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REPORT ON ONE HEALTH TECHNICAL AND MINISTERIAL



Meeting to Address Zoonotic
Diseases and Related Public
Health Threats.

Radisson Blu Hotel, Dakar (Senegal)
8 – 11 November 2016

ABREVIATIONS

CDC	: Centers for Disease Control and Prevention
ECOWAS	: Economic Community of West African States
CIRMF	: International Centre for Medical Research in Franceville
DHIS2	: District Health Information System version 2
EPT	: USAID-funded Emerging Pandemic Threats Program
FAO	: Food and Agriculture Organization of the United Nations
OIE	: World Organization for Animal Health
WHO	: World Health Organization
WAHO	: West African Health Organization
PREDICT	: EPT program address detecting novel pathogens in wildlife
RCSDC	: ECOWAS Centre for Disease Surveillance and Control
RESOLAB	: Laboratories Network
IHR	: International Health Regulation
UNICEF	: United Nations Children's Emergency Fund
USAID	: United States Agency for International Development



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EXECUTIVE SUMMARY

The “One Health” concept underway in West Africa aims to adopt a holistic approach in responding to possible public health events such as high-impact infectious diseases emerging at the interface between humans, animals and the environment. A technical and ministerial meeting was convened at the Radisson Blu Hotel in Dakar, Senegal, from 8 to 11 November 2016 to share experiences and explore challenges encountered during the One Health approach to fight zoonosis and related public health threats.

This meeting was organized by the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the World Animal Health Organization (OIE), the West African Health Organization (WAHO), the Regional Centre for Animal Health (CRSA) of the Economic Community of West African States (ECOWAS), the United States Agency for International Development (USAID) and the World Bank. It brought together representatives of delegations from 15 ECOWAS countries and Mauritania and different partners, making a total of 247 participants, including 38 ministers and representatives of ministers. The representatives of Cameroon and Gabon were invited to share their experiences on the Global Health Security Agenda for strengthening integration and inter-sector cooperation to prevent, detect and respond to emerging infectious diseases threats, especially zoonosis and antimicrobial resistance.

The opening ceremony was chaired by the Minister of Health and Social Action of Senegal and was marked by four presentations by the Director General of WAHO, the Regional Representative of OIE, the FAO Representative for Senegal and the WHO Representative for Senegal. All expressed satisfaction with the holding of this meeting and underlined the importance of the One Health approach for addressing the region’s current public health security challenges.

The technical session began with sensitization on the One Health approach, followed by a presentation of progress made, challenges encountered and lessons learned in particular in West African. The first four sessions gave an overview of: (i) the Global Health Security Agenda; (ii) the WHO/FAO/OIE tripartite agreement on the One Health approach; (iii) prospects for implementing the approach within ECOWAS areas; and (iv) human and animal health security in West Africa.

After that, six countries shared their experiences on: (i) the strengthening of the institutional framework of the One Health approach; and (ii) infectious diseases surveillance and antimicrobial resistance under this approach.

The ensuing thematic sessions centred

on: (i) surveillance of the natural reservoir of the Ebola virus; (ii) action around regional human and animal health laboratories networks; and (iii) global support and sharing of available resources/tools for the One Health approach and global health security. Since it was requested that the joint external assessment of the International Health Regulation (IHR) reflect the One Health approach, this is an opportunity to strengthen collaboration between human and animal health laboratories. The emphasis should be on existing capacity in the sub-region and available linkages to build bridges of collaboration among these laboratories. Furthermore, ECOWAS must emphasize two things: networking as a main means of sus-

taining resilience- and response-related actions and active synergy.

Several challenges were identified, namely : (i) the need to strengthen the network of epidemiologists to support the action of laboratories; (ii) the urgent need to establish a network of regional bio-banks to share specimens and information among countries and subsequently undertake research requiring these specimens. In addition, the capacity of country-level laboratories should be strengthened to ensure a rapid response to diseases that are rife in the sub-region. Capacity-building will focus on quality assurance, bio-security and bio-safety. The third challenge identified is that since technical and financial partners have put in place several tools and initiatives to support the implementation of the One Health approach, it is then important for States to make the best use of these tools.

At the end of these key discussions, four thematic sessions were organized in small groups: (i) Policy, coordination and partnerships for the One Health approach; (ii) Readiness and response under this approach; (iii) Surveillance under this approach; and (iv) Operational aspects: human resources, financing and infrastructure. After deliberations, each group highlighted the most important issues and problems in implementing the One Health approach, the strengths and opportunities. Thereafter, recommended solutions for inter-sector collaboration were listed and key recommendations formulated.

The draft Regional Strategic Roadmap for implementing the One Health approach was disseminated. This Regional Roadmap spotlights four specific activities that regional multi-sector stakeholders, member States and their partners must undertake to implement in the following three major thematic areas : (i) coordination and partnership; (ii) preparation and interventions; and (iii) surveillance.

The different countries then prepared their national action plans for implementing the One Health approach. These plans constitute one of the stages towards compliance with commitments taken by States in the communiqué issued by Ministers in charge of human health, animal health, wildlife and wild flora of West African countries. This communiqué highlighted the roles of public authorities in the establishment of inter-sector coordination, sub-regional review of dangers and risks, national and sub-regional early warning mechanisms and the regular sharing of information, joint external 2016 IHR evaluations and common planning of preparation and response.

The ministerial meeting was officially opened by the Prime Minister of Senegal, who began by thanking the partners for their multi-faceted and constant support and invited the countries to a frank collaboration at all levels - national, regional and international – to ease the sufferings of vulnerable populations.

Taking the floor in turns, the US ambassador, the Director of WAHO, the Representatives of OIE, FAO and the WHO Regional Director for Africa thanked and congratulated the Government of Senegal for accepting to host this important meeting, underlined the relevance of the One Health approach and expressed their institutions' commitment to, and expectations for, the operationalization of this approach in West Africa.

The Programme Director in charge of emergency situations at the WHO Regional Office presented a summary of the One Health concept and its major stakes for the population of Africa. Thereafter, the Director of Veterinary Services of Cote d'Ivoire presented to Ministers a summary of the outcome of the experts' deliberations. These deliberations culminated in the formulation of a plan to implement the One Health approach in each country, while soliciting the commitment of their highest authorities to support this approach and the proposed regional framework.

Prior to the closing ceremony chaired by the Minister of Health and Social Action of Senegal, the floor was given to the Director of Surveillance of Nigeria to read the final Communiqué to be approved by Ministers. The contributions made by the delegations of Senegal and Nigeria allowed for improving the text that was unanimously adopted.

The following recommendations were made at the end of the deliberations :

Recommendations to Member States :

1. Demonstrate commitment and ownership of the One Health approach by an internal budgetary allocation dedicated to this approach and planned activities;
2. Implement ongoing countrywide procedures and appoint multi-sector coordination officials in the context of the One Health approach;
3. Promote the multisectoral approach with the effective involvement of the private sector, civil society, confessional sectors, defence and security forces, technical and financial partners and academic institutions;
4. Systematically enlarge FELTP [Field Epidemiology and Laboratory Training Program] training sessions to animal health and environment professionals and embark on a coordinated capacity-building programme;
5. Establish integrated surveillance systems with due consideration for human health and animal (domestic and wild) health;
6. Establish an obligatory mechanism for the maintenance of infrastructure and equipment to ensure that public health and animal health laboratories function on a permanent basis;
7. Establish ICT-based platforms (cyber-surveillance) with emphasis on community surveillance to strengthen information systems within and between the human and animal sectors;
8. Implement the One Health approach at all levels, particularly at the community level, placing emphasis on strengthening the technical and community capacities of staff; and
9. Institute common mechanisms in the agriculture, public health and animal health sectors to jointly assess risks, regularly plan and monitor antimicrobial resistance and apply corrective measures.

Recommendations to partners :

1. Help countries of the sub-region to conduct joint external assessments of the IHR and performance of veterinary services;
2. Provide material and financial support to countries to strengthen national laboratory networks and collaboration between national and regional laboratories and create a sub-regional network of bio-banks; and
3. Undertake advocacy for the Governments of West Africa to mobilize domestic resources for health security based on their commitment to sustain the One Health approach.



INTRODUCTION

1.1 Background

Current research and data indicate that close to 75% of new infectious diseases affecting human beings in recent times were caused by pathogens coming from animals or products of animal origin. The recent epidemics in West Africa with their corollary of human and animal victims, and social and economic repercussions ended up convincing even the most sceptical that a concerted approach and multi-sector collaboration were urgently needed. The One Health concept underway in West Africa targets the adoption of a holistic approach to respond to public health events such as high-impact infectious diseases emerging at the interface between human beings, animals (domestic and wild) and the environment. A technical and ministerial meeting was held in Radisson Hotel in Dakar, Senegal, from 8 to 11 November 2016 to share experiences and explore challenges linked to the implementation of the One Health approach to address zoonotic diseases and related public health threats. The meeting was jointly organized by WHO, FAO, OIE, CRSA, the United States Agency for International Development (USAID) and the World Bank and brought together delegations from 15 ECOWAS countries and Mauritania, as well as different partners, making a total of 247 participants, including 38 ministers and representatives of ministers. The representatives of Cameroon and Gabon were invited to share their experiences on the implementation of the One Health approach in the Central African sub-region.

1.2 Objectives and Expected Outcomes

1.2.1. General objective

The general objective of the meeting was to encourage countries to adopt and implement a One Health approach in West Africa, as back-up to the Global Health Security Agenda in order to strengthen integration and inter-sector cooperation to prevent, detect and respond to threats of emerging infectious diseases, especially zoonotic diseases and resistance to antimicrobial drugs.

1.2.2. Specific objectives

The specific objectives are to:

- (i) Sensitize participants on the technical and operational aspects of the One Health approach including progress to date, challenges and lessons learned in Africa and the West African sub region;
- (ii) Develop national strategies for institutionalizing the One Health approach, pursuant to the International Health Regulation, the veterinary services performance process, the Global Health Security Agenda and other related roadmaps;
- (iii) Develop a regional agenda for institutionalizing the One Health approach, including partner commitment for harmonized support;
- (iv) Obtain strong political commitment from Ministers of key sectors to implement the One Health approach in their respective countries.

1.2.3. Expected outcomes

The expected outcomes of this meeting were:

- Participants have a better understanding and broadened perspective of One Health approach and benefits associated with the implementation of IHR, the veterinary service performance process and the Global Health Security Agenda;
- Member States identify strategic interventions for institutionalizing the One Health approach in countries;
- Regional One Health Strategic Roadmap is developed and endorsed by ECOWAS Member States and Mauritania;
- Platforms of inter-country collaboration and communication are strengthened, including mechanisms which encompass transboundary networks, in accordance with the One Health approach;
- Participating Ministers adopt decisions and recommendations of the final communiqué of the Ministerial Meeting on the One Health approach to address zoonotic diseases and related public health risks.

1.3 Methodology of the meeting

The meeting was in 2 phases, starting with a three-day technical meeting to prepare the ministerial meeting scheduled on the fourth day. Information-sharing was in the form of presentations and dissemination of technical resources during plenary sessions, group discussions and deliberations in restricted groups. Daily press briefings were held throughout the meeting. A final communiqué was prepared for adoption during the ministerial meeting.

OPENING CEREMONY

The opening ceremony, chaired by Professor Awa Marie Coll Seck, Senegal's Minister of Health and Social Action, was marked by four speeches by the Director General of WAHO, the OIE Regional Representative for Africa, the FAO Representative for Senegal and the WHO Representative for Senegal.

In her opening speech, Professor Awa Marie Coll Seck welcomed participants and expressed happiness for the choice of Senegal – the land of the Teranga – to host this important meeting. She observed that although the One Health approach is not a new concept, it is topical since humans and animals share the same environment, with a permanent risk of transmission of diseases. She stressed the importance and urgent need for multi-sector and multi-disciplinary intra- an inter-country collaboration. The opportunity was thus afforded her to thank the technical and financial partners for helping the country to implement the Global Public Health Agenda. She also expressed the wish that important decisions and effective, synergy-building measures be taken at the end of the technical meeting through a regional roadmap that will be considered by the ministerial meeting.

Dr. Xavier Crespín, Director General of WAHO recalled in his speech that despite the progress made, the situation within the ECOWAS area remains characterized by a load of communicable and noncommunicable diseases and the emergence and/or re-emergence of certain diseases against the backdrop of weak health systems. Thus, during their forty-seventh conference held in Ghana, the Heads of State and Government of ECOWAS decided to set up a Regional Disease Control Centre and instructed WAHO to ensure this and its operationalization. He underlined the fact that the decision comforts the actions of WAHO through its 2016-2020 Strategic Plan. He believed ECOWAS remains conscious of what needs to be done to coordinate the efforts of different health systems on the one hand and among other sectors of animal health and the environment on the other. Lastly, Dr Crespín reiterated that ECOWAS was willing to work with all partners to implement a regional One Health platform.

In his speech, Dr Deo Nshimirimana, WHO Representative for Senegal and leader of the Health Sector technical and financial partners, recalled the tripartite agreement defining collaborative mechanisms for coordinating global activities to be implemented to reduce health risks linked to the animals/men/ecosystems interface concluded between WHO, FAO and OIE. In the same spirit, Africa has started reflecting on the One Health approach by forging partnerships with USAID, FAO, OIE and some East African universities. According to him, although the Alma-Ata Declaration on primary health care remains valid in its principles, it is up to countries, WHO and development partners to ensure that the central ideas of the Declaration are integrated in national health systems to tackle new challenges confronting countries and succeed in the One Health approach.

In his speech, Dr Karim Tounkara, Regional Representative of the World Organization for Animal Health (OIE) also stressed the need for ownership of the One Health approach via the 2010 tripartite Agreement between the directors of three collaborating organizations: FAO, OIE and WHO. He later recalled the advocacy undertaken by the Director General of OIE during the twenty-sixth General Assembly of the United Nations held in New York on 21

September 2016, to drum up a global political commitment for measures to be taken to fight antimicrobial resistance. In addition, he presented OIE's commitments and measures for the preparation and response to epidemics and the surveillance of animal diseases including zoonotic diseases. He also talked about the vast campaign of support to veterinary services OIE has been conducting for several years now using its veterinary services performance tool.

In his speech, Patrick David, FAO Representative for Senegal said the meeting was held against the backdrop of health emergencies characterized by the ongoing Rift Valley fever epidemic in Niger. He also mentioned the highly pathogenic avian flu (AH5N1) epidemic that broke out in the sub-region with the re-emergence of the H5N1 virus in West Africa in 2015, and the Ebola virus epidemic that peaked in the sub-region from 2013 to 2015. According to Patrick David, FAO strongly believes that effective control of animal diseases, including emerging zoonosis, requires tackling these diseases from their animal sources. For that, the holistic and multi-disciplinary approach promoted by the One Health approach is more than necessary for prioritizing the protection of public and animal health, agro-ecological resilience, biodiversity conservation, the efficient use of natural resources and the health security of food supply chains.

To summarize, all the representatives of international organizations who spoke during the opening ceremony expressed satisfaction with the holding of this important meeting and underlined the importance of the One Health approach for addressing current regional and global health security challenges.

TECHNICAL SESSIONS

2.1 Sensitization on the One Health approach

The technical session started with sensitization on the One Health approach and looked at progress made, challenges encountered and lessons learned, in particular in West Africa. The first four sessions proposed an overview of: (i) the Global Health Security Agenda (GHSa); (ii) the WHO-OIE-FAO tripartite agreement on the One Health approach; (iv) prospects for implementing the One Health approach in ECOWAS; and (v) human and animal health security in West Africa.

2.1.1 Global Health Security Agenda

The first presentation was by Dr Michael Kinzer, Director General of Centers for Disease Control (CDC) for Senegal and Guinea Bissau. He began by presenting the situation of the two Ebola epidemic disease outbreaks in 2014 and 2016 and lessons learned in terms of the speed and effectiveness of common coordinated initiatives, particularly when countries' individual capacities were overstretched. In 2016, about 30% of countries were ready to detect and respond to an epidemic, but none were from the African Region. Continuing his presentation, he pointed out that in 2005, all Member States of the United Nations committed to achieving the IHR objectives. Then, he charted the vision of the Global Health Security Agenda which benefits from IHR agenda and has 11 focus areas. Dr Kinzer dwelled on five areas: zoonosis, laboratory, surveillance (and the chance of having a DHIS2 platform), human resources and emergencies management. These well-structured areas rest on three pillars – prevention, detection and response to threats based on a One Health approach.

The presentation showed the importance of the joint external assessment tool which brings together all stakeholders in describing a country's capacity, in accordance with the GHSR and IHR objectives. To date, 18 countries have completed their assessments while 31 have programmed it; the target is to reach 50 countries in May 2017. In conclusion, Dr Kinzer showed the interest of the One Health approach during delivery of the Global Health Security Agenda. Every initiative begins with sound communication and the sharing of each system's specific objectives, and rests on small successes and not on a broad vision.

2.1.2. WHO-FAO-OIE tripartite agreement on the One Health approach

The second presentation was by Dr Subhash Morzaria, World Coordinator of the FAO Component of the USAID Re-emerging Pandemic Threats Programme in Rome. After situating the tripartite agreement, he pointed out that the One Health approach defined by the Wildlife Conservation Society (WCS) in the 2004 Manhattan Principles recommends a more holistic approach. In fact, it is interested in the passage of pathogens between animals and humans, englobing interfaces between different areas (human health, animal health and ecosystem health) and promoting an international, inter-disciplinary and inter-sector approach to disease emergence and control. He recalled that the One Health approach is ever-changing and insisted on the concept note that the tripartite agreement

brought to the fight against zoonosis. This alliance defines a common vision for a world, capable of preventing, detecting, containing and eliminating animal and public health risks from animal and zoonotic diseases having an impact on food security, thanks to multi-sector cooperation based on solid partnerships. It calls for strong collaboration between WHO, FAO and OIE to share responsibilities and coordinate global activities for treating health risks to animal-human-ecosystems interfaces by applying the One Health approach. He however said that the three organizations had a long history of collaboration, even before One Health approach.

Thereafter, he explained how the One Health approach was promoted and showed its contributions: participation in international fora, information and data gathering for the design of tools and guidelines on this approach, and provision of necessary technical know-how to ministries (health, livestock, the environment and others). Special emphasis was placed on strengthening national health systems through the coordination and harmonization of uni-sector health systems and reliance on existing infrastructure wherever possible.

After citing a few important international meetings, he presented tools designed within the framework of the tripartite agreement. An example is the Global Early Warning System (GLEWS), a common tool for sharing information and assessing potentially preoccupying health events at the international level. He then enumerated global initiatives prepared as part of the same agreement such as the global agenda to combat antimicrobial resistance, control rabies and implement the Global Health Security Agenda.

Next, examples of actions compliant with the One Health approach were presented: past or ongoing joint missions and regular consultations on the fight against Avian Influenza (H1N1, H5N1, H7N9) and the Middle East Respiratory Coronavirus (MERS-Cov), as well as the strengthening of the rabies diagnostic laboratory and establishment of the veterinary laboratories network through RESOLAB.

He ended his presentation by pointing out that :

- The tripartite agreement provides international technical assistance with consequences at the country level;
- The promotion of inter-sector collaboration is essential to reduce public health threats to the man-animal-ecosystem interface;
- Emphasis should be placed on strengthening systems based on existing systems;
- The promotion of good governance, transparency and trust in building effective inter-sector relations is necessary.

2.1.3 Prospects for implementing the approach in the ECOWAS space

La troisième présentation a été faite par le docteur Abdul Nasidi et par Carlos Brito, respectiveThe third presentation was by Dr Abdul Nasidi and Carlos Brito, respectively Executive Director and Director of Public Health of WAHO. They demonstrated why the One Health approach is important, taking the example of the partners' meeting and the experience of the recent Ebola virus epidemic. The capacity of countries to address epidemics was treated with emphasis on the inadequacies of systems. Nigeria's response to the H5N1 influenza epidemic was also presented. The intervention strategy was based on several elements of the One Health approach. Immediate measures taken by the Nigerian government include the creation of a crisis management centre, the establishment of a rapid intervention team (EIR), identification of resources and loopholes and articulation of a rapid intervention plan and a medium-term biennial plan; the design of a national communication strategy and an action plan with UNICEF support.

Next, the presentation touched on problems/challenges in terms of public health, economy and food security involving the environment and society, then showed the current achievements of the

ECOWAS Centre for Disease Surveillance and Control within the purview of the One Health approach. The integrated health approach used is based on stronger collaboration between human health, animal health and environmental management, with emphasis on strengthening surveillance and intervention capacities at the regional and national levels ; strengthening early warning and detection systems; strengthening the capacities of health and veterinary authorities in the prevention, preparation and response to epidemics; assessment of the social and economic impact of diseases; the promotion of inter-sector collaboration and public-private partnership for the health of livestock, wildlife and ecosystems concerned; and lastly, research on the conditions in which emerging diseases are spread.

Lastly, they presented the four pillars of delivery of the One Health approach, namely: relying on the existing to promote coordination and collaboration between human, animal and environmental health and the prevention, detection and effective intervention against epidemics (notably harmonization with the International Health Regulation and the Global Health Security Agenda) ; solid support for strengthening country-level capacities to establish national coordination institutions (institutional, technical and financial capacity to coordinate different public health functions and establish links with the ECOWAS Centre for Disease Surveillance and Control (RCSDC); promote regional coordination to enhance solidarity regarding health security and regional collaboration on a global scale in order to treat regional issues requiring transboundary attention; sustainability through partnership to ensure necessary investments (technical and financial) but also national and regional financial support to ensure ownership.

The organization's activities offer an opportunity to apply the One Health concept in the sub region. These include annual meetings of ECOWAS Ministers in charge of human, animal and environmental health; the ECOWAS Centre for Disease Surveillance and Control; national coordination institutions being put in place at country level, the corresponding network being already in place ; the creation of a regional health information platform ; the establishment of a laboratories network and creation of a regional rapid intervention team; the process of assessing FELTP training institutions in the region; the partnership forum organized every year during the Health Ministers' meeting; and ongoing projects aimed at strengthening surveillance and intervention capacities at national and regional levels.

In wrapping up the presentation, it was recalled that human and animal health professionals must work on leadership, capacity-building, networking, cooperation, communication, facilitation and establish trust at all levels. Further, ECOWAS will serve as platform for strengthening capacity to prepare public health interventions in the region based on the strengthening of Member States' public health capacity, relying on networking and effective cooperation with all partners, founded on the One Health approach.

2.1.4 Human and animal health security in West Africa

The fourth presentation was by Dr Ambrose Talisuna, Technical Officer of IHR and Global Health Security at the Regional Office (IHR and GHS/CPI/WHE). In his speech, he underlined that emerging and re-emerging diseases were a human and veterinary health challenge in West Africa, giving the example of the avian influenza, the Ebola virus disease, Lassa fever and Rift Valley fever. In fact, all countries are exposed to zoonosis outbreaks and the man-animal-ecosystem interface is the frontier for new infectious disease threats such as zoonotic diseases and antimicrobial resistance.

Next, he said it is essential to map out risks to address zoonotic diseases and public health threats. In September 1998, Member States adopted the integrated disease surveillance and response strategy. The revised IHR became effective in 2007. This strategy, the IHR and disaster risk management aim to better detect and respond to global threats. Since 2015, the IHR monitoring and evaluation framework uses a combined approach comprising four components: the drafting of annual reports, post-action review, simulation and joint external assessment. This approach is

founded on the principles of transparency, mutual accountability, confidence-building, appreciation of public health benefits, dialogue and sustainability.

Integrated disease surveillance and response concerns eight key functions at four levels of the health system. It is a global data-based strategy for strengthening national public health surveillance and intervention systems. It is used mainly for surveillance, investigations on epidemics and interventions against common human, zoonotic and food-related diseases.

He presented examples such as the highly pathogenic avian influenza epidemic A (H5N1HPAI) among chickens in 2016; the distribution of zoonotic diseases in West Africa in 2015, and the Rift Valley fever epidemic in 2016 in Niger, as well as the mapping of certain infectious diseases.

Next, the presentation focused on the socio-economic impact of zoonotic diseases namely: labour productivity loss due to disease; reduced travelling and tourism in affected zones; decrease of livestock and food production; the death and destruction of affected animals; restricted and reduced international trade; a serious blow to the country's economy; and greater repercussions on societal health. The Ebola epidemic served as illustration model.

The challenges and lessons learned were presented, especially weak inter-sector coordination and the inadequacy of actual integrated disease surveillance and response. Besides, countries did not establish all core IHR capacities and few assessed the performance of veterinary services. Other difficulties are: limited information-sharing among sectors; limited knowledge of measures to mitigate risks and fight against new emerging diseases; inadequate mechanisms for joint risk assessment or preparation and planning of country-level interventions.

Thereafter, WHO's regional strategy was presented. Its three objectives are: (i) strengthen and support the ability of all Member States' health systems to prevent outbreaks and other health emergencies; (ii) strengthen and support the capacity of all Member States' health systems to detect and promptly confirm outbreak centres; (iii) strengthen and maintain the capacity of Member States' health systems to promptly respond to and recover from the negative effects of epidemics and health emergencies.

Four indicators were defined along with "critical targets" for achieving these objectives, namely: (i) At least 80% of Member States have organized a joint external assessment of basic IHR capacities by 2018; (ii) At least 80% of Member States have tried and tested plans in readiness for natural disasters, by 2018; (iii) At least 80% of Member States have minimum IHR capacity by 2020; (iv) A regional health manpower developed in collaboration with partners by 2017; (v) 100% of Member States have national RMA action plans 2017. Strategic approaches have been developed in that direction, through better coordination and partnership for the One Health approach, strengthening of simultaneous surveillance of human and animal diseases, the development and/or extension of data collection and sharing with the help of interoperable digital platforms, improvement of our knowledge of the human/animal interface through training, support to laboratories and research as well as the increase of investments in terms of inter-sector preparation, investigation and response.

In summary, the speaker insisted on the fact that we must reduce risks associated with zoonotic pathogens and diseases of animal origin; in fact, over 75 % of infectious diseases come from animals because the health of humans, animals and ecosystems are interconnected. Thus, the entire region is exposed to the risk of emergence and re-emergence of pathogens. That is why we must adopt the approach that englobes all threats. Our vision should be that of "a world capable of preventing, detecting, containing, eliminating and responding to animal and public health risks attributable to zoonotic animal diseases"

During discussions after the presentations, participants applauded initiatives undertaken by dif-

ferent organizations, appreciating the significant progress made to implement the One Health approach in West Africa. However, they stressed the fact that external support must help to strengthen country capacity to act more rapidly and more effectively since it is imperative to provide global immediate and decisive support. They also dwelled on the importance of areas like: (i) intense sustained collaboration between WHO, FAO and OIE for the prevention, detection and control of zoonosis to be aligned on that of ECOWAS to promote the One Health approach; (ii) the opportunity offered by joint external IHR assessment to strengthen the 19 technical domains allowing for preventing, detecting and responding to public health emergencies of international scope; (iii) approaches and procedures for establishing multi-sector coordination bodies inspired by the One Health approach; as well as zoonotic diseases and microbial resistance surveillance system models.

2.2 Strengthening institutional one health approach frameworks

The second thematic session was introduced by Dr Charles Bebay, a representative of FAO. According to him, much has been said since the start of proceedings be it at the global or country level; various strategies exist, but have all ended the same way. With regard to compliance with IHR, a number of mechanisms and tools exist at the global level with rapid warning systems. He stressed the fact that ECOWAS regional experience and ongoing works on national consultations are achievements that help to showcase good practices.

Furthermore, he acknowledged that the One Health approach was of much service during the highly pathogenic avian influenza epidemic with inter-ministerial committees set up to fight the disease. The same was true of the World Bank during preparation of integrated plans to fight the avian flu with a multi-sector approach. He however recognized that implementation differs from country to country with a great variety of structures and documents and institutionalized systems with different mechanisms. In a nutshell, many very local experiences exist, but are not necessarily documented even supervised as they should. Often, these are very local, one-time collaborations between countries. So, it is necessary to show the value added of joint external assessments and share existing research works. He finally concluded by admitting that the One Health approach is linked to existing threats in the sub-region such as the highly pathogenic avian influenza.

After that, six countries shared their experiences on (i) the strengthening of the One Health institutional policy design and delivery framework (Cameroon, Nigeria, Senegal); and (ii) infectious diseases and microbial resistance surveillance under the One Health approach (Burkina Faso, Gabon, Ghana) and sub-regional cooperation and research (Gabon). The countries spotlighted the following.

2.2.1 Strengthening of the One Health institutional framework

Senegal: Experience in a setting up a multi-sector task force to coordinate activities of the Global Health Security Agenda.

Dr Adjaratou Ndiaye (Senegal) shared lessons learned from the recent experience in the management of health crises after describing the national context. The country has a long tradition of multi-sector management of major health crises, seen in multi-sector contingency plans that use the ORSEC Plan mechanisms and means, authorized and supervised by the Prime Minister's Office. Examples of health crises coordinated by the Prime Minister's Office were presented such as the 2003 and 2004 floods that caused 250,000 victims with clear health risks for the population and livestock, or threats of the spread of the Ebola virus disease in 2014 from imported cases.

The contingency plan objectives were described; then, the other types of multi-sector health coordination were treated. The Senegalese authorities adopted the need for multi-sector coordination to ensure effective delivery of the One Health approach as a component of the Global Health Security Agenda. The genesis of coordination of this programme and the One Health strategy

were recounted in its different phases. This led to the introduction of coordination as a priority intervention area of the action programme; the technical endorsement of the five-year roadmap of the action programme; the preparation of the REDISSE sub-regional project; and IHR self-assessment in Senegal.

The institutional framework was then shared and good practices due to the multi-sector task force's leadership were treated. Lastly, Senegal shared the way forward with its roadmap before concluding on several points: the fact that the country enjoys a long tradition of multi-sector management of major health crisis for the design of its coordination strategy; the participatory strategy adopted as soon as the action programme was implemented; the gradual approach used with diplomatic and administrative procedures with the commitment of Senegal's political and administrative authorities at the highest level; concerted scientific measures between sectors and partners with assessment phases, then the joint design of work plans; the coordination arrangement which allowed for obtaining successive advances to implement the activities of the action programme and the application of the One Health strategy.

Cameroon: Lessons learned from setting up the national One Health platform

Dr Joseph Djonwe (Cameroon) recalled the genesis of the One Health approach after situating the country context. He shared his experience in the human carbon (anthrax) outbreak in 2005, the detection of three centres of the highly pathogenic avian influenza (H5N1) in 2006 and Government's response through the establishment of an ad hoc inter-sector disease prevention and control committee, and the design of a national programme for the prevention and fight against zoonosis. He also showed Government's commitment seen in ceremonies to launch these programmes, as well as official documents and programmes.

In terms of achievements, Cameroon shared actions undertaken to sensitize senators on the One Health approach and during important events; to strengthen multi-sector collaboration during investigation of a monkey pox (orthopoxvirose simienne) outbreak in Sanaga-Yong in June 2014; to strengthen multi-sector collaboration through the programme to prepare the zoonosis response with the adoption of a joint communiqué of Ministries of Health and Livestock and the communication during the avian influenza response in June 2016. He later mentioned the difficulties encountered such as insufficient ownership of the One Health approach by certain sectors, weak sensitization of the private sector and civil society and insufficient resources to carry out activities to promote the approach. He came back to the national platform currently in place under the zoonosis programme and pointed out that a reflection is underway to better tailor this to other public health events.

Cameroon has learned the following lessons: if coordination is placed at a high level of decision-making, this facilitate stronger multi-sector collaboration and the steering of the process; training and sensitization of the members of the multi-sector committee is a prerequisite to fewer divergences of points of view; active synergy in disease prevention and control through multi-sector and inter-disciplinary collaboration allows for circumscribing public health events; exchange of health information within the framework of prevention and fight against animal and human diseases contribute to effectively controlling public health events; the involvement of laboratories, universities and training schools, the private sector and civil society is beneficial for the delivery of the One Health strategy.

Lastly, he indicated prospects, among them: carry out a reflection to improve the national One Health strategy in order to mainstream public health events (ecosystems health, microbial resistance, bio-safety/bio-security...); further sensitize the private sector and civil society to implement the One Health approach; and strengthen sector capacity on this approach.

Nigeria: Response to the H5N1 virus using the One Health approach

Dr Olubumni Ojo (Nigeria) showed his country's profile and presented the Coordination Unit in charge of the One Health approach. An inter-ministerial steering committee was established by the President, followed by a technical committee, co-chaired by the Ministers of Health and Agriculture, whose members are from the Ministries of Health, Agriculture and Information, development partners, the United Nations system, university institutions and the private sector. A federal public health watch committee was also set up, chaired by the Minister of Information and comprising members from the Ministries of Health, Agriculture and Information; an avian influenza crisis management centre was also put in place. Lastly, he presented two frameworks: the procurement and incident control system, and the federal government structure at the State and local government level.

2.2.2 Infectious diseases surveillance using the One Health approach

Gabon : Transboundary surveillance of Ebola virus disease in neighbouring regions to the Republic of Congo.

Dr Gael Maganga (Gabon) began by presenting the International Centre for Medical Research of Franceville (CIRMF), which collaborates with WHO for arboviruses and viral haemorrhagic fevers. This centre is the heart of sub-regional surveillance. He then presented a historical overview of the centre, beginning with its initial objective which was to study the causes of infertility and perinatal health. The scope of its activities was later broadened to include medical research, infectious diseases and ecology. Next, he presented the centre's organizational chart and placed it within the WHO network particularly for arboviruses and haemorrhagic fevers. The centre is involved in the surveillance of animal mortality within reservoirs and intermediate hosts. A few examples were given such as carbon among chimpanzees, the Ebola and Marburg viruses among bats, contagious etyma among goats, the plague among small ruminants and the fulgurant haemorrhagic fever among the bonobos. He followed this up with examples of surveillance of wildlife through the collection of game in the forest zones of the North-East and South of Gabon.

He described how the diagnostic platform operates and how biological specimens are conveyed after sampling depending on site and diagnostic procedure. He concluded by stating the two goals of the research programme: monitor genomic evolution and provide a rapid response in case variants appear; and understand the methods of transmission in man and the appearance of epidemics.

Burkina Faso: Surveillance of rabies as part of the One Health approach

Dr Joseph Savadogo (Burkina Faso) presented the situation of animal rabies over the last five years -predominance of rabies in dogs (93 %) and among humans over the same period. He described the state of control efforts from 1960 to 2015 and the combination of actions that led to beneficiary support. Next, he presented the rabies surveillance system aimed at preventing, diagnosing and responding in a multi-sector approach. Lastly, he charted the way forward: identify pet animals; target 80% vaccination coverage of pet animals; verify the immunity rate; strengthen capacity of the diagnostic laboratory; strengthen information and sensitization of the population; ensure vaccination and offer practical tips in case one is bitten; adopt the national strategic plan; create new treatment centres; further subsidize vaccines; strengthen collaboration between veterinary and human health services. To conclude, it is noted that there are still rabies victims in Burkina Faso and that dogs remains the main means of transmission to humans, which makes it imperative to vaccinate animals to prevent rabies in humans.

Dr Boi Kikimoto (Ghana) presented the national context of antimicrobial resistance, a phenomenon that has consequences for antimicrobial drugs used in human health, veterinary medicine, aquaculture, apiculture and other sectors. A situational analysis conducted in Ghana revealed inter-sector gaps and confirmed the need for a global policy of containment. This led to specific country-level actions involving key actors of the One Health approach. Measures were initiated using existing data for government-led action. Government set up a multi-stakeholder platform led by the Ministry of Health in which the Ministries of Food and Agriculture, Fisheries and Aquaculture Development, the Environment, Science, Technology and Innovation actively participate. The platform shared information and builds the necessary trust on the subject of antimicrobial resistance.

A technical team was mandated to conduct an in-depth situational analysis to guide the next stages. Identified loopholes serves as basis for drafting the antimicrobial resistance policy. The draft policy was submitted to several multi-stakeholder consultative processes and subjected to multiple examinations and amendments to arrive at a policy based on factual considerations and which represent the main aspirations of all political actors. The multi-stakeholder platform and consultative processes were recently enlarged to better anchor the principles of the One Health approach in all actions to combat antimicrobial resistance in Ghana. The political contract on antimicrobial resistance was endorsed on 27 October 2016, and the national action plan was finalized on 28 October 2016. The final version of the antimicrobial resistance control policy should be submitted for the approval of the Cabinet. The commitment of key actors was presented: they include seven key ministries, university institutions, health research centres, the civil society, the media and other structures.

The next stages identified are the following: elaboration of a national action plan; endorsement of the policy to fight antimicrobial resistance in Ghana; dissemination of policies; policy implementation actions; communication and education; re-evaluation and response.

The ensuing discussions after the country presentations concerned the following salient points :

- Insufficient application of multi-sector approach due to low involvement of the private sector, civil society, technical and financial partners and academic institutions;
- The underlying issue of involvement of animal health professionals in the field epidemiological training programme;
- The underlying issue of coordination and information-sharing posing the problem of the reliability and quality of data;
- The sustainability of activities implemented following the One Health approach;
- Inadequate mobilization and unequitable distribution of resources;
- Insufficient coordination of the Lassa fever and Rift Valley fever response currently rife in the sub-region;
- The establishment of the collaboration mechanism with non ECOWAS member countries;
- Limited capacity of coordination structures, in particular in terms of human resources;
- Urgent need to build resilient health systems and efficient veterinary systems.

2.3 Surveillance of the natural reservoir of the Ebola virus: Guinea, Liberia and Sierra Leone

Dr Corina Monagin, representative of USAID EPT-2 PREDICT-2, presented efforts made to strengthen capacity to prevent pandemics using the One Health approach. She began by mentioning USAID's Emerging Pandemic Threats (EPT-2) programmes including PREDICT-2 implemented with

other partners. PREDICT-1 contributed to implementing EPT-1 between 2009 and 2014, then PREDICT-2 took over for the 2014-2019 period, especially with a research project on the Ebola virus in Guinea, Sierra Leone and Liberia.

Next, Dr Corina Monagin indicated that as part of the Global Health Security Agenda, PREDICT supports the fight against zoonotic diseases, the improvement of national bio-safety laboratories, and the real-time surveillance and strengthening of staff competences. Thus, to accelerate progress towards the Agenda goals, 11 areas were defined for preventing, detecting and responding to epidemics. The main challenge of PREDICT is to prevent or combat at source the emergence of zoonotic diseases. PREDICT's scientific strategy for tackling viral risk associates the enlarged characterization of viruses with known or unknown epidemic potential with risk assessment. Next, she presented a model of the One Health approach, emphasizing technical assistance provided for coordinated surveillance against zoonotic diseases and strengthening One Health platforms. She also talked about the system of sampling and screening wildlife, livestock and human to better define the risk with respect to zoonotic pathogens in animal hosts and vectors of diseases. Such targeted surveillance is founded on risk.

She went on to mention the major global achievements of PREDICT-1 and PREDICT-2, aimed at identifying large-scale transboundary ecological processes underpinning human activities with high-risk interfaces, characterizing how diseases emerge and conducting qualitative research, highlighting the improved capacity to undertake surveillance of the Ebola virus and other high-impact pathogens in wild animals.

Next, Dr Corina Monagin mentioned the Global Health Security Agenda and PREDICT Ebola Host Project which consists in assisting the governments of Sierra Leone, Guinea and Liberia to sample, prepare and respond to potentially pandemic zoonotic threats on wildlife and livestock. In addition, she cited the ecological modelling used to: estimate the distribution of the Ebola virus in the bat population in West Africa. Lastly, she presented the current activities of the Ebola Project: the sampling of specimens from wild/domestic animals and livestock in the three countries; the analysis of specimens in States with development platforms, to be optimized in 2017; the active engagement of communities and partners of the Ministries of Health, Agriculture and Sylviculture; the strengthening of governmental capacity at national and local levels, and important members of the communities.

2.4 Action around regional human and animal health laboratories networks

Dr Abdourahmane Sow (epidemic control and potentially epidemic diseases diagnostic laboratories at WAHO) presented the ECOWAS Regional laboratories network. After mentioning the context in which it was established in the aftermath of the recent Ebola virus disease epidemic, he dwelled on the commitment displayed by partners as a follow-up to the decision of Heads of State and Government to set up Regional Centre for Disease Surveillance and Control (RCSDC) within ECOWAS. Partners decided to support WAHO in its mission during the seventeenth ordinary meeting of ECOWAS Ministers of Health held in Bissau, Guinea Bissau on 8 April 2016.

Dr Sow then presented the network's strategic framework, which consists in strengthening laboratory systems and improving technical and scientific collaboration by pooling all regional technical capacities to improve disease surveillance and control within the ECOWAS space, relying on quality laboratory services. He also outlined its specific objectives: (i) support epidemiological surveillance in the 15 member countries; (ii) strengthen national laboratory management, procurement, maintenance and metrology systems through a regional approach; (iii) improve the quality, biosafety, biosecurity and bioethics of laboratory services; (iv) support laboratories in an accreditation process; (v) strengthen an integrated One Health disease surveillance approach by fostering better coordination of human, animal and environmental health surveillance; (vi) promote scientific research on emerging/re-emerging diseases in the ECOWAS area; and (vii) reinforce laboratory guidelines and governance.

After detailing the network composition, he presented the conceptual framework of operation of public health laboratories surveillance systems in the ECOWAS area, the process of setting up networks and enumerated the next stages for establishing cooperation mechanisms between WAHO/CRSCM, WHO, FAO, OIE and other existing networks (RESOLAB); prepare the regional laboratories policy in line with the One Health approach; design a plan to strengthen laboratories; put in place mechanisms of functioning of the regional biobank in accordance with international standards; and put in place regulations and procedures for transporting specimens in the ECOWAS area.

However, there are still difficulties to be resolved such as the strengthening of technical capacity to diagnose emerging diseases, the standardization of supply systems, laboratory equipment maintenance, the strengthening of operational collaboration platforms for surveillance within the One Health approach, the certification of reference laboratories and establishment of a harmonized and integrated platform for the management and transmission of laboratory data.

Henri Kabore, doctor in veterinary medicine and regional Coordinator for ECOWAS, presented the veterinary laboratory network in West Africa (RESOLAB-AO). He spoke about the context in which RESOLAB was set up by FAO in December 2007, after the holding of a joint workshop by FAO and the US Department of Agriculture (USDA/APHIS) in the Regional Centre for Animal Health of Bamako (CRSA). He mentioned the role of national veterinary laboratories, indicating that the successful detection, characterization and tracking of pathogens requires an effective laboratory system. The laboratory is an essential tool for confirming centres of disease outbreak and surveillance, for preparing emergency measures and contingency plans for the prevention and control of transboundary diseases and other emerging zoonotic diseases.

Strengthening the capacity of laboratories and building a national and regional network of laboratories is essential for the prevention and effective control of transboundary and zoonotic diseases. As a result, an important strategy for effective management of these diseases is capacity-building. He went on to describe the regional laboratory network as a forum of national laboratories, for the harmonization and standardization of diagnostic protocols and tools, coordination of activities, sharing of information, experience and training opportunities. It can also help to give national laboratories in developing countries greater exposure and promote platforms for designing regional programmes on common issues. Lastly, he presented the key achievements and major challenges of sustainability. In fact, their sustainability requires effective and collective ownership of the network by all Member States and ECOWAS to which they belong. This ownership rests on ECOWAS capacity to take charge of the coordination of RESOLAB and anchor it to a regional mechanism.

As concerns transferring coordination to ECOWAS, the main conclusions of the two meetings were the following: establish a RESOLAB/RESEPI network for West Africa (RESOLAB / RESEPI-AO) to facilitate their institutional anchoring within ECOWAS and appoint two regional coordinators for each of the networks. The meeting that subsequently took place in Mali in November 2013, organized by FAO and the US Department of Agriculture aimed at identifying institutional arrangements and operational modalities for transferring the coordination of the RESOLAB and RESEPI networks to regional coordinators. The organizational chart and important decisions taken during the last meeting as well as activities to be undertaken were presented. Lastly, Dr Kabore noted that the transfer has been done but several challenges persist including the lack of funds, legitimacy at country level (political recognition), real support from national networks and human resources as well as the limited distribution of focal points (weak feedback) and a need to institutionalize RESOLAB within ECOWAS.

A few highlights stood out in these presentations:

- ▶ Strengthen capacity to prevent pandemics using the One Health approach through PREDICT project
 - PREDICT-1 allowed for strengthening capacity (2,500 persons), fight zoonosis, support

investigations and diagnosis of epidemics through optimization of laboratory methods.

- PREDICT-2 aims to identify the large-scale transboundary ecological processes underlying human activities at high-risk interfaces and at characterizing the routes of emergence of diseases.

Concerning the network of reference laboratories of ECOWAS (WAHO) and the Regional Network of Animal Health Laboratories (RESOLAB), the following points are to be noted:

- Establish the Regional Network of laboratories in the ECOWAS area
- Anchor RESOLAB within ECOWAS (in terms of recognition and ownership)
- Transport/transfer specimens during epidemics: ethical issues are to be taken into consideration, especially when it will come to sharing specimens and information between countries
- Joint IHR assessment (internal and external) is an opportunity to bring animal health and human health closer in the laboratory sense.
- The need to enable capable States to have biobanks and those with weak capacity to benefit from the services of the central or regional bio-bank.

2.5 Global support and available resources/tools for the One Health approach and global health security

A discussion group was formed bringing together several partners - WHO, OIE, FAO, CDCs, the Africa Union Inter-African Office of Animal Resources – on global support and available resources/tools for the One Health approach and global health security.

The discussion brought out several salient points, including :

- The fact that the One Health approach is reflected in joint external IHR assessment;
- The opportunity to strengthen collaboration between human and animal health laboratories. It is therefore important to insist on existing capacities in the sub-region and available links to build collaborative bridges between animal and human health laboratories;
- In terms of resilience and response, ECOWAS should place emphasis on networks, the main means of ensuring the sustainability of actions:
 - Establishing networks is good, but sometimes, we need to think of acting in synergy.
 - In addition, ECOWAS has often provided technical, non-financial support, since one of the major limitations of the permanent functionality of laboratories is the maintenance of infrastructure and equipment.
- The need to strengthen the network of epidemiologists to support the action of laboratories;
- Establishing a regional bio-banks network is an absolute necessity inasmuch as the concern is to share specimens and information between countries and undertake subsequent research requiring the use of these specimens;
 - In addition, it is necessary to continue strengthening the capacity of laboratories at national level for a rapid response to the diseases that are rife in the sub-region.
 - Capacity-building will lay emphasis on quality assurance, biosecurity and biosafety.
- Partners have shown their readiness to support the action, since they have field experience;
- Several tools and initiatives have been put in place by technical and financial partners to accompany the delivery of the One Health approach;
 - Hence, States should make the best use of these tools to implement the approach.

After the ensuing discussions, the following recommendations were made:

- Active synergy should be created between technical and financial partners to take charge of issues linked to the One Health approach;
- The capacity of national and regional capacities should be strengthened to tackle disease diagnosis needs and address difficulties in transferring specimens;
- A joint ethics committee should be set up to handle issues linked to specimen transfers and information exchange in case of an epidemic;
- Legislation on mechanisms governing the operation and use of bio-banks should be updated (creation of national entity and/or centralization);

- More robust disease surveillance systems should be proposed taken into consideration community aspects of surveillance to optimize funds earmarked for response;
- National reservoirs, especially arthropods for zoonosis, need surveillance;
- Plans for implementing the One Health approach should be anchored beyond the public health aspect and be integrated in various regional plans to benefit from financing;
- Advocacy should be undertaken to mobilize funds for surveillance and response;

2.6 Thematic sessions

After these important discussions, four thematic sessions were held in core groups to address the following subjects:

- (i) Policy, coordination and partnerships in the One Health approach context;
- (ii) Preparedness and response in the One Health approach context;
- (iii) Surveillance in the One Health approach context; and
- (iv) Operational aspects: human resources, funding and infrastructure.

At the end of the work sessions, each group identified the major issues and challenges regarding implementation of the One Health approach, strengths and opportunities, possible solutions in view of intersectoral collaboration, and formulated key recommendations. The thematic group sessions are summarized in the table below as follows.

Major issues were highlighted as follows:

- Identify objectives and spell out coordination within an overall multisectoral framework: coordination and cooperation framework;
- Put in place and operationalize national health emergencies management committees and rapid response teams;
- Support disease surveillance and research in countries through regular State budgetary allocations;
- Put in place a single multisectoral framework for mobilization of domestic and external resources; and
- Consider innovative funding: public/private partnerships with the private sector involved in governance.

2.7 The ECOWAS One Health regional framework

Dr Carlos Brito WAHO Director of Disease and Epidemics Control, noted in his introduction that the recent health crises have shown to what extent health events, initially affecting only animals, could impact public health with global consequences affecting economies, the environment and communities (Highly Pathogenic Avian Influenza, Ebola Virus Disease epidemic, Lassa fever, Rift Valley fever...). It is therefore necessary to ensure communication and coordination among all sectors and fields relevant for the planning and implementation of measures aimed at global health security.

He referred to the One Health approach as a concept that relies on strengthening communication and collaboration between human health, animal health and environmental management. He highlighted key aspects, notably: (i) the development of surveillance and response capacities at the national and regional levels; (ii) the strengthening of early warning and detection systems; (iii) strengthening the capacities of health and veterinary officials as regards prevention, preparedness and epidemics control; (iv) assessment of the social and economic impact of diseases; (v) fostering intersectoral collaboration and public/private partnerships for cattle health, wildlife and the relevant ecosystems; and (vi) carrying out research on drivers of the spread of emerging diseases.

He presented the One Health approach framework and conceptualized the regional coordination mechanism, with reference to strategic actions such as regular meetings on the outcomes of the coordination mechanism to assess national and regional gaps and needs; planning and support for

implementing activities at the national and regional levels; mapping of progress made in implementing the One Health approach at the national and regional levels; advocacy and communication with decision-makers.

He mentioned some strategic activities: preparing an integrated multisectoral regional strategic plan to ensure properly coordinated rapid assessments and responses to regional threats; conducting/simulating a joint response of the regional rapid response team; carrying out a regional assessment of hazards and prioritizing diseases; strengthening surveillance systems and information sharing and putting in place the network of reference laboratories.

Lastly, Dr Brito observed that progress and the adequate context towards establishing and formalizing multisectoral partnerships to address zoonoses and other public health threats within and across countries require high level political support. It furthermore calls for the integration of the existing national and regional health systems in order to ensure ownership and sustainability.

2.8 Country action plans

The different countries designed their national action plans for implementation of the One Health approach. The plans are a step towards honouring States' commitments as formulated in the communiqué of the ministers responsible for human health, animal health and wildlife in West African countries. Each country was required to highlight the key elements under the main activities relating to the One Health approach, issues and challenges encountered in implementing the approach, prioritized solutions in addressing the challenges in each of the following thematic areas: policy, coordination and partnership; preparedness and response; surveillance; operational aspects – human resources, funding and infrastructure.

Cabo Verde, Senegal and Sierra Leone were chosen to present their One Health approach draft action plan.

After the country presentations, the following recommendations were formulated:

- Involve the private sector, civil society and academia in the implementation of the One Health approach;
- Tap from the outcomes of IHR evaluation to develop a robust One Health approach strategic plan;
- Take advantage of opportunities (FAO tool for avian flu surveillance, subregional collaboration for diagnosing zoonotic diseases) for designing and implementing One Health approach activities;
- Set up national multisectoral committees to coordinate One Health approach activities at all levels of the health pyramid;
- Strengthen traditional information sharing channels in view of the One Health approach;
- Prioritize advocacy before political and administrative authorities;
- Identify activities relevant for bridging the gap between different epidemiological surveillance functions;
- Plan the evaluation of integrated disease surveillance and response/IHR before formulating and implementing the One Health approach strategic plan;
- Involve all local partners in the implementation of the One Health approach.

After deliberations on country action plans, participants discussed the communiqué of the ministers responsible for human health, animal health and wildlife in West African countries. The communiqué highlighted the role of governments as concerns intersectoral coordination, assessing threats and hazards in the subregion, national and subregional early warning mechanisms, regular sharing of information, joint external assessments of IHR (2005) and joint preparedness and response planning. After taking into account the observations and inputs to the initial version read in plenary, the communiqué was finalized for reading at the ministerial meeting.

Major issues and challenges	Strengths and opportunities	Possible solutions	Recommendations
Theme : Preparedness and response in the One Health approach context			
<ul style="list-style-type: none"> • Non-involvement of key sectors • Absence of collaboration and coordination mechanisms • Weak political commitment • Weak advocacy before leaders/decision-makers • Absence of an integrated multisectoral preparedness and response plan in the majority of countries • Lack of resources (financial, human, material, logistical) • Failure to take into account priority diseases • Non-functioning of national health emergencies management committees and rapid response teams • Non-harmonization of response methods • Varying levels of preparedness in countries 	<ul style="list-style-type: none"> • Existing achievements (One Health approach tools, laboratory networks, multisectoral committees, response, etc.) • Existing national coordination institutions • Existing partner technical and financial support (REDISSE, etc.) • Institutions already engaged in fostering coordination (WHO-OIE-FAO and World Bank Tripartite Agreement) • Existing framework for experience sharing 	<ul style="list-style-type: none"> • Mettre en place un cadre institutionnel, un mécanisme formel de collaboration et de coordination comprenant tous les secteurs clés • Disposer de plans nationaux multisectoriels de préparation et de réponse • Mettre en place et rendre fonctionnel les comités nationaux de gestion des urgences sanitaires et des équipes de réponse rapide • Normaliser les approches d'intervention • Définir les types d'informations à partager 	<ul style="list-style-type: none"> • Putting in place of an institutional framework, a formal collaboration and coordination mechanism involving all key sectors • Designing national multisectoral preparedness and response plans • Putting in place and operationalizing national health emergencies management committees and rapid response teams • Standardizing response methods • Determining type of information to be shared
Theme : Surveillance in the One Health approach context			
<ul style="list-style-type: none"> • Plurality of sectors • Absence of a reliable and permanent consultation framework • Weak community approach • Weak detection, diagnostics and transportation technical capacities • Failure to take into account wild fauna • Lack of political will at the national and regional levels • Insufficient financial resources allocated for surveillance • The need to upgrade all relevant actors 	<ul style="list-style-type: none"> • Existing surveillance system • Ongoing initiative of the World Bank, OIE, FAO, African Union (partners' commitment) • Will of Heads of State to put in place a regional disease control centre • Existing operational networks • Funds pooling policy • Existing external evaluation tools • Existing food safety system • Existing training facilities 	<ul style="list-style-type: none"> • 32.Strengthening the financial, technical and material capacities of laboratories • 33.Harmonizing surveillance tools and establishing an integrated database • 34.Designing an integrated One Health surveillance plan • 35.Strengthening the capacities various relevant sectors • 36.Putting in place a regional coordination mechanism • 37.Evaluating the required IHR minimum core capacities in countries • 38.Updating Evaluation of the Performance of Veterinary Services • 39.Putting in place a safe mechanism for the transportation of samples • 40.Putting in place a cross-border surveillance network, particularly for wild fauna • 41.Developing a One Health approach communication strategy 	<ul style="list-style-type: none"> • Foster disease surveillance and research in countries through regular State budgetary allocations • Strengthen food safety surveillance systems in countries • Put in place an integrated antimicrobial resistance control and surveillance mechanism

Theme : Operational aspects: human resources, funding and infrastructure

<ul style="list-style-type: none"> • Lack of qualified staff (limited number of middle management staff, brain drain) • Communication and data collection weaknesses • Lack of overall funding • Inadequate funding in the relevant sectors • Poor assessment of countries' needs • Inconsistent funding and resource allocation • Lack of laboratory maintenance 	<ul style="list-style-type: none"> • Partners' commitment • Existence of laboratories • Existence of resources that can be mobilized • Existence of laboratory networks at the national and regional levels 	<ul style="list-style-type: none"> • Prioritizing the intersectoral approach • Putting in place a single framework for mobilization of domestic and external resources • Pooling resources for laboratory maintenance • Preparing a joint advocacy programme and putting in place an advocacy group including civil society • Coordination at the national and regional levels 	<ul style="list-style-type: none"> • Develop a training policy: revise curricula to take into account the One Health approach • Involve communities in implementing the approach • Put in place a single multisectoral framework for mobilization of domestic and external resources • Further support countries • Consider innovative funding: public-private partnerships with the private sector involved in governance • Carry out an inventory of laboratories, evaluate their performance and strengthen them
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Theme : Policy, coordination and partnerships in the One Health approach context

<ul style="list-style-type: none"> • Absence of legislation: legal and institutional framework • Institutional weakness of ministries • Absence of an overall vision and guidance towards a multisectoral approach • Non-involvement of ministries of the economy and finance to ensure sustainability • Weak involvement of communities in implementing the One Health approach • Weak ownership mechanisms put in place to ensure coordination • Lack of communication among sectors 	<ul style="list-style-type: none"> • Several ongoing programmes • Political will and sharing of experiences among countries • Existing strategic plans in different sectors enabling to take into account the One Health approach • Existing national, regional and international drive to foster the One Health approach (partner support) • Existing programmes/One Health committee in some cases 	<ul style="list-style-type: none"> • Using existing regional platforms (ECOWAS, WAHO) and policies (learn from each-other) • Raising the awareness of governments and communities on the existence of the One Health approach, particularly its operationalization at the community level • Incorporating the One Health approach into multisectoral public policies and national food safety, environmental, health crises and natural disasters resilience strategic plans • Making proposals on the already existing coordination within regional organizations: how to implement the approach and involve all countries • Enhancing coordination at the level of countries • Involving the private sector within the framework of public-private partnerships • Including partners in country policies and plans • Strengthening information platforms in countries/the region 	<ul style="list-style-type: none"> • Raise awareness and conduct advocacy at all policy-making levels • Develop an overall vision, with ownership by the authorities at the highest levels • Identify objectives and spell out collaboration within an overall multisectoral framework: coordination and cooperation framework • Assess the situation in countries in order to recommend the best national mechanism
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MINISTERIAL MEETING

3.1 Opening ceremony

The United States Ambassador, the Director-General of WAHO, the representatives of OIE and FAO and the WHO Regional Director for Africa took the floor in turn to thank and congratulate the Government of Senegal for accepting to host this important meeting.

In his address, Mr James Zumwalt, the United States Ambassador, reiterated his country's commitment to support the One Health approach through the Global Health Security Agenda. He noted that the Ebola Virus Disease epidemic in West Africa demonstrates the importance of intersectoral efforts by governments and international organizations in addressing public health emergencies. Efforts should henceforth be consolidated to further strengthen local, national and global capacities for preparedness and response to infectious disease threats. He recalled President Obama's call to countries during the 2011 United Nations General Assembly to strive together to prevent, detect and control biological threats before they turn into epidemics. In fact, the Global Health Security Agenda that was launched in 2014 is a blossoming partnership which, following this call brings together more than fifty countries, international and nongovernmental organizations.

In his address, the Director-General of WAHO recalled that despite the huge efforts of Member States, the ECOWAS region is regularly confronted with the threats and socioeconomic consequences of zoonoses-prone epidemics such as viral haemorrhagic fevers. To address this situation, existing frameworks such as IHR, the Performance of Veterinary Services and the Global Health Security Agenda should be adequately implemented. He noted that no systemic approach or structural framework put in place in the context of disease or epidemics control in ECOWAS would be successful without efficient facilitation and coordination mechanisms at both the national and regional levels. He solemnly called for the taking into account of the One Health approach, in a coherent and coordinated manner, in all future disease control strategies. As of essence, the One Health approach should be incorporated into the existing coordination frameworks in order to achieve coherent policies and strategies and joint response programmes.

In his remarks, Dr Karim Tounkara OIE representative, underlined that the meeting opens a new chapter in the One Health approach, in a world currently characterized by globalization and numerous challenges. These challenges are notably significant human population increase and the advent of a more demanding middle class in terms of their food and nutritional needs; unprecedented movement of persons and goods, together with that of pathogenic germs that are transported faster than the average incubation period of most epizootic diseases. To address these challenges and feed our planet safely, a new approach requires joint efforts across disciplines at the local, national and global levels in order to improve human health, animal health and the environment. The efforts should be made in a context of food security, food safety, antimicrobial resistance and response to the consequences of climate change.

Beth Crawford representing the Assistant Director-General of FAO, emphasized that the ministerial meeting marked a historic step in the implementation of the One Health approach in West Africa. She noted that the meeting will further strengthen the recommendations of

the technical meeting held during the last three days and shape a regional roadmap for intensifying One Health approach activities in West Africa. The meeting represents the highest level of country and partner commitment in the West African region in view of the institutionalization and implementation of the One Health approach. The time has therefore come to change paradigm, to shift from reactive responses to prevention, from local level to regional level, from single discipline to multidisciplinary and from limited scope to a more holistic approach. The success and sustainability of the One Health approach depends on collaboration among the health, agriculture and environment sectors at the global, regional, national and local levels. FAO will continue to encourage and support this lofty objective in collaboration with governments, regional and subregional institutions, international organizations and other development partners.

The WHO Regional Director for Africa Dr Matshidiso Rebecca Moeti, thanked the Government of Senegal for hosting the meeting, congratulated Member States and noted the imperative necessity to organize such a gathering in an interconnected world where disease could spread more easily and rapidly among species, in countries and across borders. The Ebola Virus epidemic and other zoonotic outbreaks that hit West Africa caused severe damages in a context of weak health systems and insufficient human resources. It is therefore necessary to build robust health systems and carry out coordinated multisectoral actions in order to prevent, detect and control diseases affecting animals and humans. The Regional Director commended the huge efforts deployed to implement the One Health approach at the national and subregional levels. She emphasized the need to use different evaluation tools to develop evidence and implement the required actions for strengthening surveillance, detection and response capacities. Political will and commitment, as well as proven leadership at the highest level, are necessary for making the One Health approach a development priority in all countries.

In his opening speech, the Prime Minister of Senegal, His Excellency Mr Mouhamed Boun Abdallah Dionne, first welcomed all delegations led by ministers and technical and financial partners. The Prime Minister stated that the One Health approach is currently a matter of course, considering the crises and epidemics that have hit Africa, in a context of intensified movement of persons and goods, accelerated spread of pathogens and the impacts of climate change on the environment. After recalling Senegal's experience in the implementation of the One Health approach, the Prime Minister thanked all partners for their multifaceted and constant support and invited all countries to collaborate sincerely at all levels – national, regional and international – in order to relieve the suffering of vulnerable populations.

3.2 Global health security and the One Health approach in West Africa

Dr Ibrahima-Socé Fall Regional Emergency Director at the WHO Regional Office for Africa, began his remarks by defining public health security as “putting in place and sustaining measures aimed at preserving and protecting the health of the population”, and recalling the socioeconomic impacts of the Ebola Virus Disease epidemic in West Africa. He revealed the context of the resurgence of epidemics in Africa (in 2015, close to 95% of notified health events were epidemics) and their significant socioeconomic impact: for instance, the last Ebola Virus Disease outbreak cost the affected countries more than one billion dollars. The Regional Emergency Director also emphasized the different factors that have contributed to the degradation of the health situation, notably rapid population growth which has in turn resulted in wanton urbanization, climate change and growing antimicrobial resistance. He recalled that more than 75% of human illnesses originated from animals, and that a multisectoral approach to preserve the health of populations was more than a necessity, which explains the One Health approach.

Dr Fall thereafter underscored the challenges in implementing this approach, in terms of multisectoral collaboration, sharing of information among all stakeholders, availability of a joint preparedness and response plan, mobilization of adequate resources, notably in the veterinary sector. He however noted that some tools in line with the One Health approach already existed, such as the IHR external

evaluation tool, the WHO Integrated Disease Surveillance and Response strategy, OIE Tool for the Evaluation of Performance of Veterinary Services and the Global Health Security Agenda. It is based on this existing context that the One Health approach regional framework was proposed in Africa. The framework relies on three main pillars, namely coordination and partnership, preparedness and response. Experts, during their three-day meeting refined and amended the framework.

He also referred to the tripartite concept note that was prepared and approved by FAO, OIE and WHO and presented at the International Ministerial Conference on Animal and Pandemic Influenza in April 2010 in Hanoi, Vietnam. The tripartite agreement calls for strong collaboration between WHO, FAO and OIE in sharing responsibilities, coordinating global actions and addressing health hazards at animal-human-ecosystems interface using the One Health approach. The April 2010 tripartite agreement identified antimicrobial resistance as a main issue.

Regarding International Health Regulations (2005), Dr Fall reaffirmed that countries tended to overestimate the level of implementation of IHR core capacities, as attested by events during the Ebola Virus Disease outbreak in West Africa. The sixty-ninth World Health Assembly that held in May 2016 proposed a monitoring and evaluation framework which marked a shift from exclusive self-evaluation, that turned out to be inadequate during the Ebola crisis, to a joint approach based on joint external evaluation. The joint evaluation tool comprises 19 areas of action and indicators covering prevention, detection, response and other IHR domains.

Concerning the Integrated Disease Surveillance and Response strategy, he noted that efficient surveillance and response systems would help reduce morbidity and mortality due to diseases and other public health events. The strategy encourages the rational use of resources by integrating joint surveillance and response activities at all levels of the health system. It takes into account the One Health approach.

Dr Fall also referred to the OIE Tool for the Evaluation of Performance of Veterinary Services, which is a global programme to enable the veterinary services of countries comply better with OIE standards relating to quality of veterinary services. OIE international standards and general principles constitute the basis for independent evaluation of the quality of veterinary services and animal health systems by countries; they were adopted by all OIE Members Countries. He provided a visual representation of the OIE strategy concerning the utilization of standards relating to the quality of veterinary services and general principles on veterinary legislation.

Dr Fall recalled the vision of the Global Health Security Agenda: that of a world safe and secure from infectious disease threats. The One Health approach supports implementation of the Agenda by strengthening multisectoral coordination and the capacities of countries to better prevent, detect and respond to infectious disease threats.

Lastly, Dr Fall underscored the ECOWAS One Health approach regional framework which aims to foster a common vision and adopt the One Health approach in West Africa in order to strengthen prevention, detection and response to infectious diseases, including zoonoses and antimicrobial resistance.

In summary, the Regional Emergency Director stated that to reduce the burden of zoonotic diseases and ensure that they no longer constitute a public health concern in Member States of the WHO African Region, there is need to foster intersectoral collaboration at the local and regional levels through the One Health approach. Multipartnership agreements would facilitate implementation of the approach at regional, subregional and national levels. Furthermore, a formal collaboration and regular communication mechanism should be put in place. Harmonization of existing policies is critical to the implementation of the One Health approach, with particular emphasis on the commitment of national authorities to improve health security.

3.3 Validation of summary report of the technical meeting

Dr Cissé Diarra Côte d'Ivoire Director of Veterinary Services, presented to ministers in attendance and their delegations the summary report of the experts' meeting that led to the formulation of a plan for implementing the One Health approach in each country and called upon the commitment of their higher authorities to support this approach and the proposed regional framework. The summary report was read and adopted before the opening ceremony that was presided over by the Prime Minister of Senegal

CLOSING CEREMONY

At the closing ceremony, the different ministers were invited to comment the summary report of the experts' meeting. The ministers or their representatives in turn thanked the Senegalese authorities for the hearty welcome accorded them and congratulated the experts for the quality of the work accomplished. All speakers recognized the relevance of the One Health approach and expressed their support to the approach. The official representatives insisted particularly on the principle of multisectoral collaboration and sound coordination. However, they noted that some aspects deserve greater attention, notably equity in allocating resources to all relevant sectors, involving the populations in the process, mobilizing local resources and enhancing research.

Proceedings at the end the meeting were conducted by the Senegalese Minister of Livestock. The Nigerian Director of Surveillance took the floor to read the final communiqué for approval by ministers. The delegations of Nigeria and Senegal provided inputs to the document that was adopted by acclamation.

The day ended with the closing ceremony presided over by the Senegalese Minister of Health and Social Action. She congratulated and thanked all experts for the quality of their work which has resulted in a document approved by all delegations. She thanked all guests, expressed her gratitude to partners for their constant support and called on all stakeholders to share experiences and information in order to make the One Health approach a success. After underlining the need to monitor implementation of the One Health approach, the Minister, on behalf of all participants, thanked the Prime Minister and the President of Senegal for their commitment and support. She thereafter wished participants safe return to their respective countries and declared closed the One Health approach ministerial meeting.

RECOMMENDATIONS

The following recommendations were formulated at the end of the meeting :

To Member States:

- Demonstrate commitment to and ownership of the One Health approach through State budgetary allocation for the One Health approach and planned activities;
- Implement lasting procedures at the national level by placing multisectoral coordination authorities in the context of One Health approach;
- Foster multisectoral approach with effective involvement of the private sector, civil society, faith groups, defence and security forces, technical and financial partners and academia;
- Expand FELTP (Field Epidemiology and Laboratory Training Programme) systematically to animal health and environment sector workers and put in place a coordinated capacity building programme;
- Put in place integrated surveillance systems taking into account both human health and animal health (domestic animals and wildlife);
- Establish a binding mechanism for infrastructure and equipment maintenance, in order to ensure the continuous functioning of public health and animal health laboratories;
- Establish platforms using information and communication technology (web-based surveillance), focusing on community-based surveillance, in order to strengthen information systems within and across the human health and animal health sectors;
- Implement the One Health approach at all levels, particularly at the community level, with emphasis on capacity building of technical personnel and community workers; and
- Institute mechanisms between the agriculture, public health and animal health sectors with a view to carrying out joint risk assessments, planning and monitoring antimicrobial resistance regularly and taking remedial measures.

To partners :

- Support countries in the subregion in carrying out IHR joint external evaluations and Evaluation of the Performance of Veterinary Services;
- Provide countries material and financial support in order to strengthen national laboratory networks and collaboration between national and regional laboratories, and to create a subregional biobanks network;
- Advocate before the governments of West African countries for mobilization of more domestic resources for health security, by virtue of their commitment to sustain the One Health approach.





ANNEXES



ANNEXE

1. COMMUNIQUÉ

One Health Ministerial Meeting to Address Zoonotic Diseases and Related Public Health Threats
Dakar, Senegal, 11 November 2016

We, the Ministers responsible for human health, animal health, agriculture, wildlife, wild flora and the environment in West African countries, meeting on 11 November 2016 in Dakar, Senegal,

Noting with concern that over 75% of the new diseases that have affected humans over the past decade have originated from animals or animal products, many of them with a potential to spread widely and to become global health security risks with major negative socio-economic consequences;

Concerned about the recent unprecedented Ebola Virus Disease outbreak in West Africa which infected over 28 000 people including more than 11 000 deaths and devastated national economies with losses in gross domestic product estimated at US\$ 219 million in Sierra Leone, US\$ 188 million in Liberia and US\$ 184 million in Guinea;

Aware of the current outbreak of Highly Pathogenic Avian Influenza (HPAI) H5N1 which has been steadily spreading across a number of West African countries in the past two years, devastated poultry farms and is threatening human health and food security;

Concerned about the ongoing and recurrent outbreak of Rift Valley fever and Lassa fever in West Africa, with a potential to spread across neighbouring countries;

Concerned that none of the countries in West Africa has achieved the International Health Regulations (2005) minimum core capacities or the critical competencies for Evaluation of the Performance of Veterinary Services (PVS) as of June 2016;

Particularly concerned that no West African country has achieved the required core capacities for prevention, detection and response to emerging infectious disease threats, zoonoses and antimicrobial resistance;

Convinced that climate change, the loss of biodiversity and degradation of ecosystems exacerbate the risk of emergence and spread of infectious diseases in animals, plants and human beings;

Recognizing that crossborder flows of domestic and wild animals constitute a potential health risk;

Aware that health risks at the human-animal-ecosystem interface constitute a major health security concern that has led to recommendations that countries strengthen different collaboration mechanisms among various sectors and partners as well as with global institutions as stipulated in the tripartite partnership of the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the World Organization for Animal Health (OIE);

Recalling Resolution A/RES/70/1 of the General Assembly of the United Nations that adopted the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) and targets;

Further recalling Agenda 2063 adopted by the Heads of State and Government of the African Union at their 24th Ordinary Assembly held in Addis Ababa, Ethiopia, from 30 to 31 January 2015 for a regional strategy to optimize the use of Africa's resources for the benefit of all Africans;

Recalling the first Inter-ministerial Conference on Health and Environment in Africa held in Libreville, Gabon, in 2008 that culminated in the adoption of the Libreville Declaration to promote an integrated approach to policy-making in the health and environment sectors;

Aware of the critical roles and responsibilities of the Economic Community of West African States (ECOWAS), neighbouring countries, the West Africa Health Organization (WAHO) and the Regional Animal Health Centre (RAHC) in supporting the implementation of the above frameworks through enhancing multisectoral coordination and in-country capacity for prevention, detection and response to epidemics in West Africa;

Noting the urgent need for the operationalization of the ECOWAS Regional Centre for Disease Surveillance and Control (RCDS) in line with the decision of the ECOWAS Heads of State and Government at the 47th and 48th ordinary sessions held in Accra in May 2015 and Abuja in December 2015, respectively, and the need to cooperate with neighbouring countries;

Commending the strong national leadership of ECOWAS countries for establishing functional partner coordination mechanisms which significantly contributed to the successful implementation of harmonized public health interventions to control the recent Ebola Virus Disease (EVD) epidemic;

Greatly recognizing and appreciating the commitment, mandate and roles of the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the World Organization for Animal Health (OIE), the Commission of the Economic Community of West African States (ECOWAS), the West Africa Health Organization (WAHO), the Regional Animal Health Centre (RAHC), the African Union Inter-African Bureau for Animal Resources (AU-IBAR) and several partners, including: the United States Agency for International Development (USAID), the United States Centers for Disease Control and Prevention (CDC), the World Bank (WB) and the African Development Bank (ADB) in advocacy, technical guidance and resource mobilization to implement the One Health approach in West Africa,

1. COMMIT OUR GOVERNMENTS TO :

1. Put in place robust national mechanisms for intersectoral coordination and partnerships to facilitate the implementation of the current global and regional initiatives, better harmonization and better sharing of information between animal, human and environmental health sectors in accordance with the One Health approach;
2. Support the institutionalization and ownership of the One Health approach at all levels through State budgetary allocation for One health approach activities;
- 3) Strengthen crossborder collaboration and information sharing among countries;
- 4) Adopt and/or implement a One Health regional framework and other initiatives for improving health security;

- 5) Contribute to subregional hazards and risk assessment and identification of common priority diseases and their drivers in both human and animal health sectors by conducting national risk assessments;
- 6) Enhance collaboration between projection, early warning and surveillance networks for human health, animal health and food safety, and environmental monitoring;
- 7) Enhance national and subregional early warning mechanisms for common priority outbreak-prone diseases in human, animal and environmental health sectors;
- 8) Use coordination mechanisms to routinely share surveillance data among the various sectors, countries, partners and international bodies, if need be, and promote the use of electronic platforms;
- 9) Take advantage of the opportunities offered by the Global Health Security Agenda and other relevant initiatives to build and sustain national core capacities for the implementation of the WHO International Health Regulations (2005), the OIE Evaluation of Performance of Veterinary Services (PVS) standards and integrate them into the environmental monitoring systems;
- 10) Support the collaboration and networking of animal and human health laboratories at national, subregional and regional levels to improve prediction, timely and accurate confirmation and further characterization of emerging pathogens and antimicrobial resistance surveillance;
- 11) Support the activities of the ECOWAS Regional Centre for Disease Surveillance and Control (RCDS) the ECOWAS Regional Animal Health Centre (RAHC) and Codex Alimentarius national committees in building the capacity of West African countries in prevention, detection and response to public health events, irrespective of origin and in improving knowledge on the human-animal-environment interface through conducting operational research for evidence-based decision making;
- 12) Urgently conduct and/or update joint external evaluation of IHR 2005 core capacities, PVS critical competencies, as well as joint preparedness and response planning at the national, sub-regional and regional levels through the whole of society approach;
- 13) Ensure better integration of the One Health approach in national and regional multisectoral plans for environmental protection, resilience and food security and in the implementation plans for relevant multilateral agreements;
- 14) Ensure monitoring of planned milestones to achieve the One Health approach through a robust coordination mechanism with clear roles and responsibilities of relevant stakeholders;
- 15) Present status reports on the implementation of the strategic regional framework and the recommendations the One Health approach technical meeting during committee meetings, ministerial meetings and summits;
- 16) Help build rapid response capacity in West Africa in order to address events that may constitute public health emergencies of international concern.

2. CALL UPON OUR SUBREGIONAL AND REGIONAL INSTITUTIONS, OUR PARTNERS (WHO, OIE, FAO, AU Commission and affiliated institutions, UNEP, WMO, USAID, CDC, World Bank, ADB and other new partners) TO :

- 1) Jointly advocate and conduct mobilization of domestic and external resources for the implementation of the One Health regional strategic framework;
- 2) Provide technical support to Member States in implementing the One Health regional strategic framework;
- 3) Jointly mobilize resources for the operationalization of the ECOWAS Regional Centre for Disease Surveillance and Control (RCDSC) and Regional Animal Health Centre (RAHC).

ANNEXE

2. AGENDA OF THE TWO MEETINGS

Technical and Ministerial Meetings on the One Health approach to Address Zoonoses and Related Public Health Threats
8 – 11 November 2016
Dakar, Senegal

PROVISIONAL AGENDA – TECHNICAL MEETING

8 NOVEMBER 2016

Time	Day 1 – Technical Meeting	Responsible
Registration and opening		
8:00 – 9:00	Registration of participants	WHO
9:00 – 10:20	Opening ceremony: <ul style="list-style-type: none">• Representative of ECOWAS• Representative of OIE• Representative of FAO in Senegal• Representative of WHO in Senegal• Minister of Health of Senegal	All organizations
10:20 – 10:30	Group photograph	WHO
10:30 – 11:00	Coffee break	
11:00 – 11:15	Administrative and security issues, election of Chairperson and rapporteurs	WHO
11:15 – 11:30	Overview of meeting objectives, expected outcomes and working method	WHO
Objective 1. <i>Sensitize partners on the technical and operational aspects of the One Health approach, including progress made as of date, challenges and lessons learned in the African Region, particularly in the West African subregion.</i>		
11:30 – 11:50	Overview of the Global Health Security Agenda (GHSA)	CDC/Senegal
11:50 – 12:10	Overview of the WHO-FAO-OIE Tripartite Agreement on the One Health approach	FAO
12:10 – 12:30	Way forward on the implementation of the One Health approach in ECOWAS	WAHO
12:30 – 13:00	Overview of human health and animal health security in West Africa	WHO

13:00 – 14:30	Lunch break	
14:30 – 16:00	Strengthening institutional frameworks for implementation of the One Health approach – experiences till date <ul style="list-style-type: none"> • Introduction by FAO • Senegal – Experience of the newly created intersectoral working group on the Global Health Security Agenda • Cameroon – Lessons learned from the putting in place of the One Health approach national platform • Nigeria – H5N1 response within the One Health approach framework • Panel discussion 	Representatives of countries Facilitator: FAO
16:00 – 16:15	Coffee break	
16:15 – 17:30	Infectious diseases surveillance in the One Health approach context <ul style="list-style-type: none"> • Gabon — Crossborder surveillance of Ebola Virus Disease at the border with the Republic of Congo • Burkina Faso – Surveillance of rabies within the framework of One Health approach • Ghana — Implementation and use of the One Health approach for surveillance of antimicrobial resistance • Plenary session and discussions 	CIRMF/Gabon Burkina Faso Ghana
17:30 – 18:00	End of Day 1	Chairperson

Time	Day 2 – Technical meeting	Responsible
<p>Objective 1. Sensitize partners on the technical and operational aspects of the One Health approach, including progress made as of date, challenges and lessons learned in the African Region, particularly in the West African subregion</p> <p>Objective 2. Formulate national strategies for institutionalization of the One Health approach, in line with International Health Regulations (IHR), Evaluation of the Performance of Veterinary Services (PVS) and related frameworks</p> <p>Objective 3. Design a regional programme for institutionalization of the One Health approach with focus on partner commitment towards a harmonized support</p>		
8:30 — 9:00	Summary of Day 1	Chairperson
9:00 — 9h20	Guinea, Liberia and Sierra Leone — Surveillance of the natural reservoir of Ebola virus	PREDICT-2
9:20 – 9:50	<p>Network of human and animal health regional laboratories:</p> <ul style="list-style-type: none"> • Network of ECOWAS reference laboratories • RESOLAB <p>Discussion on intersectoral links</p>	WAHO ECOWAS/RAHC
9:50 – 10:30	<p>Global support and resources/tools available for the One Health approach and the global health security; discussion</p> <p>Participants : WHO, OIE, FAO, CDC, AU-IBAR, World Bank</p>	Chaired by OIE
10:30-11:00	Coffee break	
11:00 – 12:00	<p>Four thematic sessions in core groups :</p> <ul style="list-style-type: none"> • Policy, coordination and partnerships in the One Health approach context • Preparedness and response in the One Health approach context • Surveillance in the One Health approach context • Operational aspects: human resources, funding and infrastructure 	OMS
12:00 — 13:00	Presentation of working group reports Panel discussion	Chairperson
13:00 – 14:30	Lunch break	
14:30 – 15:15	<ul style="list-style-type: none"> • Presentation and discussion of the draft regional framework for implementation of the One Health approach 	WAHO
15:15 – 16:30	<p>Country specific sessions</p> <ul style="list-style-type: none"> • Preparation of country action plans for implementation of the One Health approach 	
16:30 – 17:00	Coffee break	
17:00 – 18:00	<p>Country specific sessions (continued)</p> <ul style="list-style-type: none"> • Preparation of country action plans for implementation of the One Health approach 	

10 NOVEMBER 2016

Time	Day 3 – Technical meeting	Responsible
Objective 2. <i>Formulate national strategies for institutionalization of the One Health approach, in line with International Health Regulations (IHR), Evaluation of the Performance of Veterinary Services (PVS) and related frameworks</i> Objective 3. <i>Design a regional programme for institutionalization of the One Health approach with focus on partner commitment towards a harmonized support</i>		
8:30 – 9:00	Summary of Day 2	Chairperson
9:00 – 9:30	Presentation of the consolidated and updated draft regional framework for implementation of the One Health approach	WAHO
9:30 – 10:30	Presentation of country working group reports on the preparation of country action plans	
10:30 – 11:00	Coffee break	
11:00 – 12:00	Preparation of the Ministerial Meeting Discussion of the draft communiqué of the Ministerial Meeting	WHO
12:00 – 13:00	Discussion and validation of technical meeting draft summary report	WHO
13:00 – 13:30	Closing session	
13:30 – 15:00	Lunch break	

PROVISIONAL AGENDA – MINISTERIAL MEETING

11 NOVEMBER 2016

Time	Day 4 – Ministerial meeting	Responsible
Objective 4. <i>Build strong political commitment of ministers for implementation of the One Health approach in their different countries</i>		
8:00 – 8:30	Arrival and registration of participants	WHO
8:30 – 9:00	Welcome of official delegations	WHO Representative in Senegal
9:00-9:15	Group photograph	
9:15– 10:00	Opening ceremony <ul style="list-style-type: none"> • United States Ambassador to Senegal, 3 minutes • ECOWAS Commission, 3 minutes • OIE Regional Representative for Africa, 3 minutes • Representative of the FAO Regional Office for Africa, 3 minutes • WHO Regional Director for Africa, 3 minutes • Prime Minister of Senegal 	Chair: the Prime Minister of Senegal
10:00 – 10:30	Pause café	
10:30 – 11:00	Global health security and the One Health approach in West Africa: Dr Ibrahima-Socé Fall, Regional Emergency Director, WHO African Region	Chair: the Minister of Health
11:00 – 11:30	Presentation of technical meeting summary report: the Chairperson of the technical meeting	
11:30 – 12:30	Ministers' comments	
12:30 – 14:30	Lunch break	
14:30 – 15:00	Overview of the communiqué of the Technical and Ministerial Meetings on the One Health approach to Address Zoonoses and Related Public Health Threats: Chairperson of the technical meeting	Chair: the Minister of Livestock
15:00 – 16:00	Ministers' comments	
16:00-16:30	Coffee break	
16:00-16:30	Finalization of the Communiqué: rapporteurs	
16:30 – 16:45	Final communiqué of the Technical and Ministerial Meetings on the One Health approach to Address Zoonoses and Related Public Health Threats: Chairperson of the technical meeting	Chair: the Minister of the Environment or the Minister of Agriculture
16:45 – 17:15	Closing ceremony	Minister of Health



ANNEXE

3. LISTE DES PARTICIPANTS

No.	Country	Organization	Name	Function
1	Benin	Ministry of Agriculture, Livestock and Fisheries	Maxime Paterne Lokohounde	Deputy Secretary General
2	Benin	Ministry of Agriculture, Livestock and Fisheries	Dr Akpo Yao	Director of Livestock
3	Benin	Ministry of Health	Dr Hoteyi Semassa Mohamed Ismaël	Technical Adviser for Health Promotion
4	Benin	Ministry of Health	Mr Kamadozo Hervé	Deputy Secretary General
5	Benin	Ministry of Health	Dr Alassane Seidou	Minister of Health
6	Benin	Ministry of Agriculture, Livestock and Fisheries	Koudande O. Delphin	Minister of Agriculture, Livestock and Fisheries
7	Burkina Faso	Ministry of Health	Dr Konfe Salifou	Director General of Health
8	Burkina Faso	Ministry of Animal and Fishery Resources	Dr Tapsoba Mamounata	Head of Epidemiology Service
9	Burkina Faso	Ministry of the Environment	Mr Namoano Y. Georges	Director to the Arly national park
10	Burkina Faso	Ministry of Animal and Fishery Resources	Dr Savadogo Joseph	Director General of Veterinary Services
11	Burkina Faso	Ministry of the Environment, Green Economy and Climate Change	Mr Benoit Doamba	Director of Wildlife and Game Resources
12	Burkina Faso	Ministry of Health	Dr Ouedraogo Smaïla	Minister of Health
13	Burkina Faso	Ministry of Animal and Fishery Resources	Mr Koutou Sommanogo	Minister of Animal and Fishery Resources
14	Burkina Faso	Ministry of Animal and Fishery Resources	Mr Paul Djiguemde	Director of Forestry, representing the Minister of the Environment, Green Economy and Climate Change
15	Cameroon	Ministry of Public Health	Dr Seukap Pena Elise Claudine	Subdirector of Epidemics and Pandemics Control
16	Cameroon	Ministry of Wildlife and Forestry	Mr Ndenga Mikeng Edmond	One Health focal point
17	Cameroon	Ministry of Livestock, Fisheries and Animal Industries	Dr Djonwe Gaston	Director of Veterinary Services
18	Cabo Verde	Ministry of Agriculture and the Environment	Dr Afonso Semedo	Director of Livestock
19	Cabo Verde	Ministry of Agriculture and the Environment	Dr José Luis De Barros	Responsible for the surveillance of zoonotic diseases

No.	Country	Organization	Name	Function
20	Cabo Verde	Ministry of Health and Social Security	Mr Claudia Duarte Silva Gomes	Santa Cruz Health Delegate
21	Cabo Verde	Ministry of Health and Social Security	Dr Elisio Humberto Silva	São Vicente Island Health Delegate
22	Cabo Verde	Ministry of Health and Social Security	Dr Tomás Valdez	Présidente
23	Cabo Verde	Ministry of Health and Social Security	Dr Arlindo do Rosario	Minister of Health and Social Security
24	Cabo Verde	DG/PS/Wildlife	Dr Fatima Lima	Director of Cabinet of the Minister of Health and Social Security
25	Cabo Verde	DG/PS/Wildlife	Dr Tomas Valdez	Chairman of the Board of Directors of the Ministry of Health and Social Security
26	Côte d'Ivoire	Ministry of Health	Dr Raymonde Goudou Coffie	Minister of Health
27	Côte d'Ivoire	Ministry Human Health	Dr Coulibaly Daouda	Head of Epidemiological Surveillance Service
28	Côte d'Ivoire	Ministry of Animal and Fishery Resources	Dr Cissé Diarra épouse Aman	Director of Veterinary Services
29	Côte d'Ivoire	Ministry of Animal and Fishery Resources	Mr Oulai Jonas	Subdirector of Animal Health
30	Côte d'Ivoire	Ministry of Forestry	Mr Soro Yamani	Director General of Forestry
31	Côte d'Ivoire	Ministry of Water Resources and Forestry	Ms Koné Salimata	Director of Wildlife and Game Resources
32	Côte d'Ivoire	Ministry of Health	Professor Dagnan N'cho Simplicie	Director General of Health
33	Côte d'Ivoire	Ministry of Animal and Fishery Resources	Mr Kobenan Kouassi Adjoumani	Minister of Animal and Fishery Resources
34	Côte d'Ivoire	Ministry of Animal and Fishery Resources	Mr Louis-André Dacoury-Tabley	Minister of Forestry
35	Gabon	CIRMF	Dr Maganga Gael Darren	Researcher responsible for the Veterinary diagnosis platform
36	Gambia	Ministry of Health and Social Welfare	Ms Saffie Lowe Ceesay	Permanent Secretary
37	Gambia	Ministry of Health and Social Welfare	Mr Sana Malang Sambou	Programme Coordinator, Epidemiologist & Disease control Unit
38	Gambia	Ministry of Health and Social Welfare	Dr Duto Sainy Fofana	Director General, Department of Live-stock Services
39	Gambia	Ministry of Agriculture	Dr Ousman Ceesay	Principal Veterinary Officer
40	Gambia	Ministry of Environment, Climate Change and Natural Ressources	Mr Lamin F. Jawara	Deputy Permanent Secretary
41	Gambia	Ministry of Environment, Climate Change and Natural Ressources	Ms Binta Sambou	Senior wildlife conservation officer
42	Gambia	Minister of Health	Hon Omar Sey	Minister of Health and Social Welfare
43	Gambia	Ministry of Agriculture	Hon Ismaila Sanyang	Minister of Agriculture
44	Gambia	Ministry of Environment Climate Change and Natural Ressources	Hon Pa Ousman Jarju	Minister of Environment, Climate and Natural Ressources
45	Ghana	Ministry of Health	Dr Badu Sarkodie	Director Public Health Division
46	Ghana	Ministry of Health	Dr Emmanuel Ankrh Odame	Ag Director of Policy Planning Monitoring and Evaluation

No.	Country	Organization	Name	Function
47	Ghana	Forestry Commission	Mr David Guba Kpelle	Director of Wildlife
48	Ghana	DG/PS/Animal Health	Dr Aryee Kingsley Mickey	Deputy Chief Veterinary Officer
49	Ghana	Ministry of Food and Agriculture	Dr Boi Kikimoto Bashiru Bawise	Deputy Director and Head of Public Health
50	Guinea	Ministry of Health	Dr Pépé Bilivogui	Directeur national hygiène publique
51	Guinea	Ministry of Health	Dr Sakoba Keita	Directeur général de l'agence nationale de la sécurité sanitaire
52	Guinea	Ministry of the Environment, Water resources and Forestry	Mr Mamadou Dia	Head of Division of Wildlife and Nature Protection
53	Guinea	Ministry of Health	Dr Conde Mamadou	PASSP monitoring and evaluation specialist
54	Guinea	Ministry of Livestock and Animal Productions	Dr Seny Mane	Director of National Veterinary Services
55	Guinea	Ministry of Health	Dr Abdourahmane Diallo	Minister of Health
56	Guinea	Ministry/Animal health	Dr Souleymane Camara	Representative of the Minister of the Environment, Water Resources and Forestry
57	Guinea	Minister/Wildlife	Mr Mohamed Tall	Minister of Livestock and Animal Productions
58	Guinea-Bissau	Ministry of Agriculture and Rural Development	Dr Bernardo Cassama	Director General of Livestock
59	Guinea-Bissau	Ministry of Animal health	Dr Mario Marciano Gomes	Veterinary officer, epidemiologist
60	Guinea-Bissau	Ministry of Agriculture and Rural Development	Dr Fai Djedjo	Director of Wild Fauna
61	Guinea-Bissau	Ministry of Agriculture and Rural Development	Mr Hipolito Djata	Director General of Forestry and Wildlife
62	Guinea-Bissau	Ministry of Health	Dr Antonio Guilherme Sila	Secretary General of Ministry of Health
63	Guinea-Bissau	Ministry of Health	Dr Maria Inacia	Secretary of State at the Ministry of Health
64	Guinea-Bissau		Eng Mario Lopes Martins	Secretary of state for Food Security
65	Guinea-Bissau		Dr Placido Monteiro Cardoso	President of the National Institute of Public Health, Ministry of Health
66	Liberia	Surveillance Officer/Wildlife	Hon Seklau E. Wiles	Deputy Minister for Administration, Ministry of Agriculture
67	Liberia	Ministry of Agriculture	Mr Joseph R. N. Anderson	Director of Animal Health Services
68	Liberia	Ministry of Forestry Development	Mr Darlington Tuagben	Deputy Managing Director for Operations Forestry Development Authority
69	Liberia	Surveillance Officer/Animal health	Armandu K. Daniels	Manager, Ministry of Forestry Development
70	Liberia	DG/PS/MoH	Mr Thomas Nagbe	Acting Deputy Minister Team lead
71	Liberia	Ministry of Health	Dr Samson K. Arzoaquoi	Assistant Minister of Health in charge of Prevention Services
72	Liberia	DG/PS/Wildlife	Grimes Trokon	Forestry Development Authority
73	Liberia	Surveillance Officer/MoH	Mr Sonpon Blamo Sieh	One Health Focal Point

No.	Country	Organization	Name	Function
74	Mali	Surveillance Officer/ MoH	Dr Aboul Karim Sidibe	Head of Division of Disease Prevention and Control
75	Mali	Ministry of Health	Dr Adama Daou	Head of Division of Training at the Operational Emergencies Centre
76	Mali	Ministry of Health	Dr Fanta Niare Dembele	
77	Mali	DG/PS/Animal Health	Dr Dramane Dao	Ministry of Livestock and Fisheries
78	Mali	Ministry of Agriculture	Mr Hamidou Coulibaly	Legislation and Standardization Officer
79	Mauritania	Ministry of Health	Professor Lô Baidy	Inspector General of Health, representing the Minister of Public Health
80	Mauritania	Surveillance Officer/ Animal Health	M. Mohamed Sidi	
81	Mauritania	Ministry of Livestock	Dr Fall Mokhtar	Secretary General, representing the Minister of Livestock
82	Mauritania	Ministry of Livestock	Dr Boubacar Babah	Head of Service of Hygiene and Food Security
83	Mauritania	Ministry of the Environment and Sustainable Development	Dr Sidi Ould Alouimine	Director of Prevention of Pollution and Environmental Emergencies
84	Niger	Ministry of Public Health	Dr Djibo Garba	Director of Studies and Programming
85	Niger	Ministry of Public Health	Dr Kadamé Goumbi	Director of Disease Surveillance and Response
86	Niger	Ministry of Public Health	Dr Idi Illiassou Maïnassara	Minister of Health
87	Nigeria	Ministry of Health	Ms Olubunmi Ojo	Director of Disease Surveillance
88	Nigeria	Surveillance Officer/ Animal health	Dr Gidado M. Muhammed	Chief Veterinary Officer/EPI
89	Nigeria	Ministry of Health	Dr Evelyn Ngige	Director
90	Nigeria	Surveillance Officer/ Wildlife	Dr Columba Teru Vakuru	Deputy Director Epidemiology and wildlife
91	Nigeria	DG/PS/MoH	Ms Olufunmilayo Adetoro-Sanni Adeniyi	
92	Nigeria	Minister of Health	Professor Isaac Adewole	
93	Senegal	Prime Minister's Office	Dr Adjaratou Ndiaye	Technical Adviser for Health
94	Senegal	Ministry of Agriculture and Rural Equipment	Dr Dogo Seck	Secretary General, representing the Minister
95	Senegal	Ministry of Health		Surveillance Officer/MoH
96	Senegal	Ministry of Health	Mr Ibrahima Wone	Secretary General
97	Senegal	Ministry of Health	Dr Papa Amadou Diack	Director General of Health
98	Senegal	Ministry of Health	El Hadji Mamadou Ndiaye	Director of Prevention
99	Senegal	Ministry of Health and Social Action	Mr Abdoulaye Bousso	Coordinator of the Operations Centre of the Health Emergencies Centre
100	Senegal	Ministry of Livestock and Animal Productions	Ms Aminata Mbengue Ndiaye	Minister of Livestock and Animal Productions
101	Senegal	Surveillance Officer/ Animal Health	Dr Mamadou Ousseynou Sakho	Secretary General, Ministry of Livestock and Animal Productions
102	Senegal	Surveillance Officer/ Animal health	Dr Ismaila Seck	Secretary General, Ministry of Livestock and Animal Productions

No.	Country	Organization	Name	Function
103	Senegal	Minister/Wildlife	Mr Abdoulaye Balde	Minister of the Environment and Sustainable Development
104	Senegal	Ministry of the Environment and Sustainable Development	Ms Ramatoulaye Dieng Ndiaye	Secretary General
105	Senegal	Ministry of the Environment and Sustainable Development	Dr Babacar Ngor Youm	Disease surveillance and response official
106	Senegal	Ministry of the Environment and Sustainable Development	Dr Ousseynou Kasse	Director of the National Biosafety Agency
107	Senegal	Ministry of Agriculture and Rural Equipment		Minister
108	Senegal	Prime Minister's Office	Dr Papa Serigne Seck	Technical Adviser for Animal Health
109	Senegal	Ministry of Agriculture and Rural Equipment	Dr Modou Moustapha Lo	Coordinator of animal Health Programme
110	Senegal	Ministry of Fisheries and Maritime Economy	Dr Mamadou Abibou Diagne	One Health focal point
111	Senegal	Ministry of Armed Forces		One Health focal point
112	Senegal	Ministry of the Interior and Public Security		One Health focal point
113	Senegal	Ministry of Foreign Affairs and Senegalese Abroad		One Health focal point
114	Senegal	Ministry of Fisheries and Maritime Economy	Mr Omar Gueye	Minister
115	Senegal	Ministry of Armed Forces	Mr Augustin Tine	Minister
116	Senegal	Ministry of the Interior and Public Security	Mr Abdoulaye Doua-da Diallo	Minister
117	Senegal	Ministry of Foreign Affairs and Senegalese Abroad	Mr Mankeur Ndiaye	Minister
118	Senegal	Ministry of the Interior and Public Security	Dr Cisse Djibril	Physician at the Ministry of Interior
119	Senegal	Ministry of Health and Social Action	Diop Gaye Marie	Communication officer
120	Senegal	Ministry of Health and Social Action	Diouf Niang Aïssatou	Communication officer
121	Senegal	Ministry of Health and Social Action	Professor Cissoko Beye Daya	Technical Adviser
122	Senegal	Veterinary Officers without International Borders	Dr Ba Salif	Responsible productions animales
123	Senegal	Ministry of Livestock and Animal Production	Professor Faye Coumba	Director of Veterinary services
124	Senegal	Ministry of Health and Social Action	Professor Seck Ibrahima	Technical Adviser No.1
125	Senegal	HDS-Africa	Dr Dione Demba Anta	Consultant

No.	Country	Organization	Name	Function
126	Senegal	Ministry of Health and Social Action	Faye Dieynaba	Consultant
127	Senegal	Ministry of Health and Social Action	Dr Ba Siakhate Seynabou	
128	Senegal	Ministry of Health and Social Action	Dr Sadiya Aïdara	Director of Prevention
129	Sierra Leone	Ministry of Health and Sanitation	Hon Zuliatu Cooper	Deputy Minister of Health and Sanitation
130	Sierra Leone	Ministry of Health and Sanitation	Dr Sarian Kamara	Deputy Chief Medical Officer
131	Sierra Leone	Ministry of Agriculture Forestry and Food Security	Hon Lovell Thomas	Deputy Minister II
132	Sierra Leone	Ministry of Agriculture Forestry and Food Security	Mr Sorie Mohamed Kamara	Director, Livestock and Veterinary Services
133	Sierra Leone	Ministry of Health and Sanitation	Dr Alie Wurie	Focal point, ECOWAS Regional Rapid Response Team
134	Sierra Leone	Ministry of Animal health	Dr Amadu Tejan Jalloh	Ag. Deputy Director, Animal Health
135	Sierra Leone	Ministry of Agriculture Forestry and Food Security	Mr Julius Ngegba Sama	Assistant conservator of Forestry and wildlife
136	Sierra Leone	Ministry of Agriculture Forestry and Food Security	Mr William Bangura	Director of Forestry in MAFES
137	Sierra Leone	Ministry of Health and Sanitation	Mr Wogba Kamama	Monitoring and Evaluation Specialist
138	Togo	Surveillance Officer/ MoH	Professor Napo-Koua Gado Agarassi	Secretary General, Ministry of Health
139	Togo	Ministry of Health	Dr Tamekloe Tsidi Agbéko	Head of Division, Integrated Disease Surveillance, Health Emergencies and Response
140	Togo	Ministry of Agriculture, Livestock and Water Resources	Col Agadazi Ouro-Koura	Minister of Agriculture, Livestock and Water Resources
141	Togo	Minister of Agriculture, Livestock and Water Resources	Dr Batawui Komla Batassé	Veterinary Officer, Director of Livestock at the Ministry of Agriculture and Livestock
142	Togo	Minister of Agriculture, Livestock and Water Resources	Ms Go-Maró Kossiwa Wolali	Head of Laboratories Section
143	Togo	Ministry of the Environment and Forest Resources	Mr Johnson Kouassi Ablom André	Minister of the Environment and Forest Resources
144	Togo	Ministry of the Environment and Forest Resources	Mr Sama Boundjouw	Secretary General of the Ministry of the Environment and Forest Resources
145	Togo	Ministry of the Environment and Forest Resources	Mr Meba Toï Pagnibam	Head of Environment Division
146	Italy	FAO	Subhash Morzaria	Global coordinator
147	Italy	FAO	Ahmed EL-Idrissi	Senior Animal Health Officer
148	Ghana	FAO	Berhanu Bedane	Animal production & health officer
149	Switzerland	FAO	Mirela Hasibra	

No.	Country	Organization	Name	Function
150	Switzerland	FAO	Mr Samuel Nyarko	
151	Senegal	FAO	Yousouf Kabore	Team Leader FAO ECTAD
152	Senegal	FAO	Sock Fatou	Expert food safety
153	Ghana	FAO	Charles Bebay	FAO ECTAD Regional Coordinator
154	Liberia	FAO	Garba Maina Ahmed	Country Team Leader
155	Mali	OIE	Dr Karim Tounkara	Africa Regional Representative
156	France	OIE	Dr Julie R. Sinclair	Chargée de Mission
157		ECOWAS Commission	Mr Marcel Alain de Souza	President of the Commission of the Economic Community of West African States
158	Burkina Faso	WAHO	Dr Xavier Crespin	Director General
159	Burkina Faso	WAHO	Sani Ali	Planning specialist
160	Burkina Faso	WAHO	Dr Carlos Brito	Director of Disease and Epidemics Control
161	Burkina Faso	WAHO	Dr Ranaou Abache	Technical adviser
162		WAHO	Maître Ely Diallo	Legal adviser
163		WAHO	Mr Ali Sani	Planning specialist
164	Guinea-Bissau	WAHO	Mr Tomé Ca	Planning, research and health information specialist
165	WAHO	WAHO	Dr Abdourahmane SOW	Epidemics control specialist (laboratory services)
166	Senegal	EISMV	Mr Savadogo Madi	Country Administrator
167	Mali	ECOWAS/CRSA/RAHC	Dr Kabore Henri	AU-IBAR Vet-Gov Regional Coordinator for ECOWAS
168	Senegal	USDM-APHIS	Dr Fall Cheikh Sadi-bou	Ag Specialist
169	Senegal	FAO	Mr Gueye Cheikh	Programme manager
170	France	Telemedicine Technologies	Mr Givanouitch Patrick	Director of International Development
171	Ethiopia	African Union Commission	Dr Djoudalbaye Benjamin	Senior Health Officer
172	WAHO	WAHO	Ms Lalaissa Amoukou	Administration officer
173	WAHO	WAHO	Mr Cesaire Ahanhango	Coordinator of Project management Unit/ DPRIS
174	WAHO	WAHO	Dr Koku Sika Dogbe	Project coordinator REDISSE/DPRIS
175	WAHO	WAHO	Mr Harvey De Hardt-Kaffils	Communication specialist
176	WAHO	WAHO	Mr Aruna Fallah	Unité Gestion des Projets/DPRIS
177	Nigeria	WAHO	Professor Abdulsalami Nasidi	Executive Director RCD'C
178	Mali	International Medical Corps (IMC)	Ms Bassim Karol	Programme coordinator
179	Senegal	DALBERG	Mr Seck Cyril	Senior Project Manager
180	Côte d'Ivoire	Centre Suisse Recherches Scientifiques	Bonfoh Bassirou	Managing Director
181	Senegal	ADEMAs	Mr Seck Mamadou	Board Chairman
182	Côte d'Ivoire	Afrique One ASPIRE	Mr Dabo Emmanuel	Communication Officer
183	Mali	International Medical Corps (IMC)	Dr Niare Boubacar	Surveillance Manager

No.	Country	Organization	Name	Function
184		Governing Board RCSDC of ECOWAS	Ms Louise J. Cord	
185		Governing Board RCSDC of ECOWAS		Country Director for Senegal, The Gambia, Guinea Bissau and Mauritania
186	United States	NSC	Dr Elizabeth Cameroon	Senior Director for Global Health Security and Biodefense National Security Council
187	United States	US Department of State	Tierra Copeland	Africa Liaison Office of International Health and Biodefense Bureau of Oceans and International Environmental and Scientific Affairs
188	Burkina Faso	USAID	Dr Donatien Ntakarutimana	GHSA Advisor
189	Ghana	USAID	Rachel Cintron	West Africa Regional Health Office Director
190	Senegal	USAID	Elizabeth Williams	Health Officer USAID
191	United States	USAID	Ricardo Echalar	Senior Public Health Adviser
192	Côte d'Ivoire	USAID	Dr Zandra Andre	Senior Infectious Disease Team Lead
193	Benin	USAID	Soukeynatou Traore	Health Office Ebola Coordinator
194	Ghana	USAID	Tamara Chikhradze-Young	Infectious Disease Coordinator
195	Côte d'Ivoire	Preparedness + Response	Dr Baba Soumare	Africa Regional Director
196	Senegal	USAID	Philippe Mutwa Rwatana	GHSA Advisor
197		World Bank	Francois Le Gall	Advisor, Agriculture Global Practice, World Bank
198		World Bank	John Paul Clark	Senior Health Specialist, Health, Nutrition and Population Global Practice, World Bank
199	Côte d'Ivoire	World Bank	Mr Sanogo Ibrahim	Health Analyst
200	Uganda	OHCEA	Mr Kagarama Juvenal	OHCEA Technical Advisor Francophone Countries
201	Senegal	World Bank	Ms Louise J. Cord	Country Director for Senegal, The Gambia, Guinea Bissau and Mauritania
202		CDC	Dr Chastity Walker	Ghana Country Office
203	Senegal	CDC	Dr Michael Kinzer	Country Director
204	Italy	CDC	Dr Sean Shadomy	Epidemiologist and CDC liaison to FAO
205	Ethiopia	CDC/African Union Commission	Dr Merawi Aragaw	Epidemiologist Africa CDC
206	Côte d'Ivoire	CDC	Serigne M Ndiaye, PhD	Programme Director, Global Health Protection
207	Liberia	CDC	Desmond Williams MD PhD	CDC Country Director Liberia
208		AU-IBAR	Professor Ahmed El-Sawalhy	Director, Head of Mission
209	Kenya	AU-IBAR	Dr Baboucarr Jaw	Chief Animal Health Officer
210	United States	DTRA	Anthony Salvatore	
211	United States	DTRA	Mary Lancaster	Regional Science Manager
212		ECHO	Dr Ian Van Engelgem	Global Health Expert
213	Senegal	ECHO	Dr Jemmy Ghomsi Jean Paul	West Africa Regional Health Expert
214	United States	PREDICT	Dr Corina Monagin	Scientist

No.	Country	Organization	Name	Function
215	Senegal	French Embassy	Dr Jean-Pierre Lamarque	Regional global health adviser for West Africa
216	Senegal	Agronomes et Vétérinaires sans Frontières AVSF	Mr Ba Salif	Head of animal productions
217	United Kingdom	PHE	Dr Osman Dar	Consultant in International Public Health
218	Senegal	IRD	Laurent Vidal	IRD Representative in Cabo Verde, The Gambia, Guinea Bissau and Mauritania
219	Senegal	Fondation Mérieux	Ms Lorène Ladan Fofana	Head of West Africa Office
220	Senegal	CIRAD	Dr Adama Diallo	Adviser at the National Livestock and Veterinary Research Laboratory
221	Gabon	WHO	Dr Demba Lubambo Ghyllain	HSE Focal point
222	Burkina Faso	WHO	Dr Daniel Yota	Technical Officer WHE IST-WA
223	Zimbabwe	WHO	Dr Freddy Banza	Technical Officer WHE IST-ESA
224	Congo	WHO	Dr Socé Fall	
225	Congo	WHO	Dr Robalo Madga	
226	Congo	WHO	Dr Ali Yahaya	
227	Congo	WHO	Dr Yoti Zabulon	
228	Congo	WHO	Dr Talisuna Ambrose	
229	Congo	WHO	Mr Amadou Diouf	
230	Congo	WHO	Ms Sendze Marie Agnes	
231	Congo	WHO	Mr Moka Juste	
232	Congo	WHO	Ms Mireille Mouele	
233	Congo	WHO	Mr Tresor Ampa	
234	Congo	WHO	Ms Alice Ntamwishimiro Soumare	TO/Partnership
235	Congo	WHO	Ms Ebba Kalondo	
236	Congo	WHO	Ms Toth Eniko Andrea	
237	Congo	WHO	Ms Lydie Gassackys	
238	Niger	WHO	Dr Djingarey Harouna	IHM
239	Burkina Faso	WHO	Dr Manzila Tarande Constant	Focal point WHE - IST/WA
240	Congo	WHO	Mr Brice Zocli	
241	Congo	WHO	Mr Ougoudale Ghislain Adjannan	
242	Benin	WHO	Dr Kohossi Leon	DPC
243	Cabo Verde	WHO	Dr Carolina Gomes	DPC
244	Côte d'Ivoire	WHO	Dr Tano-Bian Aka	NPO/DPC
245	Cameroon	WHO	Dr Nnomzo'o Etienne	NPO/NTD
246	Gambia	WHO	Dr Sharmila La-reef-Jah	NPO/DPC
247	Ghana	WHO	Dr Sally Ann Ohene	NPO/DPC
248	Guinea	WHO	Dr Ahamdou Barry	NPO/DPC
249	Guinea Bissau	WHO	Dr Inacio Alvarenga	NPO/DPC
250	Liberia	WHO	Dr Peter Lasuba	DPC
251	Mali	WHO	Professor Massambou Sacko	DPC
252	Mauritania	WHO	Dr Zombré Daogo Sosthène	HSS

No.	Country	Organization	Name	Function
253	Niger	WHO	Dr Baruani Bienvenu Ngoy	HSE
254	Nigeria	WHO	Dr Henry Okoro-Nwanja	DPC
255	Senegal	WHO	Dr Mady Ba	DPC
256	Senegal	WHO	Mr Khalifa Mbengue	HPR
257	Sierra Leone	WHO	Dr Charles Njuguna	IDSR & IHR Team Lead
258	Togo	WHO	Dr Davi Kokou Mawulé	DPC
259	Cameroon	WHO	Etoa Nkono Barbara	HIP
260	Switzerland	WHO	Dr Elizabeth Mumford	Scientist
261	Burkina Faso		Mr Hervé Songre	Interpreter
262	Côte d'Ivoire		Mr Victor Imboua-Niava	Interpreter
263	Portugal		Ms Kathryn Watson	Interpreter
264	Cameroon		Ms Antje Witzel	Interpreter
265	Portugal		Mrs Maria Eduarda Fordham	Interpreter
266	Portugal		Mr Paula Manuppella	Interpreter
267	Senegal	CDC	Jim Tiny	Deputy
268	Guinea	Ministry of Livestock and Animal Productions	El Hadj Conde Mamady	Secretary General
269	Guinea	Ministry of Health	Dr Moustapha Grovogui	Coordinateur national Projets Santé
270	Senegal	UNODC	Mr Diouf Babacar JP	Project coordinator
271	Senegal	UNDP	Ms Djibo F. Bintou	Resident Coordinator of the United Nations system



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