

Strengthening surveillance, disease intelligence, and health information exchange

November 25, 2019 to December 31, 2021



Annex VI: Model Narrative and Financial Report

Technical Report

Objectives and Purpose

The Strengthening Surveillance, Disease Intelligence, and Health Information Exchange Project was a project funded by the Africa Centres for Disease Control and Prevention (CDC) from November 2019 to December 2021. The SACIDS Foundation for One Health (SACIDS) led project implementation in partnership with the East, Central and Southern Africa Health Community (ECSA-HC) and focal persons in the Eastern and Central Regional Collaborating Centres (RCCs) of Africa CDC. To achieve its purpose the project focused on:

- Strengthening event-based surveillance systems in the African Union (AU) Member States (MS)
- Implementing core activities of Africa CDC's strategy to address antimicrobial resistance (AMR)

Overarching strategies that guided project implementation included the establishment of a roster of different subject matter experts and service providers from the region, and engagement of focal persons at country level in the Eastern and Central RCCs who facilitated key stakeholder engagement, project introduction and advocacy, event-based surveillance (EBS) situation analysis, validation and adaptation of the training materials, and training of key stakeholders.

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- Conducted an EBS situation analysis in Africa CDC's Eastern and Central RCCs
- Developed four types of EBS training modules: Hotline, Media scanning, Health Facility Level and Community Level
- Validated of the EBS training modules by subject matter experts from the Eastern and Central RCCs
- Developed Participants' and Facilitators' Guides and PowerPoint presentations as supporting material to enhance the delivery of the EBS training modules
- Translated the EBS training packages and repackaged into main AU languages (English, French, Portuguese and Arabic)
- Developed a two-day COVID-19 Orientation Module for Community Health Workers (CHWs)
- Provided technical support to establish or strengthen EBS in Uganda, Cameroon, the Democratic Republic of Congo and Tanzania
- The EBS training modules have been adapted in Lesotho, Malawi and Zambia
- Developed a Monitoring and Evaluation Plan to aid African countries in monitoring efficacy and efficiency of their EBS implementation

Main Results

Summary

In addition to the main results shown above, the project accomplished a number of achievements that will strengthen disease management in the region.

To strengthen event-based surveillance systems in the African Union Member States

Output 1: Develop training materials, including for training-the-trainer, based on Africa CDC technical guidelines for EBS

As a regionally focused project, SACIDS sought to strengthen EBS systems in Africa through high quality training materials. The project developed four EBS training modules that addressed the community, health facility, media scanning and hotline, all packaged as an Africa CDC EBS Training Manual. The facilitation of this Manual led to the development and inclusion of a *Participants' Comfort Level Check* and presentations (see Annexes 2 to 20). Furthermore, in an effort to support Africa CDC's *Partnership to Accelerate COVID-19 Testing (PACT) Initiative*, the project developed a two-day COVID-19 Orientation Module for Community-Level (EBS), which also includes contract tracing.

The developed training modules were piloted in some Member States, then later validated by subject matter experts from Eastern and Central RCCs and development partners. The validation exercise involved:

- The reviewing and incorporation of inputs received from Member States that participated in the initial piloting of the modules
- Validating the content of the training manual, thus aligning key terminologies with those used by Member States and development partners
- Validating standardised module PowerPoint presentations; and
- Initiating the establishment of a continental subject matter expert Community of Practice (CoP) for EBS

SACIDS collaborated with strategic partners to enhance the relevance and uptake of the EBS training package and translated and repackaged them into the AU's major languages – English, French, Portuguese and Arabic.

Output 2: Conduct training of trainers on EBS in conjunction with the various RCCs

To obtain the project buy-in for successful implementation, SACIDS convened a series of orientation meetings that involved the training of trainers. In Uganda, 44 key stakeholders from national level were oriented on the Integrated Disease Surveillance and Response (IDSR) 3rd Edition, refined the IDSR materials, and built a pool of trainers for the nationwide rolling out of the technical guidelines.



Experts gathered for the adaptation to training manual and roll out of event-based surveillance in Cameroon.

Similarly in Cameroon, 19 stakeholders participated in the adaptation of the training materials and were trained as a Trainer of Trainers. Furthermore, 15 District Surveillance Focal Points and 55 Village Health Volunteers (VHVs) received training on EBS.

In the Democratic Republic of Congo (DRC), 18 stakeholders responsible for disease surveillance and response in the country received training on the adaptation of the training materials. A further 29 individuals from the national and sub-national levels were trained as Trainer of Trainers.

Likewise in Tanzania, six participants from the national and regional levels were trained on the adaptation of the training materials. A further 20 Health Care Workers (who also were Health Facility IDSR Focal Persons) and 60 CHWs received training on EBS.

Output 3: Provide focused technical support to selected countries to initiate EBS consistent with Africa CDC guidelines

In **year**, the project conducted a situation analysis¹ to assess the standing of implementation of EBS in Eastern and Central RCC Member States of the African Union (Comoros, Kenya, Madagascar, Rwanda, Somalia, South Sudan, Tanzania and Uganda). Findings from the study/analysis informed the project's design and approach to better understanding the needs so as to provide technical assistance.

¹ Twenty-three Member States from the Eastern and Central RCCs were targeted. Data collection was administered through a developed tool in the official languages of those countries (English, French and Portuguese). Data was filled and submitted electronically. 14 (64%) of the 23 Member States responded to the request to participate in the analysis.

Policy and Guidelines	<ul style="list-style-type: none"> • Policy documents on EBS were available in 12 (80%) countries, whereas EBS guidance documents were available in 10 (83%) • EBS Focal Persons were found in 10 (83%) countries • National Public Health Institutes (NPHI) were established in 8 (57%) of the countries. NPHIs or departments coordinating public health surveillance were generally understaffed
EBS Scope	<ul style="list-style-type: none"> • The scope of EBS included the use of hotlines (71%); media scanning (43%); standard operating procedures (SOPs) for reporting, triage, verification and risk assessment were available in 36% of countries at intermediate level; 57% at health facility level; and in 64% at community level • Evidence of coordination between ministries responsible for public health was found with animal health in 93% of countries, with environmental health in 71%, and customs and immigration in 36% of the assessed countries • All countries were implementing IDSR • 64% of countries had adopted the 3rd edition of IDSR strategy • 43% of countries had adopted the Africa CDC framework for EBS implementation
Resources	<ul style="list-style-type: none"> • EBS training materials were available in 36% of the countries; EBS curriculum in 43%, and data collection tools in 93% • 29% of the countries had received some form of assistance for EBS implementation from Africa CDC through the RCCs
Information Gathering	<ul style="list-style-type: none"> • The majority (79%) of the countries had identified potential sources of EBS data • 71% had some system for capturing and reporting data • 29% had Standards of Practice (SoPs) for reporting and feedback • 79% had tools for rapid reporting of data
Data Processing	<ul style="list-style-type: none"> • Half (50%) of the countries had operational call centres • 83% had public health emergency operational centres (PHEOC), 80% of PHEOCs could analyse both indicator-based surveillance (IBS) and EBS data.
Support Requested	<ul style="list-style-type: none"> • 86% of countries expressed the need for support in developing the EBS strategy; rolling out EBS (93%); training of national trainers (86%) and developing signals for identification of potential acute health events (79%)

Table 1: Major findings from the situation analysis

Following the results of the EBS situation analysis, which informed the development and validation of the EBS training modules, the project also developed the EBS Monitoring and Evaluation (M&E) Plan to aid AU MS efficiently implement EBS activities within the context of the Africa CDC EBS and One Health Frameworks and EBS training modules. The structure of the plan includes: performance (verifiable) indicators (output and outcomes) for EBS implementation for different types of EBS (i.e., community, health facility, media scanning and hotline); a resource mobilisation plan; data collection strategies and analysis plan for M&E; sources of data for each indicator, methodologies for their measurements and who would be responsible for each of them; description of baseline measures and associated time-metrics to serve as benchmark values for monitoring and evaluation of EBS implementation; and a monitoring and evaluation strategy.

The establishment of the Partnership to Accelerate COVID-19 Testing (PACT) Initiative is to drive forward the Africa Union Joint Continental Strategy for COVID-19, which aims to prevent the spread of COVID-19, prevent deaths from COVID-19, and reduce the social and economic harm linked to COVID-19 in Africa. SACIDS and Africa CDC, in collaboration with the United Kingdom Public Health Rapid Support Team (UK-PHRST) and U.S. Centers for Disease Control and Prevention (CDC), developed a two-day African-context CHWs-COVID-19 orientation module, to give CHWs a rapid orientation to work in the disease response. It focuses particularly on CHW tasks in the TRACE component of PACT as well as how they will support the TEST and TREAT components.

To implement core activities of Africa Centres for Disease Control and Prevention's strategy to address antimicrobial resistance

As a regionally-focused project, SACIDS sought to advance knowledge on antimicrobial resistance (AMR) by sharing learnings through various platforms with key stakeholders. This included the convening of a training for civil society representatives from Eastern and Central RCC in Nairobi, Kenya in November 2020. Also, the organising of a three-day virtual workshop for civil society organisations (CSOs) and the media through the engagement of ReAct Africa – on behalf of Africa CDC – focused to address AMR as well as the plans for an effective World Antimicrobial Awareness Week (WAAW) 2021.

A systematic review of policies on antimicrobial use in agriculture/ food production in Africa led to the publication of a policy brief titled *Antimicrobial Use and Resistance in Agriculture and Food Production Systems in Africa*, and a research paper *Antimicrobial Use and Resistance in Agriculture and Food Production Systems in Africa: A Systematic Review*².

In support of strengthening AU's model public health law and legal framework, SACIDS not only facilitated the translation of the Africa CDC IPC Legal Framework Standards, Policy Brief and the Background Document in the official AU languages, but also provided logistical support to the High-Level Advocacy Meeting for the Infection Prevention and Control and Biosafety of the Africa CDC held from October 28th to 29th, 2021 in Dar es Salaam, Tanzania.

Activities undertaken and Progress made during the period

To strengthen event-based surveillance systems in the African Union Member States

Output 1: Develop training materials, including for training-the-trainer, based on Africa CDC technical guidelines for EBS

In an effort to better manage disease outbreaks, the International Health Regulations requires countries to develop capacities on early detection, timely report and prompt response to public health emergencies. The widely implemented traditional IBS by many

countries captures health information predominately from only the health facilities, resulting in inefficiency in the enhancement of early warning and response to public health emergencies. To address these challenges and enhance capturing of the signals for disease outbreaks and other public health events, at source before spreading, Africa CDC developed the EBS and One Health frameworks. To aid the operationalisation of these frameworks, the project developed EBS training modules – community, health facility, media scanning and hotline – and repackaged them as an EBS Training Manual (Appendix 1). The main objectives of the manual are to help countries operationalise EBS at different levels of the health system; to impart knowledge, understanding, and application of EBS in identification, notification, and response to health risks; to enhance multisectoral collaboration in public health surveillance; and to act as a reference resource for the countries. Further supportive material was developed to facilitate delivery of the training modules (Appendices 2 to 20).

Prior to the finalisation of the training modules, the project brought together a group of subject matter experts from the Eastern and Central RCCs for a validation exercise of the training modules (see Appendix 21) in Dar es Salaam Tanzania from 7 – 9 June 2021. The validation exercise involved the reviewing and incorporation of inputs made by Member States during piloting of the training materials; align key terminologies with those used by partners and member states; review the PowerPoint presentations for the modules; and establish a subject matter expert Community of Practice for EBS. The English version of the training manual was later translated into other major AU languages to enhance their relevance and uptake (French - Appendix 22, Portuguese - Appendix 23, and Arabic - Appendix 24).

SACIDS's contribution towards combating the Coronavirus Disease 2019 (COVID-19) pandemic involved the development of a two-day community-level EBS training module that included contact tracing (Appendix 25). The central role of CHWs (VHWs) in enhancing early detection, timely reporting, feedback and prompt responses to public health signals is key to preventing the spread of COVID-19, prevent COVID-19 related deaths, and reducing the social and economic harms linked to COVID-19 in Africa.

² Mshana SE, Sindato C, Matee MI, Mboera LEG. Antimicrobial Use and Resistance in Agriculture and Food Production Systems in Africa: A Systematic Review. *Antibiotics* (Basel). 2021 Aug 13;10(8):976. doi: 10.3390/antibiotics10080976. PMID: 34439026; PMCID: PMC8389036



Participants of the Trainer of Trainers for EBS in Tanzania.

Output 2: Conduct training of trainers on EBS in conjunction with the various RCCs

To advocate for and sensitise the importance of establishing/strengthening EBS in RCC countries, the project held virtual consultations with country focal persons. Countries that felt they needed additional support – such as such as Uganda, Cameroon, DRC and Tanzania – were encouraged to submit their requests and concept notes indicating specific technical requirements and associated budgets (see Appendices 26 to 29). Further consultations led to the re-packaging of training materials and delivery of tailored training programmes to enhance their efficiency to rapidly detect and timely report signals of public health importance for effective early warning and response (Appendices 30 to 33). Lesotho, Malawi and Zambia received direct support from Africa CDC. Participants were taken through the adaptation of the EBS training modules that considered customisation of the modules to fit with local needs and requirements (2-3 days); training of the trainers from national and sub-national levels to create a cohort of trainers with practical skills to cascade the training to all levels of health system, i.e., from national to community levels (2-4 days); and supervision of training delivery to sub-national levels including regional/provincial, district and health facility (1-2 days) and community (1 day) levels. The training was preceded by pre-test to ascertain participants’ level of understanding regarding EBS. The post test was done after the training sessions, to account for knowledge gain among participants. In Uganda, 44 stakeholders participated in the training; 89 in Cameroon; 47 in the DRC; and 86 in Tanzania.

Output 3: Provide focused technical support to selected countries to initiate EBS consistent with Africa CDC guidelines

To support the initiation of EBS in line with Africa CDC guidelines, specialists from the Africa CDC, SACIDS and ECSA-HC conducted a situation analysis to assess the status of EBS implementation in Eastern and Central RCC member states of the African Union. Out of the 23 Member States from the RCC that were identified by the Africa CDC and invited to participate, only 14 countries responded. Major findings from the analysis are listed in Table 1.

Due to COVID-19 related travel restrictions, the EBS situation analysis activity was conducted through a developed digital survey software tool – in collaboration with ECSA-HC. Initial landscaping and behaviour mapping of stakeholders informed the local, social and political context for what the e-survey platform should provide. This was followed by the designing of an interface with identifiable feature sets, which was regularly reviewed by the intended users (stakeholders) (Appendices 37.1 to 37.4). Making the platform accessible online involved servicing the server, conducting system partitioning, LNPP stack installation (Linux, Nginx, Postgress and Python) and Virtual Private Network (VPN) setup via Cloud. Africa CDC Information, Communication and Technology (ICT) experts provided an appropriate domain name and linked it to the Cloud hosting platform, ensuring security through SSL (Appendix 37.5).

Two regional surveys were published during the duration of the project – *Africa CDC saving lives and livelihoods: Member States preliminary needs identifications*, and *Events Based Surveillance situation analysis* (Appendices 37.6 and 37.7).

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Figure 1: The functionality of the e-survey platform

Similar to the development of the e-survey platform, an e-learning platform was developed by the project to digitally host the EBS training materials where they could be easily accessed and shared efficiently through digital means (Appendices 37.8 to 37.12). The e-learning platform aims to provide trainers, learners and others involved in education with information, tools and resources to support and enhance educational delivery and management.

Following on from the development of the EBS training modules with inputs from the findings of the EBS situation analysis, the project developed the EBS monitoring and evaluation (M&E) plan (Appendix 36) that would

support AU MS efficiently implement EBS activities within the context of the Africa EBS and One Health Frameworks. The M&E plan sets out performance (verifiable) indicators (outputs and outcomes) for EBS implementation of different types of EBS (i.e., community, health facility, media scanning and hotline); resource mobilisation plan; data collection strategies, and an analysis plan for M&E.

Further support to containing outbreaks, SACIDS developed a two-day rapid orientation module specific for COVID-19 targeting CHWs in early detection, timely reporting, and prompt response to signals of disease outbreaks. CHWs are regarded as an essential part of the Partnership to Accelerate COVID-19 Testing (PACT) Initiative. The module describes a good basic understanding of COVID-19, its transmission/spread, prevention and control measures, community-based surveillance, identification of suspect cases, and how to perform contact tracing activities effectively.

Further technical support provided by the project included: supporting Uganda's adaptation of the third edition of IDSR guidelines; supported Cameroon, DRC and Tanzania in the formation of multisectoral technical working groups to aid in establishing EBS coordination and collaboration mechanisms at national level and improving understanding of the One Health approach in disease surveillance, adaptation of the training materials to align with country requirements, development of a list of priority diseases, list of priority signals, and a list of EBS sources for enhanced early warning and response system. Other supported included the development of standard operating procedures to enhance the operationalisation of EBS in Tanzania; creating country-level cohorts of Trainer of Trainers to accelerate EBS implementation in Eastern and Central RCC; and coordinated and supervised EBS training to national and sub-national level officials and the community health workforce in Eastern and Central RCC.

To implement core activities of Africa Centres for Disease Control and Prevention's strategy to address antimicrobial resistance

SACIDS collaborated with strategic partners at various levels to advance knowledge sharing, adaptation, and use of strategies on antimicrobial resistance (AMR). A two-day Africa CDC Capacity Building and Workforce Development workshop for CSOs on AMR was held from February 20 to 21, 2020 in Nairobi, Kenya. The Workshop was organised by SACIDS in partnership with ReAct Africa as facilitators. The

training workshop provided training on the basics of AMR, infection, prevention and control, one health, and communication and advocacy; highlighted key regional and global developments and initiatives on AMR, including the latest developments regarding the AU's work on AMR and activities of the tripartite organisations; discussed measures to increase public awareness of the AMR issue and the role of civil society and educational and information-related bodies; and developed proposals for further action at the national, regional and global levels (actions by governments, CSOs, United Nations (UN) agencies). The workshop brought together subject matter experts, CSOs from the AU MS of Burkina Faso, Cameroon, Chad, Ghana, Kenya, Malawi, Nigeria, South Africa, Tanzania, Togo and Zimbabwe; Africa CDC representatives, ReAct Africa representatives, SACIDS Secretariat, representatives of the global Tripartite Organisations (FAO, OIE, WHO) and technical experts from other partner organisations.

A similar three-day virtual workshop was again organised by SACIDS supported by ReAct Africa (November 10-12, 2021). The training sought to: highlight key progress and challenges in AMR at the regional and global level, including the latest developments in light of COVID-19; provide highlights on the basics of AMR including infection, prevention and control, and the One Health approach to mitigate AMR, communication and advocacy; reflect on progress made by various CSOs since the last workshop held in 2020 and discuss priority actions and measures to increase public awareness of AMR and the role of media in the African region including WAAW 2021 activities; and to mobilise innovative ideas for WAAW 2021, in the current context of COVID-19 restrictions. An output from the workshop was developed action plans that prioritised actions and measures to increase awareness and advocacy for AMR prevention and control.

From October 28 to 29, 2021, SACIDS provided logistical support for the High-Level Advocacy Meeting for the Infection Prevention and Control and Biosafety and Biosecurity of the Africa CDC in Dar es Salaam, Tanzania. The aim of the advocacy workshop was to promote and create awareness of the developed legal frameworks for biosafety and biosecurity (BSBS) and infection prevention and control (IPC), and encourage stakeholders to use the tool to draft national laws specific to their individual country context. Participants included Ministers of Health, IPC and BSBS experts from Member States, representatives from Regional Economic Communities, CSOs, and technical partners. Member States were encouraged to invest in the promotion and ownership of the legal framework through the adoption and implementation of appropriate strategies. Recommendations coming from the workshop include:

- i) Member States are to support the approval process of the two (2) legal frameworks during the Africa Union review process through advocacy and communication with policy makers and experts invited to the Africa Union Specialised Technical Committees (STC) (Health and Legal) review meeting;
- ii) Member States are to identify and constitute local teams (Champions) to lead in-country advocacy and communication for the two (2) legal frameworks among identified stakeholders, civil society and policy makers to improve awareness and mobilise resources in preparation for domestication and implementation of the legal frameworks after adoption by Heads of States of the African Union Member States;
- iii) Africa CDC to develop a regional and country specific implementation plans in collaboration with national experts. The process is to include mapping of existing policies and legislative structures and developing country specific plans;
- iv) Member States that have some legal framework in place are to use the regionally endorsed Legal Frameworks as benchmarks for reviewing and updating existing legal documents within the first 3 years of adoption by the Heads of States and Governments;
- v) Member States with no legal documents that specifically address BSBS and IPC to adapt/adopt/use/domesticate the regionally endorsed frameworks; and
- vi) Member States are to include domestication/implementation of the legal frameworks in their national strategic plans for health to secure fiscus support in addition to support from other sources.

It was further suggested that the draft legal framework will be submitted first to the STC of Health, Drug Control and Population in April 2021, and then to STC for Legal and Justice Affairs in November 2021, and finally to the Executive Council and the Heads of Governments in February 2022. The draft Legal Frameworks are to be piloted in four **Member States**.

A systematic review of antimicrobial resistance, antimicrobial use and existing policies in agriculture/food production systems in Africa was carried out between April and May 2021. PubMed, Science Direct, MEDLINE, LISTA, Web of Sciences, Scopus, African Journal Online and Google Scholar were searched for relevant English or French articles published between January 1980 and May 2021. Various combinations of search terms were used. Articles were scrutinised

to extract information on the antimicrobial use, prevalence of AMR and availability of a surveillance system. Furthermore, information on the impact of AMU and AMR policies in Africa covering a period from 2005 to 2020 were searched. Full-length research articles and review papers written in English and French were considered, along with publications from Food and Agriculture Organization (FAO), World Health Organization (WHO), Office International des Epizooties (OIE) and Africa CDC websites were also searched and reviewed. In each document the information regarding antimicrobial uses, resistance and surveillance were extracted, along with information regarding authority and enforcement of the laws.

Review findings revealed that the global problem of AMR requires a coordinated effort from all sectors to address it effectively. Furthermore, the emerging health threat of antimicrobial resistance requires the strengthened capacity especially in low- and middle-income countries to ensure provision of higher level of health securities. Special effort should target reduction of AMU and AMR in human, animals and agriculture. Ghana, Kenya, South Africa, Tanzania and Zambia have developed guidelines/plans to address the problem of AMU in food production and agriculture systems however, the enforcement of these documents might prove difficulty due to weak of regulations of AMU in human and animal sector. Fourteen African countries, namely, Burkina Faso, Ethiopia, Ghana, Kenya, Mauritius, Morocco, Nigeria, Northern Sudan South Africa, Tanzania, Tunisia, Zambia, Zimbabwe and Uganda, have adopted the Global Action Plan for antimicrobial resistance and developed the National AMR Action Plan. The African CDC should consider the possibility of adopting international guidelines/plan such as Guidelines on Risk Analysis of Foodborne Antimicrobial Resistance (CAC/GL 77-2011), OIE standards and guidelines related to antimicrobial agents and veterinary public health and Global action plan for AMR and develop the policy guidelines and monitoring protocol to address the AMU in agriculture/ food production systems in Africa.

Full findings of the review were published in a paper titled *Antimicrobial Use and Resistance in Agriculture and Food Production Systems in Africa: A Systematic Review*. Similarly, a policy brief based on the insights from the systematic review of antimicrobial use and resistance in animal production and agriculture was developed. The policy brief analysed the threat of AMR associated with agriculture and food production systems and provides policy actions to address the problem in Africa.

Changes introduced during implementation

The project experienced COVID-19 related disruptions during the implementation of its project activities. Originally planned physical meetings were conducted virtually. The project's contribution to COVID-19 control strategies in the Africa Union Member States was the development of community event-based surveillance (EBS) training modules specific for COVID-19 to enhance early detection, contact tracing and management of suspected cases. The training modules were initially organised by the levels of health systems (national, district/intermediate, health facility and community). Following the initial implementation/piloting of EBS in the Member States, a need arose to repackage the modules into types of EBS (media scanning, hotline, health facility and community) to enhance their relevancy and uptake by the Member States. To support countries to monitor the efficacy of EBS implementation, the project developed a monitoring and evaluation plan as an additional activity.

Challenges

The project deliverables are related and inter-dependent, suggesting that a challenge to implement one could subsequently negatively affect the other. To a large extent, most of the processes were difficult to manage during the COVID-19 pandemic. Consequently, following the delay brought about by the first, second and third waves of the COVID-19 pandemic and inability to conduct some of the activities, the project has, periodically and strategically, requested Africa CDC for a project no-cost extension to enable completion of project activities. The requests were associated with revised work plans and implementation strategies. The initial plan was to complete implementation of project activities by 26th November 2020. A no-cost-extension request was submitted to extend the project implementation by six months (November 26th, 2020 to May 25th, 2021). The request was approved for the period February 15th, 2021 to August 30th, 2021. The second no-cost extension request was approved for the period September 1st to December 31st, 2021.

Another challenge the project encountered was associated with the delayed and incomplete second fund instalments from Africa CDC. As a result, invoices for some service providers and implementation of some activities including monitoring and evaluation by Africa CDC team were delayed beyond the project lifecycle. Apart from the challenges encountered, the project was able to successfully implement all its planned project activities.

Recommendations

Building upon the lessons learned from implementation, the project recommends

- The EBS Training Manual and Monitoring and Evaluation Plan undergo further validation from representatives from all the Africa CDC RCCs.
- Undertaking advocacy and sensitisation on the adaptation of the EBS training manual in the Member States.
- Enhancing operationalisation of EBS using the One Health approach at different levels of health systems in the Member States.

Appendices

- Appendix 1: EBS Training Manual
- Appendix 2: Participants' comfort level check: pre-and post-training tests (Appendix 2)

PowerPoint Presentations

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- Appendix 4: Overview of public health surveillance
- Appendix 5: Disease transmission and ethics
- Appendix 6: EBS concept and methods
- Appendix 7: Key stakeholders in EBS
- Appendix 8: One Health Approach in EBS
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- Appendix 10: EBS Technical Working Group
- Appendix 11: Steps of EBS process
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- Appendix 13: Monitoring and evaluation for EBS
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- Appendix 15: EBS training workshop
- Appendix 16: Situation analysis report
- Appendix 17: Hotline
- Appendix 18: Media scanning
- Appendix 19: Health facility EBS
- Appendix 20: Community EBS

- Appendix 22: EBS Training Manual in French
- Appendix 23: EBS Training Manual in Portuguese
- Appendix 24: EBS Training Manual in Arabic
- Appendix 25: Community-level EBS training module

Requests for EBS technical support

- Appendix 26: Uganda concept note
- Appendix 27: Cameroon concept note
- Appendix 28: DRC concept note
- Appendix 29: Tanzania concept note

Delivered of EBS training to countries

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- Appendix 31: Cameroon
- Appendix 32: DRC
- Appendix 33: Tanzania

- Appendix 34: Situation analysis data collection tool
- Appendix 35: Situation analysis detailed report
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E-Survey Platform Outputs

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- Appendix 37.2 E-Survey Platform: Entity Relationship (ER) Diagram
- Appendix 37.3: E-Survey Platform: Interface (UX) Design
- Appendix 37.4: E-Survey Platform: Platform developed (GITHUB)
- Appendix 37.5: E-Survey Platform: Hosted online
- Appendix 37.6: E-Survey Platform: Situation analysis survey published
- Appendix 37.7: E-Survey Platform: Saving Lives and Livelihoods, member states pre-liminary needs identification survey published
- Appendix 37.8: E-learning Platform: Systems requirements document
- Appendix 37.9: E-learning Platform: Entity Relationship (ER) Diagram
- Appendix 37.10: E-learning Platform: Interface (UX) Design
- Appendix 37.11: E-learning Platform: Platform developed (GITHUB)
- Appendix 37.12: E-learning Platform: Hosted online