osewe, World Bank
- Yvonne Nkumah, World Bank
- Tom Mabururu, World Bank
- Sam Okuthe, FAO

Objective
To assess Ethiopia’s capacities and capabilities relevant for the 19 areas of the Joint External Evaluation (JEE) tool in order to provide baseline data to support Ethiopia’s efforts to reform and improve their public health security, and to meet their obligations under the WHO International Health regulations (2005).

Preparation and Implementation of the Mission

- Ethiopia is a member of the GHSA and requested an assessment as part of their commitment to this effort.
- Ethiopia completed a Self-Assessment using the Joint External Evaluation Tool developed through collaboration with the World Health Organization and GHSA Steering Group.
- The Ethiopia Assessment was the second to use the Joint External Evaluation Tool.
- The Ethiopia team’s goals for the assessment were to receive feedback on its public health and emergency response systems, to identify gaps, and to prioritize areas for future investment.
Limitations and Assumptions

- The assessment was conducted within one week’s time which limited the amount and depth of information which could be discussed between the assessment team and the host country participants.
- It is assumed that the results of this assessment will be made publically available.
- The assessment was based on information provided through the self-assessment document, presentations from Ethiopian participants during the mission, and direct conversation and discussions with staff from a variety of Ethiopian agencies.
- The assessment is not an audit and information provided by The Federal Democratic Republic of Ethiopia (Ethiopia) was not independently verified. Information provided by Ethiopia will be discussed and an assessment rating will be mutually agreed to by the Host Country and assessment team. This is a peer to peer review.

Key Host Country Participants and Institutions

Ethiopia Lead Representative: Dr. Daddi Jima Wayessa, Deputy Director General, Ethiopian Public Health Institute (EPHI)

Participating Institutions:

- Ethiopian Public Health Institute (EPHI)
  - Deputy Director General
  - Center for Public Health Emergency Management (PHEM)
  - Zoonotic Diseases Research Team
  - EPHI Laboratories
- Ethiopian Ministry of Health
  - Minister of Health
  - Immunization Technical Advisor
- Ethiopian Ministry of Livestock and Fisheries (MoLF)
- National Animal Health Diagnostic and Investigation Center (NAHDIC)
- Shiromeda Health Center Addis Ababa
- Ethiopian Food, Medicine and Healthcare Administration and Control Authority (EFMHACA)
- Ethiopian Field Epidemiology and Laboratory Training Program (EFELTP)
  - Program Director
- Ethiopian Radiation Protection Authority (ERPA)
- Pharmaceuticals Fund and Supply Agency (PFSA)
## Supporting Documentation Provided by Host Country

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<td>AMR Containment in Ethiopia</td>
<td>Food, Medicine and Healthcare Administration and Control Authority, Addis Ababa</td>
<td>29th Feb, 2016</td>
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<tr>
<td>Current Status of EFELTP and Technical Area Questions On Work Force Development for GHSA Internal Assessment</td>
<td>Tatek Bogale (MD, MPH) EFELTP Program Director</td>
<td>29 February 2016</td>
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<td>Ethiopian Health System Overview</td>
<td>Abyot Bekele (MPH) Ethiopian Public Health Institute Center for Public Health Emergency Management</td>
<td>NA</td>
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<td>Zoonotic Disease</td>
<td>Abraham Haile (DVM, MVPH) Ethiopian Public Health Institute (EPHI) Zoonotic Diseases Research Team</td>
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<td>Abrham Lilay (MPH) Public Health Emergency Management Ethiopian Public Health Institute</td>
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<td>Food safety Regulation and its challenges</td>
<td>Ethiopian Food, Medicine &amp; Healthcare Administration &amp; Control Authority (FMHACA)</td>
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<td>Food Supplement Directive</td>
<td>Ethiopian Food, Medicine And Healthcare Administration And Control Authority</td>
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<td>A Proclamation to Provide for Food, Medicine and Health Care Administration and Control</td>
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<td>Council of Ministers Regulation to establish the Ethiopian food medicine and health care Administration and control authority</td>
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<td>National Guideline for Acute Flaccid Paralysis Surveillance</td>
<td>Federal Ministry of health in collaboration with WHO</td>
<td>October, 2009</td>
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<td>EBOLA Viral Disease, Interim Guideline</td>
<td>Ethiopian Health and Nutrition Research Institute, Addis Ababa, Ethiopia</td>
<td>September, 2014</td>
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<td>Ethiopian Influenza Sentinel Surveillance Implementation Guideline</td>
<td>Ethiopian Health and Nutrition Research Institute, Addis Ababa, Ethiopia</td>
<td>December, 2012</td>
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<tr>
<td>Interim Guideline Prevention and Control of Middle East Respiratory Syndrome Coronavirus (MERS-CoV)</td>
<td>Ethiopian Public Health Institute (EPHI), Addis Ababa, Ethiopia</td>
<td>July, 2014</td>
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<td>Yellow Fever Surveillance and Outbreak Management Guideline</td>
<td>Ethiopian Public Health Institute (EPHI), Addis Ababa, Ethiopia</td>
<td>June, 2014</td>
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<td><strong>Livestock</strong></td>
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<td>PVS Gap Analysis report</td>
<td>Dr. Patrick Bastiaensen, Dr. Terry Hunt, Mrs. Emily Tagliaro</td>
<td>September, 2012</td>
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<td><strong>Preparedness</strong></td>
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<td>The Second Strategic Plan</td>
<td>Ethiopian Public Health Institute</td>
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<td>Middle East Respiratory Syndrome Coronavirus (MERS-CoV), Preparedness and Response Plan</td>
<td>Ethiopian Public Health Institute, Addis Ababa, Ethiopia</td>
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<td>Pandemic Influenza Preparedness And Response Plan</td>
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<td>A Proclamation to Provide for Food, Medicine and Health Care Administration and Control</td>
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<td>Organizational Structure of Ethiopian Field Epidemiology And Laboratory Training Program (EFELTP)</td>
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<td>Ethiopia Field Epidemiology and Laboratory Training Program (EFELTP) Operation Manual</td>
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**Other Supporting Materials**

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<td>Central Statistical Agency Addis Ababa, Ethiopia ICF International Calverton, Maryland, USA</td>
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<td>Zoonotic Diseases Prioritization for Inter-sectoral Engagement in Ethiopia</td>
<td>US Department of Health and Human Services- CDC, Ethiopian Public Health Institute, Addis Ababa, Ethiopia</td>
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<td>National Laboratory Accreditation Assessment For Clinical and Public Health Laboratories</td>
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**NA - Not Applicable**

**Supporting Links:**

- [https://www.researchgate.net/publication/261029554_Laboratory_investigation_of_epidemic_dropsy_in_Addis_Ababa_Ethiopia](https://www.researchgate.net/publication/261029554_Laboratory_investigation_of_epidemic_dropsy_in_Addis_Ababa_Ethiopia)
- [http://europepmc.org/abstract/med/22946291](http://europepmc.org/abstract/med/22946291)
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