

Template for Country Inputs: FY 2023, Quarter 2 [CAMEROON]

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
CMR-GHS-NTW-1: Strengthen the capacity of the IDDS-supported surveillance sites to detect priority pathogens and antimicrobial resistance (AMR) in both human health and animal health diagnostic facilities	Benchmark 7.1 Benchmark 3.2	In progress	
CMR-GHS-NTW-1.1: Provide technical assistance, and mentorship to IDDS-supported sites (7 human and 3 animal sites) to implement national AMR standard operating procedures (Continuation of FY 2022 activities)	Benchmark 7.1	In progress	<p>IDDS provided financial support in organizing training for human and animal health bacteriology laboratory staff of a newly enrolled antimicrobial resistance (AMR) surveillance site on AMR detection on January 16–20, 2023. This training focused on priority pathogen identification and antimicrobial susceptibility testing (AST) techniques.</p> <p>This training, which used a participatory approach, aimed to build the capacity of laboratory staff on the identification of priority AMR pathogens. Four of the older sentinel surveillance sites were selected to host the training of the new sentinel sites (Laquintinie Hospital in Douala, Yaoundé University Hospital, Yaoundé General Hospital, and Limbe Regional Hospital) to provide the new sites with experience in real time. Throughout the five days, participants were trained in media preparation, identification of priority pathogens, and conducting AST. Eight staff members (six female) from these sites were trained (1 trainee per site): Yaoundé Central Hospital, Yaoundé Gynaeco-Obstetric and Pediatric Hospital, Douala Gyneco-Obstetric and Pediatric</p>

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>Hospital, National Veterinary Laboratory, Buea Regional Hospital, Bafoussam Regional Hospital, Garoua Regional Hospital, and Ngaoundéré Regional Hospital. This process enabled the new actors to experience surveillance in real time while ensuring the transfer of standardized methods within the AMR surveillance network. It also allowed the sharing of experiences between new and existing surveillance sites.</p> <p>IDDS continued to provide technical support and mentorship to the National Public Health Laboratory (NPHL) to operationalize standard operating procedures for AMR detection to ensure harmonization of pathogen identification and AST across human and animal AMR sentinel surveillance sites. Six mentoring sessions took place in February and March 2023, mentoring 50 laboratory staff (32 female) in 5 AMR sites (Buea Regional Hospital, Limbé Regional Hospital, Yaoundé General Hospital, Yaoundé Central Hospital, and Douala Gynecological and Pediatric Hospital). Emphasis was placed on the internal quality control for antibiograms.</p> <p>In FY 2023 Q3, IDDS will continue training and mentoring AMR sentinel surveillance sites and ensure the procurement and distribution of essential laboratory needs for AMR detection.</p>
CMR-GHS-NTW-1.2: Procure basic reagents/equipment and maintenance contracts for the human and animal IDDS-supported sites to improve	Benchmark 7.1	In progress	IDDS conducted a needs assessment for FY 2023, compiled an initial list of reagents and critical equipment needed for the sites, and shared the list with suppliers for quotations. Some of these procurement funds will be reprogrammed for Marburg response if approved by USAID. As of March 31, 2023, USAID has not approved reprogramming the funds for Marburg response.

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
quality assurance (Continuation of FY 2022 activities)			IDDS purchased computers for the eight newly enrolled AMR surveillance sentinel sites to strengthen data collection, analysis, and reporting, and to expand the AMR surveillance network. The computers will be delivered in FY 2023 Q3.
CMR-GHS-NTW-1.3: Host the national AMR detection and surveillance training materials (training modules) and standard operating procedures developed during FY21 & FY22 in an e-learning platform in collaboration with other USAID GHS partners (Medicines, Technologies, and Pharmaceutical Services, and Africa One Health Network) to ensure sustainability of workforce development (New FY 2023 activity that builds on FY 2021 and FY 2022 successes)	Benchmark 3.2	In progress	<p>IDDS provided technical and financial support to the organization of a stakeholders meeting between USAID GHS partners (IDDS; Medicines, Technologies, and Pharmaceutical Services; and Africa One Health Network) and the Faculty of Health Sciences of the University of Buea on January 18, 2023, to discuss the steps needed to develop an e-learning platform and training modules to build capacity in AMR. This meeting resulted in the commitment of these stakeholders to actively collaborate in the success of this project.</p> <p>IDDS provided financial support for the recruitment of a consultant to facilitate a two-day planning meeting on February 17–18, 2023, in Douala to discuss the approach to develop the e-learning platform and the expectations of the University of Buea. In collaboration with a USAID GHS partner, the Faculty of Health Sciences will develop an online platform adapted for blended learning methods to foster the delivery of the Master in Infectious Diseases and Antimicrobial Resistance Program, and digitalize the AMR in-service modules previously developed into self-administered online modules that can be compiled into short courses (online continuing professional development certificates) to be offered by the University of Buea. In FY 2023 Q3, IDDS expects to finalize the AMR modules for the e-course and the design of the e-learning platform.</p>

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
CMR-GHS-NTW-2: Support the creation of a One Health specimen referral and transport system	Benchmark 7.2	In progress	
CMR-GHS-NTW-2.1: Convene a workshop with stakeholders to review the current specimen referral and transport systems based on the assessment done by IDDS, and identify gaps and areas of improvement for a One Health specimen referral and transport system (New activity for FY 2023)	Benchmark 7.2	In progress	IDDS submitted a concept note to the National One Health Platform for the organization of a national stakeholders meeting to review the different specimens transport strategies and propose an integrated approach. This meeting will be held in FY 2023 Q3.
CMR-GHS-NTW-2.2: Support the Ministry of Health and the Ministry of Livestock, Fisheries, and Animal Industries to develop costed estimates for a One Health specimen referral and transport system plan (New activity for FY 2023)	Benchmark 7.2	Not started	IDDS submitted a proposal to the USAID mission to reprogram some funding for Marburg preparedness and response. If this is approved, this activity will be removed from the FY 2023 work plan. As of March 31, 2023, USAID has not approved reprogramming the funds for Marburg response.

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
CMR-GHS-NTW-2.3: Support a pilot integrated human and animal specimen referral and transport system to improve surveillance of diseases with epidemic potential (New activity for FY 2023)	Benchmark 7.2	In progress	<p>IDDS supported the transportation of 57 shipments of human health specimens to the national reference laboratories (Centre Pasteur Cameroon, NPHL).</p> <p>IDDS also supported a meeting between the courier and the animal health surveillance network (RESCAM) for the integration of animal health specimens in the transport system.</p> <p>IDDS submitted a proposal to the USAID mission to reprogram some funding for Marburg preparedness and response. If this is approved, this activity will be removed from the FY 2023 work plan, although IDDS will continue to support specimen transport for national priority diseases. As of March 31, 2023, USAID has not approved reprogramming the funds for Marburg response.</p>
CMR-GHS-SURV-1: Strengthen AMR surveillance through capacity building to analyze, interpret, and report AMR surveillance data and develop national strategic plans	Benchmark 3.1 Benchmark 3.2	In progress	
CMR-GHS-SURV-1.1: Provide technical assistance to the AMR technical secretariat to develop the AMR strategic plan (2022-2027) in collaboration with other USAID GHS partners (Medicines, Technologies, and Pharmaceutical Services,	Benchmark 3.1	In progress	IDDS provided technical support to the Government of Cameroon to develop the draft of the new National Action Plan to Fight Against AMR (2023–2027). The two consultants recruited by IDDS facilitated the workshop to finalize the AMR National Action Plan. This workshop was organized under the leadership of the One Health platform, with 43 key stakeholders from various One Health key ministries and partners participating in this five-day AMR benchmark review. The next step will be the validation workshop in FY 2023 Q3, which will be followed by

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
Food and Agriculture Organization of the United Nations) (Carryover from FY 2022)			the translation into English and production and dissemination of the final document.
CMR-GHS-SURV-1.2: Conduct quarterly AMR surveillance stakeholders review meetings to assess progress and AMR data quality (Continuation of support provided in FY 2022)	Benchmark 3.2	In progress	<p>IDDS provided technical support to NPHL to organize two online data quality review meetings, which took place on February 29–30, 2023, and included 14 AMR surveillance sites. Participants discussed data quality gaps from the previous quarter and recommendations for improvement with the point of contact for each surveillance site. The meeting also served as an opportunity to share best practices among AMR surveillance focal points from the different surveillance sites and discuss challenges encountered.</p> <p>In FY 2023 Q3, IDDS will support NPHL to organize supervision visits in the 16 sentinel surveillance sites to review the AMR data collection process and standardization of the data collection method.</p>
CMR-GHS-SURV-1.3: Provide technical assistance to the National Coordination Center to develop the annual surveillance report and policy briefs, and to report National AMR data to the World Health Organization Global Antimicrobial Resistance and Use	Benchmark 3.2	In progress	<p>One of the key accomplishments of IDDS contributions in Cameroon has been the development of the AMR surveillance network. In January 2023, the Ministry of Health officially formalized the list of AMR sentinel surveillance sites. This is another step in solidifying/institutionalizing this surveillance network in the country.</p> <p>IDDS provided technical and financial support for the extension of the AMR surveillance network by training bacteriology laboratory staff of eight newly enrolled sentinel surveillance sites on the proper collection and reporting of AMR data, according to national surveillance guidelines. The training took place in</p>

CAMEROON GHS			
Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
Surveillance System (Continuation of activity implemented in FY 2022)			<p>Mbalmayo on January 13–14, 2023, and focused on AMR surveillance principles as well as data collection using WHONET software. A total of 14 laboratory technicians, biological engineers, and physicians (11 female) from the new sentinel sites were trained (Yaoundé Central Hospital, Yaoundé Gynecological and Pediatric Hospital Laboratory, Douala Gynecological and Pediatric Hospital, National Veterinary Laboratory Douala, Buea Regional Hospital, Bafoussam Regional Hospital, Garoua Regional Hospital, and Ngaoundéré Regional Hospital) on AMR surveillance. IDDS provided technical and financial support to prepare the presentation and other training materials, helped plan the training, and provided accommodations to participants. This action will further ensure the sustainability of the AMR surveillance system through the increasing number of staff qualified for data collection while guaranteeing reliability through the gathering of quality data needed to inform decision-making. In FY 2023 Q3, IDDS will continue to assist NPHL in overseeing data reporting in the extended network.</p> <p>IDDS also helped the National Coordination Center prepare an analysis plan for the 2022 Antimicrobial Surveillance Annual Report. The IDDS consultant conducted a data review to identify missing data and send feedback to the surveillance sites to fix the data. The 2022 cleaned database is now available, and analysis has been initiated. The first draft of the 2022 Annual Surveillance Report is expected to be completed in FY 2023 Q3.</p> <p>IDDS provided technical assistance to the AMR technical secretariat for the development of WHONET-District Health Information Software, version 2 (DHIS2) interoperability sketch. IDDS organized brainstorming sessions with NPHL to develop a</p>

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>data flow diagram for the incorporation process and identify the different variables to be exported as well as the type of standardized indicators to be displayed in DHIS2 dashboards.</p> <p>In FY 2023 Q3, IDDS will provide technical support to organize a meeting with the AMR surveillance technical working group to finalize the interoperability plan between WHONET and DHIS2 and to assess the technical resources needed and an estimation of costs.</p>
<p>CMR-GHS-SURV-1.4: Showcase IDDS detection and surveillance activities during National Public Health Events such as (i) 2022 World Antimicrobial Awareness Week and (ii) Cameroon International Conference on Public Health Emergencies (Continuation of activity implemented in FY 2022)</p>	Benchmark 3.1	Completed	<p>IDDS financially supported the participation of representatives from the Cameroon AMR Surveillance Network in the African Association for Research and Control of Antimicrobial Resistance 3rd Congress on February 8–10, 2023 in Abidjan, Ivory Coast. The theme of the conference was “Pandemic Threats and Antimicrobial Resistance: How is Africa Preparing?” The five participants, who are representatives from NPHL, Centre Pasteur Cameroon, and IDDS-supported AMR sentinel surveillance sites (Yaoundé General Hospital, Douala Gynecological and Pediatric Hospital), showcased Cameroon's progress on AMR detection and surveillance with IDDS support through oral and poster presentations and shared experiences and challenges with other African countries.</p> <p>The different presentations made by the Cameroon team allowed a thorough description of the AMR surveillance system, its structures, and the various actors and approaches, which outlined the country's progress in AMR control. Key results from the 2021 AMR survey were presented, with antibiotic resistance trends and priority pathogens highlighted.</p>

CAMEROON GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: December 6, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
CMR-GHS-SURV-I.5: Conduct one webinar in collaboration with other stakeholders on AMR surveillance and detection (New activity for FY 2023)	Benchmark 3.2	In progress	IDDS is still in discussions with NPHL and the Department for the Control of Diseases, Epidemics and Pandemics of the Ministry of Health to identify the themes of the webinars and the use of the Extension for Community Healthcare Outcomes platform of the Public Health Emergency Operations Center.

Template for Country Inputs: FY 2023, Quarter 2 DRC

Democratic Republic of the Congo (DRC) GHS		Work plan period of performance: October 1, 2022—May 31, 2023	
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
DRC-GHS-NTW-2: Support the establishment of a regional public health network in eastern DRC	Benchmark 7.3	Completed	
DRC-GHS-NTW-2.7: Develop advocacy roadmap with key stakeholders (DRC government officials, international donors) to mobilize domestic and external resources to sustain operations of the Eastern region diagnostic network	Benchmark 7.3	Completed	Following the FY 2023 QI workshop and finalization of the advocacy roadmap, IDDS submitted the final key deliverable, “NTW-2.7-K22: the advocacy roadmap validated by key stakeholders,” to USAID in DRC.
DRC-GHS-NTW-3: Enhance priority pathogen detection	Benchmark 7.1, Benchmark 7.2, and	In progress	

Democratic Republic of the Congo (DRC) GHS Work plan period of performance: October 1, 2022—May 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
capacity for epidemic prone diseases	Benchmark 9.1		
DRC-GHS-NTW-3.1: Support the Directorate of Epidemiologic Services to update the outbreak action plan to align with the National Laboratory Strategic Plan and to define resource requirements	Benchmark 9.1	In progress	IDDS is incorporating inputs received recently from the Ministry of Public Health (MoPH)/Directorate of Laboratory Services and the Directorate of Epidemiologic Services into the updated outbreak action plan. In FY 2023 Q3, IDDS will finalize this deliverable and submit it to USAID as a key deliverable.
DRC-GHS-NTW-3.3: Support of outbreaks response in DRC, including provision of financial and logistic support, specimen transport to support priority zoonotic diseases diagnostics, surveillance, and waste management	Benchmark 7.2	In progress	<p>IDDS provided financial and logistics support to the Provincial Health Division (DPS) in Ituri to transport eight plague specimens collected in Rethy and Aru health zones to the National Biomedical Research Institute (INRB) in Goma for confirmation testing, culture, and quality control.</p> <p>The project initiated a technical working group that included IDDS, DPS in Ituri, INRB in Goma, and other stakeholders to discuss ongoing support to the plague outbreak, the status of plague specimens transported, and the status of the testing and sampling supplies stock. This working group also worked to solve the gaps and challenges in the plague outbreak response in Ituri province.</p> <p>IDDS discussed and shared regular updates on plague outbreak surveillance and response activities throughout the quarter.</p>

Work plan approval date: January 9, 2023

Activity	IHR benchmark	Status	Activity implementation updates
DRC-GHS-NTW-3.4: Support to other outbreak response in DRC	Benchmark 7.1	In progress	<p>IDDS is prepared to discuss, identify gaps, and provide technical and financial support to any outbreak responses in the DRC, in collaboration with MoPH. This is a collaborative activity subject to a request submitted by MoPH or any DPS in the IDDS-supported eastern DRC provinces.</p> <p>IDDS shares the following information with USAID on a weekly basis:</p> <ul style="list-style-type: none"> • Updates on MoH preparedness meetings regarding the trans-border surveillance of Marburg viral outbreak in eastern DRC provinces (North-Kivu, South-Kivu, Tanganyika & Haut-Katanga) and Kinshasa. • Insights and guidance on possible diagnostic approaches, and costing of testing materials.
DRC-GHS-NTW-3.5: Explore how to incorporate local airlines (Compagnie Aérienne Africaine, Congo Airways, Kinavia, United Nations Humanitarian Air Service (UNHAS), Aviation Sans Frontière (ASF), Mission Aviation Fellowship (MAF) and others) into the	Benchmark 7.2	On hold	<p>IDDS successfully concluded discussions on specimen transportation with United Nations Humanitarian Air Service, and the first shipment of Ebola virus disease specimens from INRB in Beni to INRB in Goma took place at the end of January 2023.</p> <p>This activity has now been put on hold pending discussions with USAID to include more provinces in the specimen referral and transport system assessment in eastern DRC, the development of an implementation plan based on assessment findings, and collaboration with MoPH and local airline agencies.</p>

Democratic Republic of the Congo (DRC) GHS

Work plan period of performance: October 1, 2022—May 31, 2023

Work plan approval date: January 9, 2023

Activity	IHR benchmark	Status	Activity implementation updates
specimen transportation system			
DRC-GHS-NTW-3.7: Work with local stakeholders (MoH, USAID, Centers for Disease Control and Prevention, World Health Organization...) to secure stockpile for Ebola virus disease preparedness and surveillance	Benchmark 7.1	In progress	<p>IDDS updated existing paperwork to align the allocated budget, submitted the purchase order, and made payment to procure 900 Ebola tests (GeneXpert cartridges). Tests are expected to be delivered in FY 2023 Q3.</p> <p>IDDS is participating in discussions on the coordination for laboratory support for Ebola preparedness, including the sharing of the status of the Ebola GeneXpert cartridges order with these partners: USAID, the Centers for Disease Control and Prevention, INRB, and the World Health Organization. These discussions are aimed at securing the country stock while supporting country preparedness for and response to any further Ebola outbreaks. IDDS regularly shares with USAID the stockpile of Ebola tests available in DRC.</p>
DRC-GHS-NTW-4: Support the development of a quality assurance and biosafety / biosecurity program for health laboratories in Eastern Region of DRC	Benchmark 8.1	In progress	
DRC-GHS-NTW-4.1: Develop documents for quality assurance and biosafety / biosecurity measures	Benchmark 8.1	In progress	IDDS received inputs from the MoPH/Directorate of Laboratory Services and internal reviewers on the quality assurance document. The biosafety/biosecurity measures document is still in development.

Democratic Republic of the Congo (DRC) GHS Work plan period of performance: October 1, 2022—May 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
for the national laboratory network			The project expects to complete review of the deliverable, “DRC-GHS-NTW-4.1: Quality assurance and biosafety/biosecurity documents for the national laboratory network,” and submit to USAID as a technical deliverable in FY 2023 Q3.
DRC-GHS-NTW-5: Strengthen the capacity of the INRB Laboratory in Goma and the provincial laboratory network to detect priority pathogens in eastern DRC	Benchmark 7.1	In progress	
DRC-GHS-NTW-5.1: Support plague bacteriology diagnostics	Benchmark 7.1	In progress	<p>IDDS procured and delivered to INRB laboratory in Goma the <i>Yersinia</i> media and material for specimen culture, including 3 boxes of the <i>Yersinia</i> agar base and 10 vials of the <i>Yersinia</i> supplement.</p> <p>IDDS also continued discussing and sharing regular updates on plague outbreak surveillance and response activities connected to the diagnostics effort.</p>
DRC-GHS-NTW-5.2: Technical assistance, training, supervision for diagnostic of plague and waste management	Benchmark 7.1	In progress	IDDS worked closely with INRB in Goma as it managed plague diagnostics. After observing delays at INRB in Goma in diagnosing <i>Yersinia</i> specimens, IDDS conducted a mentoring visit to the laboratory to build capacity of three laboratory workers (one female) on <i>Yersinia pestis</i> culture. This mentoring visit allowed the laboratory to successfully complete the first culture of <i>Yersinia pestis</i> using the material procured by IDDS.

Democratic Republic of the Congo (DRC) GHS

Work plan period of performance: October 1, 2022—May 31, 2023

Work plan approval date: January 9, 2023

Activity	IHR benchmark	Status	Activity implementation updates
			IDDS is in discussions with DPS in Ituri to finalize the terms of reference and the participant list for online training of health laboratory workers on plague diagnostics and waste management, planned for FY 2023 Q3.

Template for Country Inputs: FY 2023, Quarter 2 [Ethiopia]

Ethiopia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 21, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
ETH-GHS-NTW-I: Strengthen the antimicrobial resistance (AMR) surveillance diagnostic facility network	Benchmark 3.2	In progress	
ETH-GHS-NTW-I.1: Support the diagnostic stewardship at the five human health sites bacteriology laboratories	Benchmark 3.2	In progress	<p>IDDS, in collaboration with the Ethiopian Public Health Institute (EPHI), conducted AMR diagnostic stewardship workshops on February 2–3, 2023, at Jimma University Hospital and on March 28–29, at Hawassa University Hospital, two of the IDDS-supported AMR sites. The overall objective of the workshops was to provide on-site training to selected clinicians on the microbiology laboratory services available, the types of specimens to submit to the laboratory for analysis, and how to effectively use the AMR testing results for optimal patient outcomes. The specific objectives were as follows.</p> <ul style="list-style-type: none"> • Describe the roles in a diagnostic stewardship program. • Understand the principles of taking appropriate clinical specimens. • Describe the range of laboratory techniques available for bacterial isolation, pathogen identification and antimicrobial susceptibility testing. • Understand how to use AMR data findings for patient outcomes at the facility level on a regular basis. • Understand how microbiology can be appropriately reported to clinicians.

Ethiopia GHS
Work plan period of performance: October 1, 2022—July 31, 2023
Work plan approval date: November 21, 2022

Activity	IHR benchmark	Status	Activity implementation updates
			<ul style="list-style-type: none"> Understand factors affecting bacteriology laboratory turnaround times and reporting. Promote good working relationships between laboratories and clinicians for effective diagnostic stewardship. <p>During the two-day workshops, IDDS and EPHI trained 56 staff (16 female) from Jimma University Hospital and 26 staff (9 female) from Hawassa University Hospital.</p>
ETH-GHS-NTW-1.2: Provide technical assistance, training, and mentorship on AMR detection at five human health sites based on existing standardized modules	Benchmark 3.2	In progress	<p>IDDS mentored staff at three of the five human health-supported AMR sites: Jimma Medical Center Microbiology laboratory, Gondar University Hospital laboratory, and Hawassa University Hospital laboratory.</p> <ul style="list-style-type: none"> The mentorship at Jimma Medical Center Microbiology laboratory was conducted on January 29–February 8, 2023. The objectives of the mentorship were to conduct method verification and full competency assessment as part of IDDS support to address non-conformities identified during the ISO 15189 baseline audit conducted in December 2022. WHONET data management was also included during the mentorship. Three staff (one female) were mentored. IDDS conducted the mentorship at Gondar University Hospital microbiology laboratory on February 14–19, with the objectives of ensuring the implementation of a quality management system, strengthening AMR surveillance activities at the laboratory, and WHONET data management. Four staff (one female) were mentored. The mentorship at Hawassa Hospital Microbiology was on WHONET data management. It was conducted on March 27–29. The mentorship was aimed at developing an antibiogram from WHONET. The seven mentees (four female) learned how to enter patient information, analyze

Ethiopia GHS**Work plan period of performance: October 1, 2022—July 31, 2023****Work plan approval date: November 21, 2022**

Activity	IHR benchmark	Status	Activity implementation updates
			<p>different types of reports, and export data for further analysis and sharing.</p> <p>IDDS will provide mentorship in FY 2023 Q3 to Felege Hiwot Hospital microbiology laboratory and Saint Paul Hospital Millennium Medical College (SPHMMC) microbiology laboratory.</p>
ETH-GHS-NTW-I.3: Conduct minor infrastructure improvements at three AMR surveillance sites to improve workflow, biosafety, and biosecurity	Benchmark 3.2	In progress	<p>IDDS provided financial support, and minor infrastructure improvement was conducted by the IDDS-contracted vendor at Gondar University hospital laboratory. This included renovating the microbiology washing room and the media preparation room, aluminum window replacement, and painting a ceiling board and wall for a bacteriology room.</p> <p>The site improvement work will continue in FY 2023 Q3.</p>
ETH-GHS-NTW-I.4: Support Jimma University Hospital Bacteriology Laboratory and St. Paul Hospital Bacteriology Laboratory for ISO 15189 accreditation	Benchmark 3.2	In progress	<p>IDDS is supporting the strengthening of two human health AMR sites (Jimma University Medical Center and SPHMMC) toward ISO 15189 accreditation. Following the initial assessment conducted in December 2022, IDDS has been supporting the two sites to address the non-conformities identified during the ISO 15189 assessment.</p> <p>As part of this effort, IDDS organized a five-day ISO 15189 technical and management documents revision workshop and helped SPHMMC microbiology laboratory develop its quality manual and standard operating procedures related to the technical and management requirements of the standards. Fifteen technical experts from SPHMMC, EPHI, and IDDS participated in the document review meeting that was held on February 20–24, at the EPHI training center. Follow-up action points were discussed, and the responsible person was assigned for the</p>

Ethiopia GHS**Work plan period of performance: October 1, 2022—July 31, 2023****Work plan approval date: November 21, 2022**

Activity	IHR benchmark	Status	Activity implementation updates
			<p>documents' approval and to facilitate further review of job descriptions, standard operating procedures, master list of documents, and the customization of the laboratory handbook and biosafety and biosecurity manual. Seventy-two SOPs and manuals were updated and finalized during this workshop.</p> <p>Following the ISO 15189 baseline assessment conducted in December 2022, non-conformities were identified from Jimma University Medical Center microbiology laboratory. The microbiology laboratory, along with IDDS, has been working to address the non-conformities. Two of the major non-conformities identified were staff assessment and method verification. IDDS provided financial support to EPHI so two of their experts could conduct the staff assessment and method verification.</p>
ETH-GHS-NTW-I.5: Support Bahir Dar Regional Veterinary General Laboratory to share laboratory AMR surveillance testing report to the EPHI and Animal Health Institute	Benchmark 3.2	Not started	This activity will begin in FY 2023 Q3.
ETH-GHS-NTW-I.6: Support operationalization of the standard	Benchmark 3.2	Not started	This activity will begin in FY 2023 Q3.

Ethiopia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 21, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
operating procedures and guidelines for detection of priority AMR pathogens in one animal health surveillance site (Amhara Regional Veterinary Laboratory)			
ETH-GHS-NTW-2: Support the diagnostics supply chain management system to ensure uninterrupted AMR detection	Benchmark 3.2	In progress	
ETH-GHS-NTW-2.1: Supply basic microbiology/AMR reagents and commodities to five human health AMR sentinel surveillance sites	Benchmark 3.2	In progress	IDDS finalized the specifications for the procurement of antibiotic susceptibility discs and culture media. The list will be sent to vendors in Kenya for procurement because limited vendors are available in country. This process may take four to five months. IDDS anticipates that these reagents and commodities will be delivered in FY 2023 Q4.
ETH-GHS-NTW-2.2: Supply basic AMR	Benchmark 3.2	In progress	See NTW-2.1 for the update.

Ethiopia GHS

Work plan period of performance: October 1, 2022—July 31, 2023

Work plan approval date: November 21, 2022

Activity	IHR benchmark	Status	Activity implementation updates
reagents and commodities to five Phase 2 animal health AMR surveillance sites			
ETH-GHS-NTW-2.3: Facilitate microbiology/AMR supply chain management training and onsite mentorship to the five human health and one animal health AMR sites	Benchmark 3.2	In progress	<p>To overcome the gaps among microbiology laboratory professionals regarding proper uses and management of essential limited microbiology resources, IDDS, in collaboration with EPHI's AMR coordination team, organized a four-day workshop on January 2–5, 2023, to train staff on microbiology stock management, quantification, and forecasting. The major objective of the training was to improve AMR commodities management in all 15 AMR surveillance sites through proper store management, as well as quantification and forecasting using annual consumption. This involved a total of 41 participants (10 female) from various AMR sites including 10 staff (3 female) the five IDDS-supported human health sites.</p> <p>The deliverables of the workshop were as follows:</p> <ul style="list-style-type: none"> • Annual AMR test plan for each AMR site • Annual quantification and forecasting plan of AMR commodities for each site <p>IDDS will provide on-site mentorship in FY 2023 Q3 and Q4.</p>
ETH-GHS-NTW-3: Strengthen equipment	Benchmark 7.1	In progress	

Ethiopia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 21, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
procurement, operations, and preventive maintenance systems			
ETH-GHS-NTW-3.1: Facilitate the trained biomedical engineers to support maintenance of laboratory equipment in the six IDDS-supported surveillance sites	Benchmark 7.1	Not started	This activity will begin in FY 2023 Q3, when the engineers will be available to conduct the training.
ETH-GHS-NTW-3.2: Supply a limited range of critical auxiliary microbiology/AMR equipment for six supported sites	Benchmark 7.1	In progress	IDDS collected proformas from three vendors to procure the auxiliary equipment. The equipment is expected to be procured in FY 2023 Q3.
ETH-GHS-SURV-1: Improve the efficiency of AMR surveillance data management	Benchmark 9.3	In progress	
ETH-GHS-SURV-1.1: Provide WHONET mentorship and	Benchmark 9.3	In progress	IDDS conducted a WHONET mentorship at three of its human health AMR sites (Jimma University Hospital microbiology laboratory, Gondar University Hospital Laboratory, and Hawassa Hospital Laboratory) on how to enter data into the

Ethiopia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 21, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
training on data entry at the five Phase 2 human health AMR surveillance sites			<p>system. IDDS mentored three staff (one female) from Jimma, seven staff (four female) from Hawassa, and four staff (one female) from Gondar.</p> <p>The mentorship will continue in FY 2023 Q3.</p>
ETH-GHS-SURV-1.2: Support quarterly AMR surveillance review meetings to review progress and share best practices and lessons learned	Benchmark 9.3	In progress	<p>IDDS provided financial and technical support to a two-day AMR surveillance review meeting on February 15–16, 2023, in Gondar city, with high-level government officials, senior hospital management, regional health bureaus, and relevant federal government AMR One Health actors and international partner representatives. IDDS helped facilitate the meeting. This was followed by a site visit to the University of Gondar microbiology laboratory, which is one of the five human health AMR sites supported by IDDS. IDDS provided both financial and technical support for this surveillance review.</p> <p>The review meeting had the following objectives:</p> <ul style="list-style-type: none"> • To present the 2021–2022 annual AMR surveillance implementation report and findings • To identify AMR surveillance implementation gaps and challenges and seek possible solutions for the coming implementation years • To strengthen networking, coordination, and collaboration with relevant government sectors and international partners to address the AMR threat through strong advocacy for resource mobilization • To disseminate the 2022–2023 AMR surveillance operational plan and incorporate feedback from participants for further implementation and collaboration

Ethiopia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 21, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>The following key points were the outcome of the workshop:</p> <ul style="list-style-type: none"> • Disseminated the 2021–2022 AMR surveillance implementation findings and identified gaps for future improvement. • Shared best practices among AMR implementing partners. • Enhanced networking, collaboration, and partnership on AMR surveillance implementation among AMR One Health national key stakeholders and international partners.

Template for Country Inputs: FY 2023, Quarter 2 [Guinea]

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
GIN-GHS-NTW-I: Strengthen antimicrobial resistance (AMR) detection and surveillance through technical assistance (TA) at six supported regional laboratories plus Ignace Deen National Laboratory	Benchmark 3.2	In progress	
GIN-GHS-NTW-I.I: Provide TA, training, and mentorship on AMR data management and analysis to the IDDS-supported surveillance sites	Benchmark 3.2	In progress	<p>In collaboration with partners, IDDS provided technical advice to the director of the National Institute of Public Health (INSP) and the data management team to develop procedures and guidance documents to establish a data management unit at INSP.</p> <p>IDDS provided financial and technical support to an AMR TWG meeting on February 17, 2023, to discuss and address pending action items such as the development of the national AMR bulletin, as well as to discuss AMR governance and regulations, update partners on the project's progress in the labs for AMR surveillance, and to plan and coordinate amongst the different stakeholders. During the meeting, IDDS recommended that the letter of appointment for the GLASS focal point person be sent to the office of the Minister of Health as a priority for signature.</p>

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			IDDS and INSP also jointly mentored 10 staff (4 female) from the regional hospital laboratories of Mamou, Kankan, and Labe on WHONET, DHIS2, and AMR data management on March 12–31, 2023. This activity will continue in FY 2023 Q3.
GIN-GHS-NTW-1.2: Provide technical support to INSP to report national AMR data to the Global Antimicrobial Resistance Surveillance System	Benchmark 3.2	In progress	The person who will be working on data analysis and capturing AMR into the World Health Organization Global Antimicrobial Resistance Surveillance System has been identified, pending the signature of the appointment letter by the Minister of Health. Training and technical support is expected to start in FY 2023 Q3.
GIN-GHS-NTW-1.3: Provide Internet data connection to the IDDS-supported laboratories	Benchmark 3.2	In progress	IDDS provides Internet to IDDS-supported laboratories in Mamou, Kankan, Kindia, Faranah, and Labe to enable them to send weekly bacteriology and AMR results to INSP at the central level. This is a monthly recurrent cost supported by IDDS.
GIN-GHS-NTW-3: Build capacity of four regional laboratories to detect antimicrobial resistance and priority IDSR (integrated disease surveillance and response)/epidemic-prone diseases by	Benchmark 7.1	In progress	

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
reinforcing skills and competencies in quality assurance, microbiology/antibiotic susceptibility testing and immunology/serology			
GIN-GHS-NTW-3.1: Enhance the implementation of laboratory quality management systems by supporting internal quality control and external quality assurance testing at the three existing AMR surveillance sites	Benchmark 7.1	In progress	<p>Internal quality control data are reviewed during site supportive supervision visits by the IDDS diagnostic specialist team. This quarter, IDDS provided supportive supervision visits to 38 staff (6 female) from five IDDS-supported laboratories in Mamou, Kankan, Labe, Kindia, and Faranah during which internal quality control data were reviewed.</p> <p>IDDS developed and revised 26 quality management system (QMS) documents for bacteriology and antimicrobial susceptibility testing including:</p> <ul style="list-style-type: none"> - 20 SOPs on testing and QMS - 5 documents on equipment maintenance - 1 document on reagent and supplies management
GIN-GHS-NTW-3.2: Facilitate monthly supportive supervision visits to improve the implementation of the	Benchmark 7.1	In progress	IDDS provided supportive supervision visits to the IDDS-supported regional hospital laboratories, specifically those in Mamou, Kankan, Labe, Kindia, and Faranah. Quality management systems, laboratory results, stock management, and equipment maintenance documents were reviewed, and corrective actions were developed for the laboratories in which gaps were identified.

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
quality management systems at the IDDS-supported laboratories			
GIN-GHS-NTW-3.4: Procure basic equipment and reagents to set up bacteriology and serology unit at Nzérékoré Regional Laboratory	Benchmark 7.1	In Progress	Procurement is ongoing. The vendor encountered difficulties delivering the reagent, equipment, and supplies in FY 2023 Q2 as planned. IDDS continues to follow up with him to finalize a new delivery date. This has been a challenge because it has delayed the implementation of activity GIN-GHS-NTW-3.6.
GIN-GHS-NTW-3.5: Conduct training of laboratory technicians on basic microbiology and serology at Nzérékoré Regional Laboratory	Benchmark 7.1	In progress	IDDS conducted training for four laboratory technicians (all male) on basic microbiology and serology.
GIN-GHS-NTW-3.6: Conduct mentoring of laboratory technicians on microbiology at	Benchmark 7.1	Not started	This activity is pending the completion of activity GIN-GHS-NTW-3.4. It is planned for FY 2023 Q3.

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
Nzérékoré Laboratory			
GIN-GHS-NTW-4: Strengthen the ability to test for priority zoonotic diseases including Lassa, Ebola and Marburg	Benchmark 7.3	In progress	
GIN-GHS-NTW-4.1: Train staff on Lassa fever testing if necessary and monitor the quality of testing	Benchmark 7.3	Not started	This activity is pending the completion of activity GIN-GHS-NTW-4.2.
GIN-GHS-NTW-4.2: Purchase and deliver viral hemorrhagic fever reagents to testing laboratories	Benchmark 7.3	In progress	Procurement of reagents is ongoing. IDDS expects the reagents to be delivered in FY 2023 Q3.
GIN-GHS-NTW-5: Support the extension of an integrated specimen referral system in Nzérékoré, Kankan, and Labe regions and consolidate	Benchmark 7.2	In progress	

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
implementation in the first three supported regions			
GIN-GHS-NTW-5.1: Provide financial support and TA for an integrated specimen referral system in three existing regions and three new regions	Benchmark 7.2	In progress	IDDS provides Internet and call data to the Ministry of Health focal points at the hubs and covers transport costs for the public transport union. This is a monthly recurrent cost supported by IDDS.
GIN-GHS-NTW-5.2: Provide TA to the Ministry of Health, INSP, and Direction Nationale des Laboratoires to roll out of the integrated specimen referral system developed and piloted by IDDS to additional regions not supported by IDDS	Benchmark 7.2	In progress	IDDS collaborated with the Gates Foundation and the Centers for Disease Control and Prevention to expand the specimen referral system to all 33 health districts in Guinea, thereby covering the entire health network in country, from the health posts to the health centers to the prefectures and regions to the reference laboratories. IDDS directly supports approximately 30 percent of the health districts.

Guinea GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
GIN-GHS-NTW-6: Support laboratory mapping	Benchmark 7.3	Not started	
GIN-GHS-NTW-6.1: Organize training on use of the laboratory mapping database for data analysis for 3 participants	Benchmark 7.3	Not started	IDDS is in discussion with the Mali team to conduct a virtual regional laboratory mapping training; the training date has not yet been identified but is anticipated for FY 2023 Q3.
GIN-GHS-NTW-6.2: Develop a flowchart and a plan describing the coordination of information between laboratories at different levels of the health network and laboratories of the animal health sector	Benchmark 7.3	Not started	This activity depends on the implementation of activity GIN-GHS-NTW-6.1 and is anticipated for FY 2023 Q3.

FY 2023, Quarter 2 [India]

India GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: Approved with contingencies on December 13, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
IND-GHS-NTW-I: Support the National Center for Disease Control (NCDC) and identified laboratory(ies)/ laboratory networks for antimicrobial resistance (AMR) containment and surveillance and strengthen National One Health Program for surveillance of emerging zoonotic infections	Benchmark 3.1 Benchmark 3.2 Benchmark 4.2	In progress	
IND-GHS-NTW-I.1: Provide technical and managerial support for the development of a new National Action Plan on Antimicrobial Resistance (NAP-AMR) (2022-2026)	Benchmark 3.1	In progress	<p>IDDS is in the process of finalizing a comprehensive report on the recommendations from three recent meetings on the development of the revised NAP-AMR 2.0. IDDS convened the multisectoral meeting, and IDDS members were present to lead several technical sessions.</p> <p>IDDS shared the meeting summary report with National Centre for Disease Control (NCDC) for their feedback and approval in January 2023. This summary report captured the feedback from more than 50 national experts, who represented several sectors from the national level. In addition, experts from both public and private sectors contributed. The participants included program</p>

India GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: Approved with contingencies on December 13, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
with the leadership of NCDC			<p>managers (national health programs and state AMR action plans), clinicians, microbiologists, public health professionals, health administrators, researchers, veterinarians, academicians, international development partners, and several members of civil society organizations.</p> <p>On March 30, 2023, IDDS submitted the first draft of the NAP framework and proposed strategic and operational plans with NCDC for their input.</p> <p>The outcomes from these three expert consultation meetings are informing the inputs for the revised NAP-AMR 2.0, which IDDS is currently developing, in collaboration with NCDC.</p>
IND-GHS-NTW-1.2: Support development of the State Action Plan on Containment of Antimicrobial Resistance (SAP-CAR) for the identified state(s) aligned to NAP-AMR	Benchmark 3.1	In progress	<p>The SAP-CAR meeting, which was planned for February 16–17, 2023, in the State of Sikkim, was postponed due to political unrest in the state and is now planned for FY 2023 Q3. IDDS has prepared an agenda and a set of worksheets for meeting attendees to participate in a group work activity. The worksheets focus on each of the strategic priorities outlined in the SAP-CAR and provide participants with question prompts on the status of activity implementation in alignment with the SAP-CAR, any required additional activities to support the SAP-CAR, the responsible agencies that are to implement the required activities, and the identified mechanisms or requirements for successful implementation of activities within each strategic priority. IDDS has shared the worksheets and proposed agenda with NCDC, and their concurrence is currently pending.</p>
IND-GHS-NTW-1.3: Develop and demonstrate a model of district level AMR	Benchmark 3.2	In progress	<p>IDDS led the development of a laboratory assessment tool to assess district-level laboratories to determine their current AMR surveillance capacity in terms of infrastructure, human resources, testing capacity, etc., and identify any gaps or weaknesses for priority action. IDDS shared the assessment tool with NCDC on</p>

India GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: Approved with contingencies on December 13, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
surveillance in the identified district(s) of selected state			January 4, 2023, and revised it based on their feedback. IDDS identified the State of Punjab for piloting the assessment tool, and a meeting with all the districts is being planned for FY 2023 Q3.
IND-GHS-NTW-I.4: Establishing Technical Support Units at NCDC – strengthen the AMR containment and surveillance, and Zoonosis Disease Program (for emerging zoonotic infections)	Benchmark 3.1 Benchmark 4.2	Not started	IDDS hired two consultants to support the establishment of a technical support unit in the NCDC AMR division. One consultant started on January 17, 2023, and will focus primarily on implementation of the SAP-CAR meetings, and the other consultant will start in FY 2023 Q3 and will focus primarily on the implementation of the district -level assessment.
IND-GHS-NTW-I.5: Support strengthening the National Reference Laboratory capacity at NCDC by providing critical equipment to conduct External Quality Assurance Scheme for network laboratories	Benchmark 3.2	In progress	IDDS met with NCDC to review their procurement needs. NCDC leadership is drafting a list of required consumables for procurement to support their role as the National Reference Laboratory. After the gaps have been identified and the procurement request has been received, IDDS will work with local and regional vendors to procure the requested supplies.

<div> <div>India GHS</div> <div>Work plan period of performance: October 1, 2022—July 31, 2023</div> <div>Work plan approval date: Approved with contingencies on December 13, 2022</div> </div>			
Activity	IHR benchmark	Status	Activity implementation updates
conducting AMR surveillance			

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
IDN-GHS-NTW-I: Support the One Health Laboratory Network (OHLN) Sub-Working Group (SWG)	Benchmark 4.1 Benchmark 7.1	In progress	
NTW-I.1: Support and facilitate regular One Health Laboratory Network SWG meetings	Benchmark 4.1	In progress	<p>IDDS facilitated a preparation meeting for the leptospirosis systematic review. The meeting was conducted at the Ministry of Agriculture on January 26, 2023, and was attended by IDDS and staff from the Animal Health Surveillance Division, with a total of 10 participants. In the preparation meeting, participants reviewed the current existing data on leptospirosis distribution in Indonesia, reviewed several journal articles and scientific papers about leptospirosis in Indonesia, and developed the initial variables that will be collected. Meeting participants also agreed to conduct two focus group discussions (FGD) in FY 2023 Q3 with representatives from ministries and national and local laboratories to identify the variables that will be collected and the documents that need to be put in place regarding leptospirosis in Indonesia, such as policies, procedures, and guidelines.</p> <p>All relevant parties (experts and staff from ministries and labs) will be invited to the next meeting, planned for FY 2023 Q3, at which the variables to be collected will be presented and policy recommendations will be drafted to support leptospirosis control and prevention.</p>

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
NTW-I.4: Support and facilitate PREDICT Laboratory Protocol training	Benchmark 4.1 Benchmark 7.1	In progress	This activity has been scheduled for FY 2023 Q3. IDDS, in collaboration with the Ministry of Health (MoH), will conduct a monitoring and evaluation visit in one selected laboratory, the Center for Environmental Health Engineering and Disease Control Lab (BTKLPP) in Makassar, and will perform monitoring and evaluation online for the other three laboratories (BTKLPP in Batam, Manado, and Ambon) that were trained on the PREDICT Protocol.
IDN-GHS-SURV-I: Integrate Laboratory and Surveillance Systems and Revitalize 4-Way Linking (4WL)	Benchmark 4.1	Not started	
SURV-I.3: Develop a 4WL Guideline revitalization review document based on the workshop result with Government of Indonesia (GoI) stakeholders	Benchmark 4.1	Not started	The 4WL Guideline was piloted in select GoI districts to ensure the implementation ran smoothly. The aim of this activity is to share lessons learned from IDDS project implementation results in the form of a policy brief. The 4WL Guideline revitalization review document will be developed in FY 2023 Q4 once the pilot implementation is complete. The policy brief will be developed by the GoI SWG team, and it will include the technical guidelines for implementation of the 4WL Guidelines to be shared and used by other districts.
SURV-I.5: Develop/revise the 4WL document to revitalize 4WL	Benchmark 4.1	Not started	The activity will support the finalization of a new MoH role, Coordinating Minister of Human Development and Culture Affairs Regulation (Permenko PMK No. 7 year 2022), whose job will be important for integrated surveillance, 4WL, and the Zoonosis and

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
implementation for various diseases			Emerging Infectious Disease Information System (SIZE) implementation in Indonesia. The activity will be held in Central Java in FY 2023 Q3.
IDN-GHS-SURV-2: Advance National Surveillance Integration in Indonesia	Benchmark 4.1	In progress	
SURV-2.1: Support and facilitate regular Integrated Surveillance SWG	Benchmark 4.1	In progress	Together with other relevant ministries, institutions, and international development partners, IDDS supported the launch of the Regulation of the Coordinating Minister of Human Development and Cultural Affairs (Permenko PMK) on March 8, 2023. This regulation included a SIZE roadmap, Integrated Surveillance Guidelines, and 4WL Guidelines as annexes, developed with technical and financial support from IDDS. The meeting was attended by 130 in-person participants and 346 online participants. IDDS also supported the launch event by helping organize regular planning meetings for the event, providing the SIZE and integrated surveillance poster, ensuring that hard copies and digital versions were furnished in English and Bahasa Indonesian, and ensuring that each participant received a hard copy version to keep in their district. The ambassadors of the U.S. and Australian embassies, and the heads of international development partners and relevant ministries and institutions attended the launch event, which was covered by several media outlets.
SURV-2.8: Support and facilitate the	Benchmark 4.1	In progress	In collaboration with the Directorate of Communicable Disease Control and Prevention, IDDS conducted a workshop on monitoring and evaluation of the pilot integrated surveillance on

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
development of a cross-sectoral integration surveillance system on zoonosis infectious emerging diseases (IEDs) and antimicrobial resistance/antimicrobial use (AMU) guideline			leptospirosis and formed a coordination team at the district level in Demak District, Central Java. The workshop was held on March 28–30, 2023, with a total of 48 participants (22 female), including teams from the various coordinating ministries, the team from Demak, District health office, IDDS staff, and representatives of other international development partners such as the Food and Agriculture Organization and the World Health Organization. The purpose of the workshop was to analyze and interpret integrated surveillance data on leptospirosis and evaluate the implementation progress of integrated surveillance on Leptospirosis in Demak District. In addition, IDDS assisted the Demak District health office team to draft a description of the coordination team's responsibility to prevent and control zoonosis and new infectious diseases.
IDN-GHS-SURV-3: Support the Development and Operationalization of SIZE 2.0	Benchmark 9.2	In progress	
SURV-3.3: Support the facilitation and reporting of the SIZE Coordination Group (CG) regular meeting	Benchmark 9.2	In progress	At the request of the MoH Surveillance and Health Quarantine Directorate, IDDS facilitated a coordination meeting of relevant development partners (World Health Organization, Food and Agriculture Organization, Centers for Disease Control and Prevention, International Federation of Red Cross and Red Crescent Societies, Japan International Cooperation Agency, Australia Indonesia Health Security Partnership, USAID GHS and Health Systems Strengthening, and Pusdatin (data center) and the MoH Digital Transformation Office to strengthen the Early Warning Alert and Response System (EWARS). The meeting took

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>place on February 20, 2023, with 30 participants (20 female). The objective of the meeting was to get an indication of partners' level of future support for EWARS. IDDS then mapped this support at the province and district/city levels and sent it to MoH. After EWARS is strengthened, it is expected to be integrated into and become interoperable with SIZE.</p> <p>IDDS also supported the Coordinating Ministry for Human Development and Cultural Affairs to conduct a coordination meeting to strengthen One Health through SIZE and the President's Detect and Prevent Disease Threats website (SIGAAP). This meeting took place through Zoom on March 27, 2023, with 29 participants (11 female). This meeting aimed to provide an update on the progress of the development of SIZE and SIGAAP and to coordinate further developments across the sector. IDDS's support consisted of helping identify relevant participants and presenters from different MoH offices who could provide updates on the regulations, infrastructure, and Internet maps being developed to ensure that SIZE and its interoperable systems are all accessible through the Internet.</p>
SURV-3.6: Support the development of a regulatory strategy for the operationalization of the SIZE	Benchmark 9.2	Not started	This activity will begin once IDDS receives GoI approval and after the Four Way Linking and SIZE is implemented in the eight districts training on the system.

Indonesia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: February 24, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
SURV-3.10: Conduct training for One Health concept and SIZE 2.0 for technical staff at a district level	Benchmark 9.2	In progress	This activity is delayed due to the challenges encountered in developing and upgrading SIZE according to the Gol's request. The training cannot be conducted yet, because the SIZE strategy has not been completed to cover other priority zoonoses beyond rabies. Instead, the Gol and USAID Mission in Indonesia asked IDDS to support the development phase, which is more important than training, because the implementing partners have not yet allocated resources to its development in their agreement with the ministry. The team will submit a revised workplan to USAID Washington for approval and execution in FY 2023 Q3.
SURV-3.11: Conduct the closeout event and dissemination of the final report	Benchmark 9.2	Not started	This activity is planned to begin in FY 2023 Q4.

Template for Country Inputs: FY 2023, Quarter 2 Kenya

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
KEN-GHS-NTW-I: Enhance national-level multi-sectoral antimicrobial resistance (AMR) detection and surveillance leadership and coordination	Benchmark 3.2	In progress	
KEN-GHS-NTW-I.1: Promote the AMR surveillance training course hosted on the Ministry of Health (MoH) virtual academy through digital and print methods, and during meetings such as the World Antimicrobial Awareness Week	Benchmark 3.2	In progress	IDDS continued to promote the AMR surveillance training course hosted on the MoH virtual academy through forums in which the project teams participated. The forums included the National AMR forum convened by National Antimicrobial Stewardship Interagency Committee (NASIC), held February 25–27, 2023, the Nyeri County Antimicrobial Stewardship Interagency Committee (CASIC) work plan review meeting, and the national AMR extension of community health outcomes sessions convened biweekly by the National Public Health Laboratories (NPHL). In all these sessions, IDDS reminded participants of the training course either during presentations or during remarks on the training and directed them to the link for it.
KEN-GHS-NTW-I.2: Monitor enrollment and	Benchmark 3.2	In progress	To increase completion rates, IDDS continued to collaborate with USAID Health IT and course managers to support learners enrolled in the AMR course hosted on the MoH virtual academy. Course managers actively responded to

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
completion of the AMR surveillance training course on the MoH virtual academy, conduct a refresher training for trainers and mentors, and actively support learners to navigate through the course (directly and on interactive forums) to improve course completion rates			learners' questions and participated in the discussion forums, and learners who failed to pass module quizzes were given one additional attempt to pass. Automatic progress reminders through emails were activated so that learners received periodic reminders. During January–March 2023, course enrollments rose to 1,419 from 1,276 in December 2022, and completion rates stood at 20.5 percent. Refresher training for course managers will be conducted in FY 2023 Q4.
KEN-GHS-NTW-1.3: Provide technical assistance (TA) to MoH and work with the Health IT project to advocate for a waiver of the annual course accreditation fees by the regulatory bodies. This will ensure	Benchmark 3.2	Not started	The activity is expected to begin in FY 2023 Q3.

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
regulatory bodies that have previously accredited the course, for award of continuous professional development points, maintain the accreditation status, and new regulatory bodies accredit the course to promote uptake by targeted learners.			
KEN-GHS-NTW-1.4: Participate in NASIC and CASIC activities, and provide technical inputs during the revision of national and county documents on AMR prevention and control in Kenya	Benchmark 3.2	In progress	<p>IDDS participated in one national forum convened by NASIC and two subnational AMR forums convened by the Nyeri CASIC.</p> <p>On February 22–24, 2023, IDDS participated in a national AMR forum convened by NASIC to sensitize national and subnational laboratory mentors and trainers on the national mentorship framework developed to guide capacity strengthening across all AMR prevention and containment strategic objectives. Representatives of all key AMR stakeholders in the country working at both national and subnational levels attended the forum. IDDS shared lessons gathered and key considerations in establishing integrated specimen referral systems (SRS) inclusive of bacteriology specimens.</p> <p>On January 11–12, 2023, IDDS participated in the Nyeri CASIC forum convened to undertake an end-term review of its two-year CASIC work plan</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			(2020–2022). During the CASIC work plan period under review, IDDS contributed mainly to the implementation of activities under AMR surveillance and partially to activities under antimicrobial stewardship (AMS) and AMR awareness among health care workers. Key achievements realized in collaboration with the county and other stakeholders under this AMR surveillance strategic objective included the following: (1) sensitization and training of health care workers to raise awareness and promote surveillance of AMR in the county; (2) training and mentorship to three laboratory technologists in bacteriology techniques; (3) placement of two technologists for training and mentorship at Aga Khan University hospital, an internationally recognized health facility; (4) training of three staff from Nyeri County Referral Hospital on AMR data management and analysis using WHONET software; (5) sensitization forums in which more than 500 health care workers were sensitized on AMR and diagnostic stewardship; (5) advocacy for acquisition of automated bacteriology equipment to enhance efficiency of the laboratory in delivering bacteriology services; (6) support for two clinical laboratory interface forums; (7) provision of TA in collation and analysis of AMR surveillance collected at Nyeri County Referral Hospital for preliminary AMR trends; and (8) promotion and dissemination of AMR surveillance findings and lessons gathered in laboratory capacity strengthening through conferences.
KEN-GHS-NTW-2: Strengthen diagnostic services in five county referral hospitals	Benchmark 3.2	In progress	
KEN-GHS-NTW-2.1: Provide	Benchmark 3.2	In progress	IDDS provided TA to address diagnostic and surveillance gaps during on-site mentorship visits to four of the five IDDS-supported surveillance sites

Kenya GHS			
Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
quarterly virtual and onsite mentorship to the five IDDS-supported surveillance sites to address any diagnostic and surveillance gaps			<p>(Bungoma, Kitale, Murang'a, and Nyeri Counties). The fifth IDDS--supported surveillance site (Malindi) will receive its mentorship visit in FY 2023 Q3. The on-site visits were conducted for two days for each site: Murang'a County Referral Hospital (March 13–14, 2023), Nyeri County Referral Hospital (March 16–17, 2023), Bungoma County Referral Hospital (March 20–21, 2023), and Kitale County Referral Hospital (March 23–24, 2023). The visits followed the laboratories' assessment of antibiotic resistance testing and surveillance capacity conducted in February and March 2023 using the Laboratory Assessment of Antibiotic Resistance Testing Capacity (LAARC) tool. LAARC is a laboratory assessment tool for use in clinical bacteriology laboratories in low- and middle-income countries.</p> <p>During the on-site mentoring visits, IDDS diagnostic specialists monitored adherence to standard practices in specimen processing and antimicrobial susceptibility testing (AST) and offered mentorship to improve the skills and competency of microbiology technologists to deliver quality diagnostic services. A total of 10 (1 female) laboratory technologists were mentored during the visits: 2 in Murang'a County Referral Hospital, 2 in Nyeri County Referral Hospital, 3 in Bungoma County Referral Hospital (including 2 male students on clinical attachment), and 3 (1 female) in Kitale County Referral Hospital Laboratory. The IDDS team also reviewed the gaps in surveillance and diagnostic capacity identified during the antibiotic resistance testing and surveillance capacity assessment and helped develop improvement action plans to address the gaps. The assessment findings will be addressed as a means of continual quality improvement and strengthening the availability of quality diagnostic capacity for detection of antimicrobial resistance and utilization.</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
KEN-GHS-NTW-2.2: Engage with the five IDDS-supported county leadership and equipment vendors to secure three-year equipment maintenance service contracts for the counties to strengthen microbiology equipment preventive maintenance to guarantee service continuity and quality	Benchmark 3.2	In progress	<p>As part of its engagement with new county leadership (SURV-3.4), IDDS held discussions on equipment preventive maintenance in the following project counties: Nyeri (March 21, 2023), Murang'a (March 23, 2023), Bungoma (March 29, 2023), and Trans Nzoia (March 30, 2023). During these visits, IDDS advocated for equipment maintenance and calibration of auxiliary and automated equipment. County leadership promised to commit budgets for service contracts to guarantee service continuity and quality service. IDDS will continue to follow up with the counties for actualization of the commitments. Calibrated and serviced quality equipment will guarantee the validity and reliability of laboratory tests results needed to inform decision-making in patient management and to generate quality AMR surveillance data. IDDS procured one-year service contracts for automated identification and AST equipment, which had remained nonfunctional since 2019 for Kitale and Malindi county hospitals.</p> <p>IDDS will hold discussions with Malindi County in Q3.</p>
KEN-GHS-NTW-2.3: Procure limited buffer reagents to support Murang'a county to avoid service interruption and ensure automation of	Benchmark 3.2	In progress	IDDS has identified the supplies that are required and will initiate the actual procurement when Murang'a County commits itself to the equipment placement through a contract with the vendor. IDDS is advocating with the county for the placement of automated organism identification and AST equipment (see NTW-2.4).

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
bacteriology services			
KEN-GHS-NTW-2.4: Facilitate engagement between Murang'a County Referral Hospital and equipment placement vendors to acquire and place automated organism identification and AST equipment in the hospital	Benchmark 3.2	In progress	<p>On January 30, 2023, IDDS held discussions with the county director of health, the hospital medical superintendent, and the laboratory team at Murang'a County Referral Hospital on the need to procure and place automated equipment in Murang'a. The leadership agreed in principle to acquire the platform on placement terms. IDDS supported the county technical team to develop a concept note on the equipment acquisition to be shared with the county health management team.</p> <p>On March 23, IDDS held discussions with the Murang'a County health management team, led by the county executive committee member for health, and deliberated on the concept note on acquisition of the equipment on placement terms. The county executive committee member for health promised to escalate the discussion to the office of county governor to minimize procurement bureaucracies that could lengthen the process. IDDS will continue to follow-up, monitor progress, and provide assistance in the placement process as needed.</p>
KEN-GHS-NTW-2.5: Organize semi-annual virtual AMR forums between counties and partners to share lessons and learn from each other about AMR	Benchmark 3.2	Not started	<p>This activity has not been conducted due to other competing priorities for IDDS, NASIC, and the counties. However, teams from IDDS sites participated in two national forums organized by NASIC with the support of other partners during the quarter. The forums provided an opportunity for the sites to share their experiences and learn from each other.</p> <p>IDDS is making efforts to organize a forum in FY 2023 Q3.</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
surveillance, including external quality control aspects			
KEN-GHS-NTW-2.6: Organize quarterly national webinars on select bacteriology and AMR surveillance topics to strengthen AMR surveillance detection and surveillance	Benchmark 3.2	Not started	IDDS plans to conduct a webinar in FY 2023 Q3.
KEN-GHS-NTW-2.7: Support preventive maintenance of microbiology equipment (i.e., servicing of automated equipment and calibration of select auxiliary equipment) in the five IDDS-	Benchmark 3.2	Completed	IDDS secured a one-year service maintenance contract for repair and servicing of VITEK 2 Compact, automated organism identification and AST equipment at Kitale and Malindi County laboratories. The two pieces of equipment have not been working since 2018. Through the support of IDDS, the repair and servicing of the equipment at Kitale and Malindi laboratories was successfully completed on January 25, 2023, and February 9, 2023, respectively. To revive the two machines, the Pentium computer was replaced to be compatible with software upgrades. The LCD on the Vitek platform in the Kitale laboratory was found to be faulty, and the vendor successfully replaced this as part of the service contract. Personnel were trained on how to maneuver function keys in the new software. The service contract will guarantee planned preventive

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
supported AMR surveillance sites			maintenance of the equipment and timely response to any breakdown, thus contributing to effective delivery of health care services in the two sites.
KEN-GHS-NTW-3: Increase demand and utilization of diagnostic capacity established at the five IDDS-supported county referral hospitals laboratories	Benchmark 7.2	In progress	
KEN-GHS-NTW-3.1: Provide virtual TA to Murang'a and Bungoma counties to convene quarterly SRS technical working groups (TWGs), to coordinate referral of all specimens in the county. IDDS will help to analyze specimen referral data and prepare presentations for the meetings.	Benchmark 7.2	Completed	<p>IDDS provided TA to Bungoma and Murang'a Counties to convene their quarterly SRS TWGs and to Trans-Nzoia County to convene its inaugural SRS TWG. The forums were attended by the respective counties' SRS TWG members and implementing partners, and chaired by county medical laboratory coordinators.</p> <p>In Bungoma and Murang'a Counties, the TWGs reviewed tuberculosis, HIV, and bacteriology specimen referral activities and discussed solutions to challenges that hampered efficiency of the systems in the respective counties. Across the two counties, the number of bacteriology specimens referred had slowed, and motor bike fueling and servicing challenges persisted in Murang'a County. IDDS will continue to collaborate with the counties to sensitize clinicians from high-volume peripheral health facilities to increase the number of specimens referred. Due to funding challenges by county governments, counties such as Murang'a had resolved to reduce specimen pickup and dropoff frequency to cope with the situation. IDDS has been providing logistical assistance to ensure that bacteriology specimens collected at the peripheral health facilities are</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>picked up and dropped off within required timelines at the bacteriology testing hubs.</p> <p>In Murang'a County, the SRS TWG was convened on February 7, 2023, with county and sub-county health management teams, rider representatives, and partners (IDDS, LVCT Health, and Respiratory Society of Kenya) attending. In Bungoma County, the forum was convened on March 21, 2023, with county and sub-county health management teams, representatives from private facilities, and implementing partners (IDDS, USAID Dunisha, and Kenya AIDS Non-governmental Consortium), which support SRS in the county, attending. The inaugural SRS TWG in Trans-Nzoia was convened on March 23, 2023, with representatives from the county, sub counties, private facilities, and implementing partners (USAID Uzima and IDDS) attending.</p>
KEN-GHS-NTW-3.2: Continue to support bacteriology specimen referral in Murang'a and Bungoma counties by supplementing transportation costs	Benchmark 7.2	In progress	<p>IDDS continued to provide financial support to specimen referral activities in Bungoma and Murang'a Counties. Between January and March 2023, a total of 107 specimens were referred to 4 of the 5 IDDS-supported bacteriology testing hubs by 9 government-owned public health facilities (Bungoma: 15, Murang'a: 52, Kitale: 21, Malindi: 19) and a total of 13 specimens were referred by 4 private health facilities (Bungoma: 4, Murang'a: 4, Kitale: 2, Malindi: 3). The project will continue to collaborate with other stakeholders to raise awareness of AMR in the respective counties. The slowdown in bacteriology specimen referral activities in two counties actively supported by IDDS for bacteriology specimen referral (Bungoma and Murang'a) formed part of the discussions during the TWG sessions convened this quarter, as well as with discussions with the county leadership during the engagement visits. IDDS also began efforts to support Trans-Nzoia and Nyeri Counties to be able to implement</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			bacteriology specimen referral. Trans-Nzoia County has since been able to convene its SRS TWG with IDDS technical and logistical assistance.
KEN-GHS-NTW-3.3: Provide TA to the IDDS-supported sites to convene clinical-laboratory interface meetings on a quarterly basis. IDDS will support the sites to prepare resource materials (e.g., presentations) to be used during the meetings	Benchmark 7.2	In progress	<p>IDDS provided TA to the Nyeri County Referral Hospital laboratory team to analyze its bacteriology data and prepare a presentation that was made during the hospital's medicines and therapeutics committee (MTC) meeting. The presentation highlighted the laboratory's progress in improving its capacity to offer quality-assured bacteriology tests and the challenges that it still faces that required attention of clinical department heads, especially filling of request forms that affect the completeness of AMR surveillance data and the low uptake of bacteriology tests in the facility by clinicians. The MTC forum was convened on March 22, 2023, with 12 clinicians/nurses leading the hospital clinical departments and the hospital AMS coordinator, pharmacist, laboratory manager, and microbiologist attending.</p> <p>In FY 2023 Q3, IDDS will continue to provide technical and logistical assistance to the supported counties to hold clinical-laboratory interface meetings, as IDDS did during FY 2023 Q1 during World Antimicrobial Awareness Week 2022 celebrations, to promote uptake of bacteriology services and local use of AMR data.</p>
KEN-GHS-NTW-3.4: Monitor bacteriology isolate referral from the surveillance sites to the National Microbiology	Benchmark 7.2	In progress	IDDS continued to track isolates referral by surveillance sites. A total of 146 bacterial isolates were referred between January and March 2023. All five IDDS-supported surveillance sites and seven other laboratories in the national AMR surveillance network were able to refer isolates to NMRL for quality control. The range of isolates referred included <i>Acinetobacter spp.</i> , <i>Salmonella spp.</i> , <i>Shigella spp.</i> , multidrug resistant <i>E. coli</i> , and methicillin-resistant

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
Reference Laboratory (NMRL) for retesting (as part of external quality assessment [EQA]) and provide support to the surveillance sites to transport the isolates on a need basis			<i>Staphylococcus aureus</i> . Only six packages were shipped to NMRL with the support of IDDS for urgent rechecking of resistance profiles reported by surveillance sites. All other packages this quarter were shipped using existing specimen referral mechanisms. IDDS also built capacity of the NMRL team to manage and analyze isolate retesting data between January and February 2023, using an on-job-training approach in which the NMRL team and IDDS staff jointly cleaned and analyzed the data. Isolate retesting reports were dispatched by NMRL to the surveillance sites on March 9, 2023.
KEN-GHS-NTW-3.5: Provide TA to NMRL to develop a bacteriology isolates biorepository by preparing an excel-based tool and a standard operating procedure (SOP) for bacteriology isolates from the counties and those from outbreak response activities	Benchmark 7.2	In progress	In collaboration with other stakeholders, IDDS made progress in providing TA to the NMRL to establish an isolate biorepository. The Kenya Medical Research Institute trained staff on biorepository management on February 6–13, 2023. An inventory of isolates in the custody of NMRL is currently in progress, using a simple Excel tool, which NMRL developed with IDDS support. After licenses are acquired, these data will be exported to a biorepository software. IDDS also supported NMRL to draft a SOP for repository management; this SOP is currently undergoing review.

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
KEN-GHS-NTW-4: Provide assistance to surveillance sites to maintain their Kenya Accreditation Service International Standards Organization accreditation status, as part of the continuous quality improvement monitoring	Benchmark 7.4	In progress	
KEN-GHS-NTW-4.1: Provide TA to the five IDDS-supported sites to monitor internal quality controls using key performance indicators such as blood culture contamination rates and specimen rejection rates, and by reviewing the facilities' own clinicians/customer	Benchmark 7.4	In progress	IDDS continued to monitor key performance indicators (KPIs) from the five IDDS-supported surveillance sites. Monitoring of KPIs is an important quality assurance indicator of laboratory performance. The KPIs being monitored include blood culture contamination rates and specimen rejection rates, both of which are monitored monthly. Facilities' own clinician/customer satisfaction surveys will be reviewed after one year. During the six- month period between October 2022 and March 2023, a total of 1,352 blood cultures were collected from Bungoma County Referral Hospital, 635 from Kitale County Referral Hospital, 37 from Malindi Sub-county Hospital, and 157 from Nyeri County Referral Hospital. Contamination rates were reported as follows: Bungoma County Referral Hospital had 91 contaminants (6.7 percent), Kitale County Referral Hospital had 24 contaminants (3.8 percent), Malindi Sub-county Hospital had no contaminants recorded, and Nyeri County Referral Hospital had 3 contaminants (1.9 percent). In the four sites, the contamination rate ranged within the normal limits. All isolated organisms were from the normal commensal flora or air contamination. There is a need for strict disinfection

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
satisfaction surveys done annually as part of the accreditation requirements			procedures to be followed with hand hygiene and regular training of health care workers. IDDS will continue to monitor the contamination rate as part of the quality indicators that are being monitored by accreditation bodies in microbiology and so that preventative measures can be taken in the future.
KEN-GHS-NTW-4.2: Monitor the five sites' EQA performance on a quarterly basis and assist the sites to take corrective actions to maintain their accreditation statuses	Benchmark 7.4	In progress	IDDS continued to monitor EQA performance of the five IDDS-supported sites on a quarterly basis, to identify poor performance, detect analytical errors, and document and take corrective actions. External Quality Assessment-Africa (EQuAFRICA) and NMRL carried out the EQA for the five IDDS-supported surveillance sites in November 2022. The laboratories posted EQuAFRICA cycle three results as follows in January and February 2023: Bungoma County Hospital (100 percent), Kitale County Referral Hospital (100 percent), Malindi Sub-County Referral Hospital (100 percent), Murang'a County Referral Hospital (98 percent), and Nyeri County Referral Hospital (92 percent). Participation in EQA enables an evaluation of the performance of the individual laboratory and its systems and instruments. Therefore, proper and timely evaluation of EQA survey reports is essential and a requirement for ISO 15189 accreditation. Although all the sites passed the EQA, IDDS diagnostic specialists reviewed the findings with staff from the two sites (Murang'a and Nyeri) that did not score 100 percent to identify and address the gaps. Some of the issues identified were missed organism identity. In FY 2023 Q3, IDDS will continue to monitor performance and assist the sites to take appropriate preventive and corrective actions.
KEN-GHS-NTW-4.3: Provide TA to NASIC and the	Benchmark 7.4	In progress	IDDS provided TA to NASIC and the IDDS-supported sites to update 10 bacteriology SOPs on the following: culture media preparation; specimen collection, transportation, and processing; bacteria isolation; organism

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
IDDS-supported sites to update bacteriology SOPs. Carry out a desk review and compile a list of amendments that need to be made for various SOPs			identification; AST, using manual, semi-automated, and automated methods and other quality assurance procedures; quality control of culture media, reagents, and stains; maintenance and storage of isolates to ensure consistency in performing laboratory activities for AMR on selected pathogens; and operation of automated equipment for identification and susceptibility testing. The SOP review ensures that all steps to be followed for the tests are well captured. IDDS had provided TA to NASIC in FY 2019 to review 60 technical AMR SOPs and 20 quality assurance SOPs which were later customized by surveillance sites to do the following: provide uniformity, consistency, repeatability, and reliability for each of the activities performed in the laboratory; reduce systematic errors; and introduce the total quality system in the surveillance laboratories in the country. Using the SOP monitoring log, IDDS will continue to monitor progress of the customization and adoption of other SOPs. During on-site and remote mentorship sessions, laboratory personnel will be trained on adherence to SOPs during every activity performed in the laboratory. IDDS will review bacteriology culture worksheets during on-site mentorship visits to monitor adherence to the technical steps and quality assurance practices in laboratory testing.
KEN-GHS-SURV-I: Strengthen AMR surveillance data analysis and use at the county and national levels	Benchmark 3.2	In progress	
KEN-GHS-SURV-I.1: Conduct on-	Benchmark 3.2	Not started	The activity will take place in FY 2023 Q3.

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
the-job, hands-on WHONET refresher trainings in the five IDDS-supported AMR surveillance sites			
KEN-GHS-SURV-1.2: On a monthly basis, review AMR surveillance data submitted to the Central Data Warehouse (CDW) from IDDS-supported and other AMR surveillance sites, and monthly workload data submitted to IDDS from the sites	Benchmark 3.2	In progress	IDDS continued to monitor AMR detection and surveillance activity progress at the surveillance sites. All sites continued to provide uninterrupted organism identification and AST services. A total of 2,523 bacteriology culture tests were conducted, and 372 organisms were isolated from January to March 2023, compared to 1,379 tests and 308 isolates identified during a similar period in FY 2022. The tests conducted and organisms isolated this quarter bring the total number of culture tests done from October 2022 to March 2023 to 4,780, with 731 organisms isolated. The commonly isolated organisms across the 5 sites from January to March 2023 were <i>Escherichia coli</i> (89), <i>Staphylococcus aureus</i> (73), and <i>Klebsiella spp.</i> (57). This is consistent with the national bacterial isolation patterns published in the National AMR Surveillance Reports of 2021 and 2022 and the FY 2023 Q1 report, which showed that <i>Staphylococcus aureus</i> and <i>Escherichia coli</i> are the most commonly isolated priority pathogens in Kenya. However, more <i>Klebsiella spp.</i> organisms were isolated during this quarter as compared to previous quarters. Other priority pathogens isolated from the five IDDS-supported sites from January to March 2023 were <i>Pseudomonas aeruginosa</i> (18), <i>Acinetobacter spp.</i> (8), <i>Salmonella typhi</i> (7), <i>Streptococcus pneumonia</i> (1), and <i>Shigella spp.</i> (1).
KEN-GHS-SURV-2: Enhance AMR	Benchmark 3.2	In progress	

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
surveillance data quality, sharing, and use within and across sectors and partners			
KEN-GHS-SURV-2.3: Provide TA to the surveillance sites and NASIC to analyze and disseminate AMR surveillance data, within and outside the IDDS-supported counties	Benchmark 3.2	In progress	<p>As reported in NTW-3.3, IDDS provided TA to the Nyeri County Referral Hospital laboratory team to analyze its bacteriology data and prepare a presentation, which was done during the hospital (MTC meeting). The presentation highlighted the laboratory's progress in improving its capacity to offer quality-assured bacteriology tests and the challenges that it still faces requiring the attention of clinical department heads, especially the filling of request forms that affects the completeness of AMR surveillance data and the low uptake of bacteriology tests in the facility by clinicians. The MTC forum was convened on March 22, 2023, with 12 clinicians and nurses who lead the hospital clinical departments, the hospital AMS coordinator, the hospital pharmacist, the laboratory manager, and the hospital microbiologist attending.</p> <p>IDDS also provided assistance to Nyeri and Murang'a to analyze data and prepare presentations made to the county management teams during the engagement with the new county leadership, as reported in SURV-3.3.</p>
KEN-GHS-SURV-2.5: Provide TA to Bungoma and Murang'a surveillance sites to initiate development of antibiograms/	Benchmark 3.2	In progress	Using data analyzed with IDDS support, Murang'a and Bungoma counties prepared antibiograms on the key isolates (<i>E. coli</i> from urine, and <i>Staphylococcus aureus</i>) that have adequate volumes of isolates and ASTs. In FY 2023 Q3 and Q4, IDDS will continue to work with the sites to refine their antibiograms.

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
antibiotic formulary/treatment guidelines based on the AMR surveillance data from the sites			
KEN-GHS-SURV-3: Strengthen national- and county-level integration and use of information systems to manage AMR surveillance data	Benchmark 3.2	In progress	
KEN-GHS-SURV-3.1: Provide TA to the NPHL to finalize the information systems interface between WHONET and CDW so that data may be directly uploaded from WHONET to the CDW	Benchmark 3.2	In progress	On February 2, 2023, IDDS participated in a meeting organized by NASIC and attended by the technical officers from NPHL and the Association of Public Health Laboratories to discuss AMR laboratory information system improvements, including standardization of site variables with the CDW and interoperability with the WHONET software to be able to upload WHONET data seamlessly into the CDW. The virtual meeting had 10 attendees (2 female). The Association of Public Health Laboratories indicated that it was planning to support NASIC to address gaps identified during the meeting and previous engagements, including the national CDW and WHONET interoperability. IDDS will continue to follow up and support the process to allow for seamless data upload from the surveillance sites.
KEN-GHS-SURV-3.2: Provide TA to	Benchmark 3.2	In progress	IDDS continued to provide informatics assistance to support NASIC and NPHL to operate and maintain AMR surveillance information systems. IDDS

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
strengthen AMR surveillance data and information systems operation and management at NPHL and IDDS-supported counties			supported the reconfiguration and upgrading of the Laboratory Information Management Systems (LIMS) in use at Nyeri and Kitale County Referral Hospital laboratories. This was done in Nyeri on February 2–4, 2023, and in Kitale on February 16–18. The upgrades and reconfigurations were aimed at strengthening the microbiology module of the Labware LIMS, which manages AMR data locally and transmits them to the CDW. During the visits, IDDS addressed technical challenges earlier reported by the surveillance sites. Reconfigurations implemented at both sites included the following: standardization of AMR data variables collected using the LIMS; standardization of specimen types; and standardization of hospital departments and drug-bug combinations based on the national AMR surveillance strategy. Filters to allow transmission of clean AMR records were also implemented during the visits. IDDS will continue to monitor proper functioning of these systems integral to the AMR surveillance system in Kenya and further collaborate with NPHL in implementing these reconfigurations at the Malindi Sub-county Hospital, which uses a similar system.
KEN-GHS-SURV-3.3: Engage the new county governments to sensitize them to IDDS's work and advocate for continued support for AMR prevention and control	Benchmark 3.2	In progress	Between March 21 and 30, 2023, IDDS, together with representatives from NPHL, visited and held discussions with the new county government leadership in Nyeri, Murang'a, Bungoma, and Trans-Nzoia Counties. During these meetings, the project team provided an update on the progress and improvements in diagnostic and surveillance capacity at the respective sites because of the project's collaboration with the counties, as well as areas that required continued focus and emphasis by the county leadership. The teams also discussed the findings of the recently conducted LAARC tool-based assessment, to highlight areas that require more collaboration going forward to ensure continuous quality improvement of bacteriology testing capacities. These included equipment servicing and calibration, support to the laboratory to maintain accreditation status, budgeting and timely procurement of supplies

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>to avoid stockouts, training of more staff to increase the pool of technologists competent in microbiology, efforts to increase utilization of available bacteriology capacity through specimen referral and clinician sensitization at regular intervals, and strengthening of data management and analysis for policy decisions and to inform clinical practice. Key successes celebrated included the following: accreditation of bacteriology tests in all the sites visited, uninterrupted bacteriology laboratory testing, AMR data use locally to inform policy and practices, and automation of bacteriology tests in three of the four counties visited. The teams also discussed the importance of maintaining capacities established and successes realized thus far beyond the life of IDDS project.</p> <p>IDDS has scheduled a similar visit to Kilifi County for FY 2023 Q3.</p>
KEN-GHS-SURV-3.4: Conduct an assessment of AMR surveillance capacity using the LAARC tool in all five IDDS-supported sites and work with counties to address identified gaps	Benchmark 3.2	Completed	<p>Between February 13 and March 6, 2023, IDDS engaged an independent microbiologist to reassess the capacity of the five IDDS-supported laboratories to test and carry out surveillance on antibiotic resistance. The LAARC tool was used to collect data. Reassessments were conducted in Kitale (February 13–14, 2023), Bungoma (February 16–17, 2023), Nyeri (February 20–21, 2023), Murang'a (February 23–24, 2023), and Malindi (March 2–3, 2023). Significant improvements were noted in all five laboratories. For example, the Murang'a laboratory at baseline in 2019 had a score of 23 percent and a score of 89 percent on reassessment in February 2023, and the Bungoma laboratory had a score of 48 percent at baseline and a score of 88 percent on reassessment in February 2023. Some of the technical gaps identified have been resolved during mentorship support visits and through action plans developed for those that required closer monitoring and follow-up. Infrastructural gaps that required the</p>

Kenya GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			attention of county leadership were discussed during the engagement meetings with the county leadership.

Template for Country Inputs: FY 2023, Quarter 2 [Liberia]

Liberia GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
LBR-GHS-NTW-4: Strengthen county level implementation of Strengthening Laboratory Management Toward Accreditation (SLMTA)-based quality management system (QMS) in supported laboratories in Lofa, Nimba, and Bong	Benchmark 7.4	In progress	
LBR-GHS-NTW-4.1: Provide SLMTA-based on-site training, mentorship, and support visits to the 9 laboratories enrolled in QMS in Bong, Nimba, and Lofa	Benchmark 7.4	In progress	In Bong County, IDDS provided QMS mentorship to three technicians (one female) at Bong Mines Hospital laboratory on January 9–13, 2023, in following up and addressing the non-conformities identified during the September 2022 audit and during implementation of routine work. Topics covered included inventory management of equipment and reagents, work area management, and biosafety with emphasis on waste separation and disposal. IDDS worked closely with the laboratory supervisor and the biomedical engineer and identified equipment that was due for repair and maintenance. IDDS also provided financial support for the printing of job aids and bench standard operating procedures for routine use. IDDS helped the laboratory supervisor at Bong Mines Hospital advocate to hospital management for the laboratory rooms to be connected to the recently installed solar system. The laboratory will be connected to the solar system after they procure the cables for wiring from the control room to the laboratory.

Activity	IHR benchmark	Status	Activity implementation updates
			<p>On January 16–20, 2023, IDDS provided mentorship to three technicians (one female) at C.B. Dunbar Hospital laboratory. The mentorship focused on addressing the non-conformities identified in the September 2022 audit and initiating a QMS improvement project on equipment inventory and preventive maintenance. IDDS also discussed the importance of work area management with the technicians. In Phebe Hospital laboratory, IDDS assisted the laboratory team to identify a location for an emergency shower in line with the requirements for safety in the laboratory. IDDS also provided continuous mentorship to laboratory staff at Phebe Hospital. Topics covered included documents and records, organization and personnel (ensuring that competency assessments are conducted), information management, process control, control and prevention of actions (addressing of non-conformities and root cause analysis), facilities and safety, and specimen collection and processing for culture and antimicrobial susceptibility testing. Nine technicians (one female) received mentorship at Phebe laboratory during FY 2023 Q2.</p> <p>In Nimba, IDDS provided continuous mentorship to 21 technicians (6 female) at G.W. Harley Hospital laboratory. Four of the 21 mentees (19 percent) at G.W. Harley are laboratory sciences students from Nimba Training College who are assigned to the laboratory for practical work and are benefitting from the IDDS -provided mentorship in QMS and bacteriology specimen collection and processing and media preparation. QMS topics covered included documents and records, management review, evaluation, and audits with a focus on internal audits, process control, information management, corrective and preventive actions, and specimen collection and processing for culture and antimicrobial susceptibility testing.</p>

Liberia GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>In Lofa, IDDS mentored four technicians (one female) at Curran Lutheran Hospital on January 16–20, 2023, on the following QMS topics: identification of non-conformities from the September 2022 audit, corrective and preventive actions, process control, organization and personnel, and management reviews. In Foya Boma Hospital laboratory, IDDS mentored four technicians (all male) on January 9–13, 2023. Topics covered during mentorship included facilities and safety, evaluation and audits, documents and records, and customer services. At Tellewoyan Memorial Hospital, IDDS has been building the capacity of the laboratory supervisor in analyzing data and preparing presentations from customer satisfaction surveys through continuous mentorship. IDDS provided mentorship to the laboratory team in conducting a laboratory risk assessment and developing a risk mitigation matrix. IDDS provided continuous mentorship to seven technicians on topics including documents and records, evaluations, and audits, purchasing and inventory, and facilities and safety. With IDDS guidance, the Tellewoyan Memorial Hospital laboratory conducted a management review meeting on March 16, 2023.</p> <p>IDDS provided financial support to procure stationery to print QMS documents in the three supported counties.</p> <p>IDDS will continue QMS mentorship in all the supported laboratories in FY 2023 Q3, with visits to district hospital laboratories scheduled in FY 2023 Q3 as well.</p>
LBR-GHS-NTW-4.2: Conduct Stepwise Laboratory Improvement Process Towards Accreditation	Benchmark 7.4	In progress	IDDS provided financial support to six technicians (one female) from six project-supported laboratories (Phebe, Tellewoyan, G.W. Harley, C.B. Dunbar, Curran Lutheran Hospital, and Ganta United Methodist Hospital) to attend a three-day internal audit training on March 16–18, 2023. The training was held at Corina Hotel in Monrovia and was jointly organized by Ministry of Health (MoH)/National Diagnostic Division, and Deutsche Gesellschaft fur Internationale

Liberia GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
(SLIPTA) audits for the laboratories enrolled in SLMTA in the supported counties			<p>Zusammenarbeit (GIZ) as a way of addressing the poor performance in section 6 (Evaluations and Audits) of the SLIPTA checklist. IDDS provided input to the training agenda and dates to hold the training. A pretest and posttest were provided and showed a 17 percent average increase in knowledge for the six supported technicians.</p> <p>The SLIPTA audit will be conducted in FY 2023 Q3.</p>
LBR-GHS-NTW-4.3: Provide technical assistance on establishment of an in-country bacteriology external quality assessment (EQA) program at the National Public Health Reference Laboratory (inter-laboratory comparison)	Benchmark 7.4	In progress	<p>IDDS worked closely with the national bacteriology trainer to develop the EQA standard operating procedures and forms as well as the preparation of the EQA panels for the three IDDS-supported facilities (Phebe, G.W. Harley, and Tellewoyan) and one laboratory in Maryland County (J.J. Dossen Hospital laboratory). IDDS worked with the national trainer to develop the different clinical cases/scenarios for each of the panels. The scenarios will help the participants identify the causative agents of the infections.</p> <p>IDDS will prepare and distribute EQA panels in FY 2023 Q3.</p>
LBR-GHS-NTW-7: Strengthen capacity to perform and report quality-assured microbiology, including antimicrobial resistance	Benchmark 7.1 Benchmark 3.1	In progress	

Liberia GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
(AMR) detection, in the three supported counties			
LBR-GHS-NTW-7.1: Strengthen laboratory data management and reporting using WHONET	Benchmark 7.1	In progress	<p>IDDS provided financial support for the national bacteriology trainer to travel to Tellewoyan Memorial Hospital and G.W. Harley Hospital laboratories to provide mentorship on the utility of the WHONET software in bacteriology and AMR data reporting. The trainer mentored six technicians (all male) at Tellewoyan on February 13–14, 2023, and nine technicians (one female) at G.W. Harley on February 20–24. The bacteriology focal persons of the two laboratories (both male) were mentored on WHONET data entry, data sharing, and the use of bacteriology documents. They were tasked with the responsibility of entering all the bacteriology data into the WHONET database to enable reporting of monthly data to the national level.</p> <p>IDDS provided financial support for the bacteriology trainer to visit the J.J. Dossen Hospital laboratory in Maryland County on March 27–31, 2023, and work together with the Partners In Health microbiologist in ensuring that the procedures for panel preparation are standardized and in line with requirements of ISO 17043: Conformity Assessment—General requirements for proficiency testing.</p> <p>IDDS expects to support a follow-up training on the new AMR data collection tool introduced by the MoH AMR Unit in FY 2023 Q3.</p>
LBR-GHS-NTW-7.2: Provide technical assistance on promoting appropriate, timely	Benchmark 7.1	In progress	IDDS provided financial support to convene a bacteriology stakeholder meeting at Tellewoyan Memorial Hospital on February 15, 2023. The meeting brought together a total of 22 participants who included the medical directors from Lofa County, pharmacists, nurses, laboratorians, and physician assistants. The focus of the meeting was to advocate to the clinicians to use the bacteriology services

Activity	IHR benchmark	Status	Activity implementation updates
diagnostic testing and patient management guided by timely microbiological data			<p>provided at Tellewoyan Memorial Hospital laboratory. During the meeting, stakeholders discussed possible specimen referral methods, and the senior medical team will finalize the way forward for adoption. IDDS mentored 22 individuals (4 female) from Tellewoyan Memorial Hospital's laboratory team throughout the quarter on forecasting to ensure uninterrupted bacteriology testing. By the end of the quarter, Tellewoyan Memorial Hospital's management team procured commodities (sterile swabs and urine jars) for the laboratory.</p> <p>As part of laboratory coordination, IDDS participated in a virtual meeting with the laboratory core group (MoH/National Diagnostic Division, National Public Health Reference Laboratory, U.S. Centers for Disease Control and Prevention, World Health Organization, Regional Disease Surveillance Systems Enhancement, GIZ, and IDDS) to meet and discuss upcoming laboratory activities, including implementation updates from partners and other topics such as QMS, biosafety and biosecurity, bacteriology testing, specimen referral, and inventory management. The core group met seven times.</p> <p>Fifty specimens were processed for culture at Phebe Hospital (20) and G.W. Harley Hospital (30) laboratories. Tellewoyan laboratory has not been testing due to challenges with the solar system, which is unable to support the incubators during the night. IDDS provided financial support for a solar systems technician to assess what is needed for the solar system to be able to provide electricity to the laboratory at night. In FY 2023 Q3, IDDS will support the integration of the two existing systems to improve and stabilize electricity supply from the solar system.</p>
LBR-GHS-NTW-7.3: Support the	Benchmark 3.1	In progress	IDDS identified a consultant to support the development of the Integrated Antimicrobial Resistance Surveillance Strategy.

Liberia GHS

Work plan period of performance: October 1, 2022—July 31, 2023

Work plan approval date: November 16, 2022

Activity	IHR benchmark	Status	Activity implementation updates
development of the Integrated (One Health) Antimicrobial Resistance Surveillance Strategy for Liberia			After the consultant is hired, IDDS will hold stakeholders' meetings, conduct key informant interviews, and draft the strategy in FY 2023 Q3.
LBR-GHS-NTW-7.4: Support procurement of essential bacteriology reagents, supplies, and consumables and provide contracts for equipment service and calibration to support culture and antimicrobial susceptibility testing for Phebe, Tellewoyan, and G.W. Harley	Benchmark 3.1	In progress	<p>IDDS issued a purchase order to procure essential bacteriology reagents, supplies, and consumables. These items are expected to be delivered in FY 2023 Q3 and will be distributed to IDDS-supported sites after the supplier delivers them.</p> <p>IDDS conducted an assessment to identify the challenges with the Tellewoyan laboratory solar system equipment. In FY 2023 Q3, the issue should be addressed, and the system is expected to be fully operational.</p>

Template for Country Inputs: FY 2023, Quarter 2 - Madagascar

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
MDG-GHS-NTW-1: Build the capacity of the RESAMAD network personnel at all levels (physicians, biologists, and technicians) on microbiology, sample collection and transport, and quality management	Benchmark 7.1		
MDG-GHS-NTW-1.1: Support the organization of a 5-day training workshop on medical biology testing with a focus on infectious diseases and priority pathogens	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-1.2: Follow-up mentoring and training senior biologists at four selected sites (Antsirabe,	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
Ambatondrazaka, Fort Dauphin and Antsiranana) (New FY 2023 activity)			
MDG-GHS-NTW-1.3: Expand mentorship and training of senior biologists to other sites in the RESAMAD network (New FY 2023 activity)	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-1.4: Reinforcement of bacteriology laboratory for Itasy. This activity will focus on the implementation of bacteriological testing, procurement of consumables, equipment and	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
reagents, technician training. (New FY 2023 activity)			
MDG-GHS-NTW-2: Continue to support diagnostic capacity building of laboratories in the Mahajanga Region for bacteriology testing to identify priority pathogens	Benchmark 7.1		
MDG-GHS-NTW-2.1: Conduct a supportive supervision visit and workshop to continue to strengthen the pre-analytical phases--specimen referral, packaging, transport--in the Boeny Region	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-2.2: Provide basic equipment and	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
reagents to strengthen laboratory capacity (Centre Hospitalier Universitaire de Mahajanga labs)			
MDG-GHS-NTW-3: Support the implementation of the National Laboratory Strategic Plan	Benchmark 7.1	Not started	
MDG-GHS-NTW-3.1: Organize 1/2 day workshops to follow up on National Laboratory Strategic Plan implementation	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-4: The RESAMAD network quality management system training and audit	Benchmark 7.4		
MDG-GHS-NTW-4.1: Organize a session for development of	Benchmark 7.4	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
standard operating procedures on the audit process (during the RESAMAD workshop) (New FY 2023 activity)			
MDG-GHS-NTW-4.2: Conduct the audit visits	Benchmark 7.4	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-4.3: Debrief the audit visits and prepare the action plans for each site	Benchmark 7.4	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-NTW-4.4: Hold a training session for auditors and quality referees on the new version of the ISO 15189 standard (during the RESAMAD workshop)	Benchmark 7.4	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
(New FY 2023 activity)			
MDG-GHS-NTW-5: Rational management of laboratory reagents and consumables	Benchmark 7.1		
MDG-GHS-NTW-5.1: Develop a guide for the supply chain to facilitate the purchase of reagents	Benchmark 7.1	In progress	<p>IDDS provided financial and logistical support to the Ministry of Health (MoH) to organize a technical working group (TWG) meeting on February 7–8, 2023, at Le Pavé Hotel, Antaninarenina, Antananarivo, to revise a guide for the management of laboratory supplies and medical imaging units of public hospitals. This is part of strategic axis #4 of the National Laboratory Strategic Plan: “Financial management and availability of laboratory reagents and consumables,” objective #2, “Make public laboratory reagents and consumables available.” Twenty-one participants (14 female) attended this meeting from several departments in MoH and partners.</p> <p>The primary outcomes of the two-day meeting were an understanding of country’s inventory, with a situational analysis of the reagents, consumables, and medical imaging at the operational level (strengths, weakness, opportunities, threats, and solutions). Participants also reviewed the pricing structure and revenue management, discussing current strengths and areas for improvement, as well as potential solutions. As a result of this meeting, IDDS, in conjunction with the Direction de la Pharmacie, des Laboratoires et de la Médecine</p>

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
			<p>Traditionnelle (DPLMT), MoH, Ministry of Economy and Finance, and SALAMA, and based on pricing proposed by suppliers, plans to update the National List of Laboratory Supplies and revise the pricing structure.</p> <p>IDDS also financially supported a TWG meeting to validate the management guide for laboratories and medical imaging in public hospitals on March 10, 2023, at the DPLMT premises, in Tsaralalana, Antananarivo. Eighteen participants (10 female) attended this meeting from different MoH departments and from diverse financial and technical partners. In FY 2023 Q3, the DPLMT and IDDS expect to send the guide to the MoH Department of Communication for review.</p>
MDG-GHS-NTW-5.2: Collect the semi-annual requirements for reagents and laboratory consumables for each laboratory (New FY 2023 activity)	Benchmark 7.1	In progress	<p>Following the revision of the management guide for laboratories and medical imaging in public hospitals (see NTW-5.1) on February 7–8, 2023, it was obvious that the list of laboratory reagents and consumables proposed by SALAMA does not reflect the current need of public hospitals and leads to a lot of supplies being purchased outside SALAMA due to the long administrative procedure. The prices also need revision because some items are very expensive, compared to a direct purchase from another supplier. IDDS provided financial support to a TWG meeting held on March 23, 2023, at the DPLMT, Tsaralalana, Antananarivo, to update the National List of Laboratory Inputs. Fourteen participants (9 female) from MoH and financial partners attended this meeting.</p>

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
			After the meeting, MoH shared a form with public hospitals to collect information on the reagents, consumables, equipment, and materials that these facilities need.
MDG-GHS-NTW-5.3: Organize 3 meetings per year with the SALAMA Purchasing Center concerning the continuous supply of laboratory reagents and consumables (7 Ministries, 4 RESAMAD, 5 SALAMA) (New FY 2023 activity)	Benchmark 7.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
MDG-GHS-SURV-2: Improve coordination of integrated disease surveillance and response (IDSR) by supporting review and dissemination of the monthly IDSR bulletin	Benchmark 9.1		
MDG-GHS-SURV-2.1: Support the organization of a two-day workshop to review IDSR bulletin once a month	Benchmark 9.1	In progress	<p>IDDS collaborated with the Directorate of Health Monitoring, Epidemiological Surveillance, and Response to develop and review three monthly integrated disease surveillance and response bulletins and disseminate them electronically to stakeholders, thus improving coordination of integrated disease surveillance and response.</p> <p>IDDS organized the following workshops:</p> <ul style="list-style-type: none"> • January 5–6, 2023 (bulletin #44, data for November 2022) • January 26–27, 2023 (bulletin #45, data for December 2022) • March 9–10, 2023 (bulletin #46, data for January 2023) • March 30–31, 2023 (bulletin #47, data for February 2023)
MDG-GHS-SURV-3: Detect and investigate health risks	Benchmark 9.1		
MDG-GHS-SURV-3.1: Support the	Benchmark 9.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Madagascar GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023. (Please note that the workplan is subject to possible changes during FY 2023 Q3)			
Activity	IHR benchmark	Status	Activity implementation updates
organization of the three-day workshop to develop a hospital IDSR surveillance protocol (New FY 2023 activity)			
MDG-GHS-SURV-3.2: Support the organization of five-day workshop training on the IDSR surveillance in the hospital	Benchmark 9.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.
MDG-GHS-SURV-3.3: Support the organization of one-day workshop to validate the hospital IDSR surveillance protocol	Benchmark 9.1	Not started	This sub-activity is expected to begin in FY 2023 Q3.

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
MLI-GHS-NTW-1: Map national diagnostic facilities and their capacities	Benchmark 7.3	In progress	
MLI-GHS-NTW-1.1: Complete the laboratory capacity mapping by collecting data in the remaining regions (Mopti, Gao, Timbuktu, Kidal, Taoudenit, and Menaka) (Carryover activity from FY 2022)	Benchmark 7.3	In progress	<p>IDDS organized the logistics and provided the trainer for the Directorate of Pharmacy and Medicines' (DPM) virtual training session on data collection on February 9, 2023. A total of 11 data collectors (all male) attended from the 6 regions covered.</p> <p>Following the training, data collection was completed in Nara health district (Koulikoro region) on February 24, 2023, with two laboratories mapped (referral health center laboratory and central community health center laboratory).</p> <p>Data collection is ongoing in the regions of Mopti, Gao, Timbuktu, Kidal, Taoudenit, and Menaka.</p> <p>In FY 2023 Q3, IDDS will continue to provide virtual technical assistance in data collection as needed and financial support for data collection in the regions of Mopti, Gao, Timbuktu, Kidal, Taoudenit, and Menaka. Data collection is anticipated to be complete in FY 2023 Q3.</p>
MLI-GHSA-NTW-1.2: Hold a data verification and validation session in Mopti with data collectors before uploading onto the	Benchmark 7.3	In progress	IDDS shared draft terms of reference for the Mopti data verification and validation workshop with the DPM and is awaiting feedback. The data validation workshop is expected to take place in FY 2023 Q3.

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
African Society for Laboratory Medicine (ASLM) platform (Carryover activity from FY 2022)			
MLI-GHS-NTW-1.3: Support attendance cost of 3 government staffs (from DPM and Institut National de Santé Publique [INSP]) to the regional training workshop for lab capacity mapping data analysis through ONA platform (workshop location TBD) (Carryover activity from FY 2022)	Benchmark 7.3	In progress	IDDS initiated discussions with an ASLM-trained trainer to conduct the regional training workshop for laboratory capacity mapping data analysis virtually. The virtual format will increase the number of possible participants and reduce implementation costs. On March 8, 2023, the Director of the DPM drafted a memo that formally requested implementation of the training. IDDS is negotiating with an independent consultant trainer, which will likely occur during FY 2023 Q3.
MLI-GHS-NTW-2: Strengthen diagnostic equipment systems (procurement, availability,	Benchmark 7.3	In progress	

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
operating status, and preventive maintenance)			
MLI-GHS-NTW-2.1: Work with the equipment committee to support the development or revision of national equipment policies, guidelines, and standard operating procedures through quarterly meetings of the multi-sectoral committee for laboratory system strengthening (Continuation of activities from FY 2020, FY 2021, and FY 2022)	Benchmark 7.3	In progress	<p>IDDS provided logistical, technical, and financial support to the INSP for the February 7, 2023, meeting of the Multisectoral Committee for Laboratory System Strengthening. The meeting participants included the 15 committee members from the key ministries of the One Health platform, including INSP (Ministry of Health), University Clinical Research Center, <i>Laboratoire National de la Sante</i>, <i>Centre Hospitalier Universitaire du Point G</i>, <i>Laboratoire de Biologie Moleculaire Appliquee</i>, and <i>Centre National de Transfusion Sanguine</i>, IDDS staff (who participated actively in technical discussions), and others. The objective of the meeting was to discuss the following items: (1) validation of the previous meeting report, (2) presentation of the research report on trypanosomiasis prevalence in the Sikasso region, and (3) presentation of the research report of the evaluation of <i>Escherichia coli</i> resistance genes isolated from children under five years of age in Dioro in Ségou region.</p> <p>In FY 2023 Q3, IDDS will continue to support the bimonthly meetings of the Multisectoral Committee for Laboratory System Strengthening by providing similar technical, logistical, and financial support.</p>
MLI-GHS-NTW-2.2: Develop a costed plan for identified equipment needs (maintenance	Benchmark 7.3	Not started	This activity will be done after the lab mapping data validation workshop in Mopti (NTW-1.2) takes place in FY 2023 Q3.

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
contracts, equipment repair, and/or procurement) during a 3-day workshop (Carryover activity from FY 2022)			
MLI-GHS-NTW-3: Strengthen support for the accreditation process for the serology section at the INSP and the laboratory of Ségou Regional Hospital	Benchmark 7.4	In progress	
MLI-GHS-NTW-3.1: Organize an assessment and coaching visit for the quality management system (QMS) international expert to INSP and Ségou Hospital (Carryover activity from FY 2022)	Benchmark 7.4	In progress	<p>IDDS held discussions with the INSP, Ségou hospital, and QMS expert to start planning the assessment and coaching visit for the QMS expert to visit the INSP and Ségou hospital.</p> <p>Dates were set for the visit, which will take place May 1–12, 2023.</p>
MLI-GHS-NTW-3.2: Conduct two rounds	Benchmark 7.4	Not started	This activity will take place after the QMS expert completes the assessment and coaching visits in FY 2023 Q3.

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
of quarterly visits to INSP and Ségou Regional Hospital Laboratory to follow up the implementation of the international QMS expert assessment recommendations (Carryover activity from FY 2022)			
MLI-GHS-SURV-I: Provide technical and financial support for community-based surveillance (CBS) implementation through support to districts already covered (Kadiolo, Kati, Kangaba, Sikasso and Kolondieba)	Benchmark 9.1	In progress	
MLI-GHS-SURV-I.1: Support the communication costs (SMS and Internet fees) of CBS actors in	Benchmark 9.1	In progress	<p>IDDS continued to monitor the quality of the data collected from the health districts of Kadiolo, Kati, and Kangaba.</p> <p>Across the five IDDS-supported districts (Kadiolo, Kangaba, Kati, Kolondieba, and Sikasso), 1,685 signals were received, and all were verified. A total of 10,625</p>

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
the health districts of Kadiolo, Kati, Kangaba, Sikasso and Kolondieba (Continuation of activities from FY 2021 and FY 2022)			<p>daily SMS messages were sent by 330 community health workers across the 5 supported districts in FY 2023 Q2. Reporting rates (percentage of expected daily messages sent) in FY 2023 Q2 for these districts are as follows:</p> <ul style="list-style-type: none"> • Kadiolo: 62 percent • Kangaba: 70 percent • Kati: 64 percent • Kolondieba: 18 percent • Sikasso: 25 percent <p>In FY 2023 Q3, IDDS will continue to monitor the quality of data reported from the five health districts.</p>
MLI-GHS-SURV-1.2: Print and hand over CBS data collection tools to the health districts covered (Continuation of activities from FY 2022)	Benchmark 9.1	Completed	On December 27, 2022, IDDS received the printed CBS data reporting tools from the service provider. The tools were sent to the relevant districts during the last week of January 2023.
MLI-GHS-SURV-1.3: Conduct 2 rounds of supportive supervision visits to CBS activities implementers in the	Benchmark 9.1	In progress	IDDS and the General Directorate of Health and Public Hygiene (DGSH) conducted seven supportive supervision and data review visits for CBS in the Sikasso health district. The objective of these visits was to assess knowledge, skills, and challenges of community health workers in Sikasso health district related to conducting CBS, as well as strengthening their capacities. During these visits, which took place March 14–20, 2023, 85 community health workers

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
health districts of Sikasso, Kolondièba, Kadiolo (Sikasso region) and Kati, Kangaba (Koulikoro region) (Continuation of activities from FY 2022)			(74 female) and 34 community health center directors (3 female) received supervision and coaching. In FY 2023 Q3, IDDS and the DGSHP will conduct the first round of supportive supervision and data review visits for CBS in Kadiolo, Kati, Kangaba, and Kolondièba health districts.
MLI-GHS-SURV-2: Strengthen integrated disease surveillance and response (IDSR) geographical areas that have underperforming surveillance reporting and support the updating of national guides	Benchmark 9.1	In progress	
MLI-GHS-SURV-2.1: Support health districts in Ségou region to organize two rounds of quarterly IDSR supportive supervision visits to underperforming	Benchmark 9.1	In progress	IDDS provided technical and financial support to the Ségou region to conduct the first round of biannual IDSR supportive supervision visits to underperforming community health centers. A total of 80 health centers were visited in Barouéli, Bla, Macina, Markala, San, Ségou, Niono, and Tominian health districts from January 21 to March 3, 2023. These supervision visits aim to improve the quality of health and disease surveillance data reported into DHIS 2, by checking the accuracy and the completeness of the data and coaching the staff. For each facility

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
community health centers (Continuation of activities from FY 2022)			<p>visited, IDDS worked with staff to develop corrective action plans to address issues observed during the supervision visits.</p> <p>In FY 2023 Q3, IDDS will provide technical and financial support to the Ségou region to conduct the second round of biannual IDSR supportive supervision visits to underperforming community health centers.</p>
MLI-GHS-SURV-2.2: Support training sessions of community health center staff in the use of the new IDSR guideline in the health districts covered with CBS: Sikasso, Kolondiéba, Kadiolo (Sikasso region) and Kati, Kangaba (Koulikoro region)	Benchmark 9.1	In progress	<p>IDDS provided technical and financial support to Kati and Kangaba health districts in the Koulikoro region to conduct training sessions of community health center staff, referral health center staff, private facility staff, and representatives from other key ministries of the One Health platform. A total of 90 personnel (17 female) from key ministries of the One Health platform and private sector were trained. The trainings, which were held on February 13–17, 2023, in Kangaba (one session), and on February 13–24, 2023, in Kati (two sessions), focused on the use of the new IDSR technical guidelines. Overall, there was an increase of an average of 45 percent in scores between pretests and posttests across the three training sessions held in Kangaba and Kati.</p> <p>In FY 2023 Q3, IDDS will provide technical and financial support to Kadiolo and Kolondiéba health districts in the Sikasso region to conduct training sessions of community health center staff, referral health center staff, private facility staff, and representatives from other key ministries of the One Health platform.</p>
MLI-GHS-SURV-3: Improve sharing of real-time monitoring data and information	Benchmark 9.3	In progress	

Mali GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
MLI-GHS-SURV-3.1: Provide technical assistance to the DGSHP to develop and disseminate IDSR annual and monthly bulletins to stakeholders at central, regional, and district levels (Continuation of activities from FY 2022)	Benchmark 9.3	In progress	<p>IDDS provided financial, technical (writing), and coordination support to the DGSHP to produce three monthly IDSR bulletins (December 2022, January 2023, and February 2023) and one annual bulletin (2022). All bulletins were published on the IDDS-developed surveillance website.</p> <p>The website is available at https://mali.iddsproject.org/.</p>
MLI-GHS-SURV-3.2: Support DGSHP to update and monitor the developed web-based online platform for surveillance document storage and sharing (Continuation of activities from FY 2022)	Benchmark 9.3	In progress	<p>IDDS continued to provide technical support as needed to government staff on use of the website through site monitoring and uploading of surveillance documents.</p> <p>In FY 2023 Q3, IDDS will continue to provide technical support as needed to government staff on use of the website.</p>

Template for Country Inputs: FY 2023, Quarter 2 [Senegal]

Senegal GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
SEN-GHS-NTW-1: Strengthen the antimicrobial resistance (AMR) national surveillance system	Benchmark 3.2		
SEN-GHS-NTW-1.1: Support the Directorate of Laboratories (DL) to designate officially AMR National Reference Laboratory and sentinel sites involved in AMR surveillance	Benchmark 3.2	In progress	The terms of reference for the workshop to designate the AMR National Reference Laboratory and sentinel sites to be involved in AMR surveillance were developed and validated by the DL of the Ministry of Health (MoH). The workshop was planned for March 20–24, 2023. However, due to the unavailability of most targeted stakeholders, the workshop has been postponed to April 2023.
SEN-GHS-NTW-1.2: Establish/Improve the national external quality assessment program under the leadership of the DL	Benchmark 3.2	In progress	IDDS initiated discussions with the DL/MoH to integrate IDDS-supported laboratories into the next round of external quality assessments planned for FY 2023 Q3. IDDS has already agreed with the DL that this activity will be cost shared- because it will include other laboratories not supported by IDDS.
SEN-GHS-NTW-2: Strengthen quality	Benchmark 7.4		

Senegal GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
management systems in biomedical laboratories			
SEN-GHS-NTW-2.1: Strengthen quality management systems in biomedical laboratories	Benchmark 7.4	In progress	<p>Audit sessions started on February 27 and ended on March 31, 2023. All nine IDDS-supported laboratories were audited. The final report on this activity is expected to be completed in FY 2023 Q3.</p> <p>Next steps consist of supporting the laboratories in developing their post-audit action plans during FY 2023 Q3.</p>
SEN-GHS-Surv-1: Strengthen real time surveillance	Benchmark 9.1		
SEN-GHS-SURV-1.1: Support the implementation of the events-based surveillance (EBS) system	Benchmark 9.1	In progress	<p>A three-day workshop was organized for March 1–3, 2023, with the EBS technical working group to review the national EBS protocol. Following the first workshop, a five-day workshop was organized in the Thies region March 6-10, to develop and review EBS guidelines and standard operating procedures. Another three-day workshop was organized for March 15–17, at the MoH Directorate of Prevention, to validate all documents developed or reviewed during the two previous workshops.</p>

Senegal GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
			The activity report is under development and is expected to be completed in FY 2023 Q3.
SEN-GHS-SURV-I.2: Support the Directorate of Prevention to scale up the Senegalese Syndromic Sentinel Surveillance network –Installation of two new sites	Benchmark 9.1	In progress	Between March 20 and 25, 2023, two site visits of three days each were conducted in Yeumbeul and Pikine health districts; these districts were selected jointly with the MoH Directorate of Prevention as part of the extension of the Senegalese Syndromic Sentinel Surveillance network. The objective of the visits was to accompany staff from the two new sites during the following processes: checking the inclusion criteria; orienting the staff on sentinel surveillance activities (data collection, sample collection, storage, and transport); procuring required materials for surveillance activities at the site level; and defining the data flow. IDDS oriented 10 staff (8 female) in Yeumbeul and 5 staff (4 female) in Pikine.
SEN-GHS-SURV-I.3 Organize an annual meeting to monitor surveillance activities of the 2 new sentinel sites and share lessons learned for improvement	Benchmark 9.1	Not started	This activity is expected to begin in FY 2023 Q3.

Template for Country Inputs: FY 2023, Quarter 2 [Tanzania]

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-NTW-I: Work with government agencies to support the national diagnostics supply chain, ensuring essential, quality-assured microbiology commodities are available at four IDDS-supported antimicrobial resistance (AMR) surveillance sites to enable uninterrupted detection of AMR at the sites	Benchmark 3.2	In progress	
TZA-GHS-NTW-I.1: Provide technical assistance for managing microbiology commodities to ensure AMR surveillance and diagnostic services are uninterrupted	Benchmark 3.2	In progress	IDDS recruited and onboarded a supply chain specialist to provide technical assistance in managing microbiology commodities at IDDS-supported sites to ensure uninterrupted AMR surveillance and diagnostic services and monthly stock status information to advise on supply management, forecasting and quantification to guide gap-filling procurements as needed. IDDS is anticipating procuring and distributing lab supplies to the IDDS-supported sites in FY 2023 Q3.

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-NTW-1.2: Conduct biannual onsite mentorship programs and integrated quarterly supportive supervision at the four IDDS-supported laboratories, with a focus on supply chain and inventory management for laboratory supplies required for AMR testing	Benchmark 3.2	In progress	<p>IDDS conducted supportive supervision visits to three IDDS-supported sites (Morogoro Regional Referral Hospital [RRH] in Morogoro, Temeke RRH in Dar es Salaam, and Benjamin Mkapa Hospital in Dodoma) on February 20–24, 2023, on supply chain and inventory management of laboratory supplies needed for AMR testing. These supportive supervision visits will lead to the strengthening of the capacity of laboratory staff to manage stock levels of laboratory supplies and to ensure uninterrupted AMR testing.</p> <p>A supportive supervision visit to Maweni RRH is planned for early FY 2023 Q3.</p>
TZA-GHS-NTW-1.3: Conduct training on diagnostic stewardship to engage a hospital-level multi-cadre approach to implement AMR surveillance and infection prevention and control and ensure stewardship activities link and	Benchmark 3.2	Completed	<p>IDDS provided financial and technical assistance to conduct a training on diagnostic stewardship for hospital-level multi-cadre staff to implement AMR surveillance and infection prevention and control (IPC) to ensure that stewardship activities are linked and complementary. The training was held in Arusha on March 13–17, 2023, and was attended by 25 (11 female) laboratory staff, clinicians, nurses and pharmacists who implement AMR testing and surveillance, antimicrobial stewardship (AMS), and IPC interventions in the 4 IDDS-supported sites. Subject matter experts from the National Public Health Laboratory and Muhimbili University Health and Allied Sciences led the training, with IDDS guiding discussions. IDDS also helped develop the presentation for the training.</p>

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
complement each other			This training was designed to ensure that the accurate diagnostic and surveillance data generated at the IDDS-supported laboratories are being used to inform treatment decisions, AMS activities, and IPC initiatives at the site level.
TZA-GHS-SURV-I: Enhance antimicrobial susceptibility testing performance and AMR data collection, analysis, and reporting on urine, blood, and wound specimens at IDDS-supported sites	Benchmark 3.2	In progress	
TZA-GHS-SURV-I.I: Provide supportive supervision and onsite mentorship, in collaboration with USAID Medicines, Technologies, and Pharmaceutical Services, to holistically address AMR surveillance, infection prevention and control, and stewardship	Benchmark 3.2	In progress	<p>IDDS conducted supportive supervision visits, which included supervision for testing, reporting, and management of AMR data, at three IDDS-supported sites (Morogoro RRH in Morogoro, Temeke RRH in Dar es Salaam, and Benjamin Mkapa Hospital in Dodoma) on February 20–24, 2023. These visits were aimed at strengthening capacity for laboratory staff testing and reporting of AMR data and ensuring continuous quality improvement of the AMR surveillance activities at the sites. IDDS plans to visit Maweni RRH in FY 2023 Q3.</p> <p>In addition, IDDS mentored microbiology laboratory staff at Maweni RRH, Morogoro RRH, Temeke RRH, and Benjamin Mkapa Hospital to improve their knowledge, skills, and competency in performing microbiological testing, including antimicrobial susceptibility testing. Mentors were deployed at each site to work with the laboratories from February 15 to March 3, 2023. Nine people (four female) were mentored at the four sites. Mentees were trained on aspects</p>

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
interventions to enhance impact and ownership of AMR surveillance data			<p>of data collection, entry, analysis, and timely reporting to the relevant national authorities, including the National Public Health Laboratory. Moreover, quality control aspects and external quality assessment programs were emphasized during the mentorship sessions.</p> <p>IDDS collaborated with the USAID Mission in Tanzania, USAID's Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program, and the Ministry of Health to conduct a joint site visit to Benjamin Mkapa Hospital in Dodoma from February 23-24 to strengthen collaboration and increase impact at the site level between IDDS and MTaPS on implemented activities such as AMR detection, surveillance, IPC, and AMS. This visit provided the USAID Mission in Tanzania an opportunity to understand the work supported by these two USAID programs at the field level. The findings of this joint venture are expected to enhance impact, including fewer infections, improved documentation, ownership, and use of AMR surveillance data by all implementing partners and stakeholders at the site.</p>
TZA-GHS-SURV-I.2: Support AMR data collection, analysis, and reporting from the four site's catchment areas by implementing sensitization and strengthening sample referral mechanisms at lower levels	Benchmark 3.2	In progress	<p>IDDS conducted a sensitization meeting to raise AMR awareness and enhance AMR specimen referral from catchment areas (at lower levels) to IDDS--supported testing laboratories. The meeting was held in Tanga on February 6–10, 2023, and was attended by 24 (8 female) staff from IDDS--supported sites and their respective catchment areas, and high-level representation from the Ministry of Health and the President's Office Regional Administration and Local Government. In FY 2023 Q3, IDDS will collect and analyze AMR data from the testing sites to determine the proportion of specimens referred from the catchment areas and the functionality of referral mechanisms.</p>

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-SURV-I.3: Support national AMR coordination mechanisms including reviewing the National Action Plan for AMR and the National AMR Surveillance Framework to ensure IDDS's contribution and visibility is sustained. This will be accomplished through support for one multi-sectoral coordinating committee meeting and two national AMR surveillance technical working group meetings (one human health sub-group meeting and one animal health sub-group meeting).	Benchmark 3.2	In progress	<p>IDDS participated in a Multisectoral Coordination meeting on Mar 29-30, 2023, which confirmed the National AMR Secretariat and the AMR-related technical working groups (TWGs), including the National AMR surveillance and research TWG.</p> <p>IDDS is following up with the National AMR surveillance and research TWG on when development of the AMR surveillance protocol is anticipated. After the dates are confirmed, IDDS will provide technical assistance to develop an AMR surveillance protocol for the implementation of the National Action Plan on AMR.</p>

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-SURV-2: Enhance AMR data quality for reporting and use at subnational and national levels, and globally through the Global Antimicrobial Resistance Surveillance System	Benchmark 3.2	In progress	
TZA-GHS-SURV-2.1: Conduct semi-annual data quality assessment/review at the four IDDS-supported sites and facilitate a refresher training on WHONET AMR data analysis, interpretation, management, presentation, and reporting, as needed	Benchmark 3.2	Not started	This is planned for FY 2023 Q3.
TZA-GHS-SURV-2.2: Conduct quarterly data collection to track progress and	Benchmark 3.2	In progress	IDDS collected data on the work plan and monitoring and evaluation indicators to track progress of the project (using designated data collection tools) as well as data to demonstrate the impact of AMR activities using the U.S. Centers for Disease Control and Prevention's Laboratory Assessment of Antibiotic

Tanzania GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
demonstrate impact of AMR activities at IDDS-supported sites			<p>Resistance Testing Capacity (LAARC) tool. This was conducted on January 23–February 4, 2023, at all four IDDS- supported sites. The data will be used to compile a key deliverable named the LAARC Reassessment and IDDS Impact Report, which is due in FY 2023 Q3.</p> <p>IDDS will continue to collect data on a quarterly basis.</p>

Template for Country Inputs: FY 2023, Quarter 2 [Uganda]

Uganda GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
UGA-GHS-NTW-5: Support the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) to initiate accreditation process at two Regional Animal Disease Diagnostics and Epidemiology Centers (Gulu and Mbale) and three national reference laboratories (National Animal Disease Diagnostics and Epidemiology Center [NADDEC], National Animal Livestock Research Resources Institute, and Uganda Wildlife Authority Queen Elizabeth National Park Laboratory)	Benchmark 7.4	In progress	

Uganda GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
UGA-GHS-NTW-5.1: Engage MAAIF, regional laboratory directors, district production officers and district veterinary officers to discuss the adoption of the accreditation plan	Benchmark 7.4	Not started	This is planned for FY 2023 Q3. IDDS will officially discuss the accreditation journey for the selected facilities with the leadership of the laboratories on April 25, 2023. MAAIF is reviewing the NADDEC strategic plan, with support from other implementing partners, and IDDS and the partners that support NADDEC are engaging with MAAIF to align activities being implemented with the strategic plans.
UGA-GHS-NTW-5.2: Hold a document review workshop to incorporate the South African National Accreditation System document requirements for the national and regional laboratories being prepared for accreditation	Benchmark 7.4	Completed	<p>IDDS provided technical expertise during a document review workshop held in Jinja at the Source of the Nile Hotel that convened six quality managers from three national reference laboratories (two female). The workshop aimed at standardizing and aligning the quality management system managerial documents that are referenced in the policy documents.</p> <p>This activity was primarily done for national reference laboratories (Uganda Wildlife Authority Diagnostics and Research Laboratory [Queen Elizabeth National Park Laboratory], National Animal Livestock Research Resources Institute, and NADDEC). This activity was facilitated by experienced South African National Accreditation System-trained facilitators and paired quality managers and their deputies with experienced quality management system subject matter experts to aid in developing these documents.</p> <p>The immediate results of this workshop are the development and realignment of all the key standard operating procedures that are required by the ISO 17025:2017 standard. These documents will be used by the facility-based teams</p>

Uganda GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
			to implement these standards as they build their laboratory quality management systems.
UGA-GHS-NTW-5.3: Conduct quality management systems mentorship focused on accreditation cycle 1	Benchmark 7.4	Not started	This activity is scheduled for FY 2023 Q3. It has been delayed because it had to follow the completion of the document review, which was completed in FY 2023 Q2.
UGA-GHS-NTW-5.4: Conduct quality management systems mentorship focused on accreditation cycle 2	Benchmark 7.4	Not started	This activity is sequential and follows outputs from mentorship cycle 1 (see NTW-5.3), which is planned for implementation during FY 2023 Q3.
UGA-GHS-SURV-7: Operationalize coordinated surveillance of priority zoonotic diseases	Benchmark 4.1	In progress	
UGA-GHS-SURV-7.1: Support one national One Health Platform technical working group (OHTWG) meetings	Benchmark 4.1	In progress	IDDS attended an ad hoc national OHTWG meeting focused on GHS-supported activities. The meeting took place virtually on March 7, 2023. IDDS presented project activities conducted from January 2021 to February 2023. Other partners that presented included Food and Agriculture Organization, Baylor Uganda, and Infectious Disease Institute. Pertinent issues discussed included challenges in multisectoral coordination as demonstrated by the recent expression of interest

Uganda GHS Work plan period of performance: October 1, 2022—July 31, 2023			
Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
to focus on zoonoses			<p>in the World Bank Pandemic Fund and inadequate involvement of the One Health Coordination Office in field activities. Better partner coordination, led by the National One Health Platform Coordination Office, was recommended.</p> <p>The next routine OHTWG meeting to be supported by IDDS is scheduled for June 2023.</p>
UGA-GHS-SURV-7.2: Provide technical assistance during the National Task Force meeting on epidemics for priority infectious diseases	Benchmark 4.1	In Progress	IDDS provided technical support to the National Task Force to hold a virtual meeting on January 18, 2023, to coordinate response to a yellow fever outbreak in five districts (Masaka, Kasese, Buikwe, Buvuma, and Wakiso). IDDS also provided technical support to the National Task Force to organize a virtual meeting on March 15, 2023, to coordinate response to the Rift Valley fever and bacterial meningitis outbreaks in the districts of Mbarara and Obongi, respectively.
UGA-GHS-SURV-8: Improve surveillance and data analysis of priority zoonotic diseases in the animal health sector at four selected district sites	Benchmark 9.3	Not started	
UGA-GHS-SURV 8.1: Hold a hybrid (physical and virtual) workshop to introduce and roll out the upgraded Microsoft Excel data	Benchmark 9.3	Not started	This activity will be conducted in FY 2023 Q3. IDDS is engaging with MAAIF and partners supporting surveillance systems in the animal health sector in Uganda to ensure that parallel surveillance systems and tools are not rolled out to districts. A web-based prototype has been developed and promoted by the Infectious Diseases Institute. Rollout of the Microsoft Excel data entry and analysis tool will begin after express clearance from MAAIF is provided.

Uganda GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: January 9, 2023			
Activity	IHR benchmark	Status	Activity implementation updates
entry and analysis tool to all the districts			

Template for Country Inputs: FY 2023, Quarter 2 [Vietnam]

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
VNM-GHS-NTW-I: Strengthen the human specimen referral system (SRS)	Benchmark 7.2	In progress	
VNM-GHS-NTW-I.14: Refine the SRS procedures and management at the project sites based on pilot evaluation results	Benchmark 7.2	In progress	<p>IDDS continues collecting SRS data on timeliness, biosafety and biosecurity issues, and quality of the specimens after transport to analyze and improve the related procedures as needed. IDDS also organized a technical working group meeting with key human health stakeholders to present SRS data and collect feedback from them to revise the SRS procedures, such as accommodating the specimen transport time to reflect each type of specimen and transport distance. The meeting was held virtually on March 27, 2023, with stakeholders from Nhat Tin Logistics (NTL), National Institute of Hygiene and Epidemiology, Pasteur Institute Nha Trang, Pasteur Institute in Ho Chi Minh City, and provincial Centers of Disease Control of Thai Nguyen, Binh Dinh, and Dong Thap provinces in attendance.</p> <p>In FY 2023 Q3, IDDS will support revising standard operating procedures for specimen transport, including the standardization of transport temperature for each type of specimen across all facilities.</p>
VNM-GHS-NTW-I.15: Optimize the specimen data management software	Benchmark 7.2	In progress	<p>IDDS continued to collect feedback from stakeholders and resolve issues that occur when using the specimen data management software.</p> <p>IDDS continued to provide remote technical support for troubleshooting of the system.</p>

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
to better support the SRS			In FY 2023 Q3, IDDS will support updating the software to improve its functions and better meet the needs of users in the pilot provinces. Collecting feedback and providing remote technical support is also expected to continue next quarter.
VNM-GHS-NTW-I.16: Support refining the specialized specimen transport operation of NTL company for the SRS expansion	Benchmark 7.2	In progress	IDDS worked closely with NTL to discuss issues with the specialized service for specimen transport and monitor all shipments of the three pilot provinces to ensure the quality of the specimens. The issues discussed included shipment delays and revisions of transport procedures, and identified solutions included following stipulations on package pick-up time more closely and revising the transport time based on the type of specimen being transported.
VNM-GHS-NTW-I.17: Continue implementing the pilot SRS in preventive sector, expand it to the curative sector of 3 provinces (Binh Dinh, Dong Thap, Thai Nguyen), monitor and provide technical assistance to sites	Benchmark 7.2	In progress	<p>IDDS procured 2,000 packaging bags that can withstand 95 kPa to provide to pilot provinces. These packaging bags will be delivered to local participating facilities after obtaining project approval from the government.</p> <p>IDDS continues providing remote technical support, including guiding proper packaging and storage, monitoring temperature, and resolving any delays during specimen transport for SRS activities in the human health facilities in the three provinces.</p> <p>IDDS continues collecting specimen transportation-related data in the three pilot provinces. As of March 2023, NTL has transported 8,501 specimens in a total of 323 packages, out of which 4,188 human specimens were included in 193 of those packages.</p>
VNM-GHS-NTW-I.18: Conduct costing	Benchmark 7.2	Not started	This activity will begin after the Ministry of Health has granted project approval, which is expected in FY 2023 Q3.

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
of the preventive sector SRS pilot			
VNM-GHS-NTW-2: Strengthen the animal SRS	Benchmark 7.2	In progress	
VNM-GHS-NTW-2.12: Refine the SRS procedure and management at the project sites based on pilot evaluation results	Benchmark 7.2	In progress	<p>IDDS continues collecting SRS data on timeliness, biosafety and biosecurity issues, and quality of the specimens after transport to analyze and improve the related procedure as needed. IDDS also organized a technical working group meeting with key animal health stakeholders to present SRS data and collect feedback from them to revise the SRS procedures, such as accommodating the specimen transport time to reflect each type of specimen and transport distance. The meeting was held virtually on March 28, 2023, with stakeholders from NTL, National Center for Veterinary Diagnosis, Regional Animal Health Organizations (RAHOs), and Sub-Departments of Animal Health of the three pilot provinces in attendance.</p> <p>Refer to the human health sub-activity NTW-1.14 for the update on revising the standard operating procedures for specimen transport.</p>
VNM-GHS-NTW-2.13: Optimize the specimen data management software to improve the operation of SRS	Benchmark 7.2	In progress	Refer to the human health sub-activity NTW-1.15 for the updates. The same work took place to strengthen the animal SRS.

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
VNM-GHS-NTW-2.14: Support refining the specialized specimen transport operation of NTL for the SRS expansion	Benchmark 7.2	In progress	Refer to the human health sub-activity NTW-1.16 for the updates. The same work took place to strengthen the animal SRS.
VNM-GHS-NTW-2.15: Continue implementing the pilot SRS for animal health in 3 provinces (Binh Dinh, Dong Thap, Thai Nguyen), monitor and provide technical assistance to sites	Benchmark 7.2	In progress	<p>IDDS staff attended the Epi-Labnet workshop organized by the Department of Animal Health and sponsored by USAID on March 15–17, 2023, and showcased pilot SRS preliminary data. The leaders of the Department of Animal Health and RAHOs were impressed by the pilot preliminary data, and, as a result, many of them requested an expansion of the SRS project to provinces beyond Binh Dinh, Dong Thap, and Thai Nguyen.</p> <p>IDDS continued collecting specimen transportation-related data in the three pilot provinces from January to March 2023. As of March 2023, NTL has transported 8,501 specimens in a total of 323 packages, out of which 4,313 animal specimens were included in 130 of those packages.</p> <p>Refer to the human health sub-activity NTW-1.17 for other updates related to improving both the human and animal health sectors.</p>
VNM-GHS-SURV-1: Increase use of Vietnam Animal Health Information System (VAHIS)	Benchmark 9.3	In progress	

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
VNM-GHS-SURV-1.7 (continuation from FY 2022): Operationalize the pilot VAHIS use enhancement plan developed in FY 2021 in the five provinces (Binh Dinh, Can Tho, Dong Thap, Khanh Hoa, and Thai Nguyen)	Benchmark 9.3	In progress	<p>IDDS organized five bimonthly meetings to review VAHIS use and to mentor provincial and district staff in the five pilot provinces. The meetings with Thai Nguyen, Dong Thap, Can Tho, Khanh Hoa, and Binh Dinh provinces were held virtually on February 20, 21, 22, 23, and 24, 2023, respectively. In these meetings, the information technology expert who developed the VAHIS mobile application also collected feedback from the participants on the application. In the meetings with Khanh Hoa and Binh Dinh provinces, staff from RAHO IV mentored animal health staff from both provincial and district levels on animal disease reporting. Through these meetings, animal health staff, especially staff at the district level, identified their errors on animal disease data collection and entry and learned how to correct them. IDDS also received feedback from VAHIS mobile application users that will help improve the application. IDDS mentored 55 people (25 female) from the 5 provinces.</p> <p>Based on the feedback from the meetings, IDDS improved the VAHIS mobile application. These improvements are expected to be rolled out in FY 2023 Q3. In FY 2023 Q3 and Q4, IDDS plans to continue to provide training to district veterinary staff in Thai Nguyen, Can Tho, and Dong Thap provinces on animal disease reporting using VAHIS (web-based) and on using the VAHIS mobile application to report data into VAHIS for staff in all five pilot provinces to ensure that they can enter data into VAHIS correctly and in a timely manner.</p> <p>IDDS also developed and disseminated the user guide for the VAHIS mobile application that included a short interactive video for users.</p>
VNM-GHS-SURV-1.8 (continuation from FY 2022): Assist RAHOs and	Benchmark 9.3	In progress	IDDS organized the VAHIS quarterly data review meetings with project-supported provinces managed by RAHO VII, II, and IV on March 27, 28, and 31, 2023, respectively. During these meetings, IDDS, together with RAHO staff, reviewed animal disease data from the five pilot provinces that were reported

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
provincial sub-departments of animal health to conduct quarterly data reviews and propose solutions to improve VAHIS reporting timeliness, completeness, and accuracy			into VAHIS during the reporting period of December 15, 2022—March 14, 2023. Participants identified the data entry errors and discussed solutions to improve data quality. Participants also reviewed animal disease data entered into the VAHIS demo version by district staff of Binh Dinh and Khanh Hoa provinces and identified issues that need further training or guidance to district staff to ensure data quality. Participants also discussed the VAHIS new function on the management of the dog population and dog bite cases.
VNM-GHS-SURV-I.9: Extend VAHIS use to district level to enhance animal disease data reporting timeliness, completeness and accuracy in four provinces (Binh Dinh, Can Tho, Khanh Hoa, and Thai Nguyen)	Benchmark 9.3	In progress	<p>IDDS provided technical support and worked with RAHO IV staff to mentor district animal health staff in Binh Dinh and Khanh Hoa provinces during the bimonthly meetings. Before the meetings, RAHO staff prepared the outbreak demo data for district staff to practice and requested them to use the newly designed VAHIS mobile application to enter data into the VAHIS demo version. During the mentorship, RAHO and IDDS staff identified errors and clarified misunderstandings on some indicators, such as total population at risk, number of animals culled, etc., with district staff. After this exercise, district staff from these two provinces became more familiar with VAHIS reporting.</p> <p>During these meetings, district staff provided feedback to information technology experts about improvements that could be made to the VAHIS mobile application.</p>
VNM-GHS-SURV-I.10: Advocate for the model for increasing VAHIS use	Benchmark 9.3	Not started	This activity is planned to start in FY 2023 Q3 and Q4.

Vietnam GHS Work plan period of performance: October 1, 2022—July 31, 2023 Work plan approval date: November 16, 2022			
Activity	IHR benchmark	Status	Activity implementation updates
supported by IDDS in 2021–2022 in other provinces in Vietnam			

FY 2023, Quarter 2 Cambodia PMI

Cambodia PMI		
Work plan period of performance: January 15—September 30, 2023		
Work plan approval date: February 23, 2023		
Activity	Status	Activity implementation updates
MAL-PMI-NTW-I: Malaria Diagnostic Network Assessment and Capacity Building	In progress	
NTW-I.1: Conduct a landscape assessment of malaria diagnostic services, resources, capacities, and policies	In progress	<p>IDDS re-introduced the revised IDDS project plan to the National Center for Parasitology, Entomology and Malaria Control (CNM) in late February 2023, and CNM agreed to the activities that IDDS proposed in alignment with the current national malaria control efforts.</p> <p>IDDS drafted the detailed implementation plan and submitted it to USAID-Cambodia for concurrence. IDDS is also in the process of recruiting an international consultant to lead the PMI activities with support from another IDDS staff member.</p> <p>In FY 2023 Q3, IDDS plans to conduct a landscape assessment of malaria diagnostic services, resources, capacities, and policies.</p>
NTW-I.3: Enhance molecular diagnostic capacity of CNM laboratory for malaria species identification	In progress	<p>IDDS met with CNM to discuss the possibility of the project supporting the capacity building of CNM laboratory staff to enhance molecular diagnostic capacity for malaria species identification. CNM agreed and confirmed that they would provide polymerase chain reaction (PCR) machines and requested that IDDS procure the reagents needed for PCR testing.</p> <p>In FY 2023 Q3, IDDS plans to conduct PCR training for enhancing molecular diagnostic capacity for malaria species identification for CNM lab staff.</p>

FY 2023, Quarter 2 Cameroon Mpox

Cameroon Mpox		
Work plan period of performance: October 1, 2022—March 31, 2023		
Work plan approval date: September 29, 2022		
Activity	Status	Activity implementation updates
CM-MPX-NTWI: Technical Assistance	In progress	<p>IDDS supported the Government of Cameroon to organize the National Action Plan for Mpox dissemination meeting. The main objectives of this activity were to present the draft of the plan to the multisectoral actors involved in the fight against mpox at the central and the regional levels, advocate for resource mobilization, and discuss next steps. IDDS provided technical (through the planning of the meeting) and financial support to this one-day meeting, which was held on February 1, 2023, and led by the National One Health Platform. Participants included key national stakeholders from the different ministries of the Government of Cameroon involved in antimicrobial resistance activities, the One Health network, regional delegations of public health and livestock (East, Southwest and Northwest), <i>Centre de Recherche pour la Santé des Armées</i>, <i>Centre de Recherche sur les Maladies Emergentes et Réemergentes</i>, <i>Centre Pasteur du Cameroun</i>, and technical and financial partners, such as the Food and Agriculture Organization of the United Nations, World Health Organization, World Bank, and several USAID projects, including IDDS. IDDS also supported the printing of 800 copies of the strategic plan that have been distributed in the various sectors at the central level and will be distributed in the priority regions in FY 2023 Q3.</p> <p>IDDS also translated the Mpox Surveillance Operational Guidelines document from French into English and sent it to the translation department in the Ministry of Health for review. In FY 2023 Q3, IDDS expects the translated document to be finalized and printed for dissemination to the regions.</p> <p>IDDS supported the Cameroonian Society of Microbiology with financial assistance to organize a scientific meeting on January 11, 2023, with human and animal health professionals as well as students from these fields to discuss the issue of mpox. The presentations focused on disease transmission hazards to humans, clinical and biological diagnosis, epidemiological surveillance, case management, and the national strategy for mpox control.</p>

Cameroon Mpox Work plan period of performance: October 1, 2022—March 31, 2023 Work plan approval date: September 29, 2022		
Activity	Status	Activity implementation updates
CM-MPX-NTW2: Support epidemiologic surveillance activities of monkeypox and case investigation in affected health districts	Completed	<p>IDDS provided technical and financial support to train health professionals from the Northwest Region on the Third Edition of the Integrated Disease Surveillance and Response Technical Guidelines in the context of mpox outbreak. The training, which IDDS facilitated, took place on February 13–18, 2023, in Bafoussam, and trained 40 government staff (17 female) from the regional and district levels of the Northwest as well as 2 surveillance staff (all male) from the Military Health Department in the West Region. This training aimed at equipping participants to conduct effective surveillance activities; enabling the integration of multiple surveillance systems to use resources more efficiently; enabling participants to improve the use of information for detecting, investigating, and responding to public health threats; and improving the flow of surveillance information throughout the health system.</p>
CM-MPX-NTW 3: Strengthening monkeypox diagnostics in regional laboratories of the affected regions	In progress	<p>IDDS provided technical and financial support in assessing and designating three regional laboratories to conduct mpox diagnostic activities. IDDS supported the evaluation of the three regional laboratories, which are Bamenda Regional Hospital, Bertoua Regional Hospital, and Laquintinie Regional Hospital. The purpose of the evaluation was to identify gaps in human and technical resources to perform mpox diagnosis at the regional level.</p> <p>In FY 2023 Q3, IDDS plans to support the procurement of mpox diagnostic supplies for these laboratories as well as a training session on mpox molecular diagnostics and the establishment of an infectious disease information system.</p>

FY 2023, Quarter 2 DRC EVD

DRC EVD Work plan period of performance: October 20, 2022—April 30, 2023		
Work plan approval date: November 22, 2022		
Activity	Status	Activity implementation updates
DRC-EVD-NTW-1: Train health workers on specimen management (collection, packaging, storage, and shipment)	Completed	<p>In collaboration with four <i>divisions provinciales de la santé</i> (DPS, or provincial divisions of health) in eastern DRC, IDDS organized and facilitated a three-day, online training of laboratory workers on specimen management for priority pathogens, including the Ebola virus. In total, 15 laboratory workers (6 female) from the <i>Institute national recherche biomédical</i> (INRB, or National Biomedical Research Institute) laboratories (Goma, Beni, Bunia, and Butembo), provincial laboratories, and DPS Ituri and North Kivu participated in this online training. These participants were selected because they are consistently involved in the management of specimens during outbreaks in their respective provinces. The training topics included biosafety/biosecurity focused on personal protective equipment and the collection, packaging, storage, and shipment of specimens. The training was facilitated by IDDS diagnostic specialists and one subject matter expert from INRB-Goma.</p> <p>The training report will be finalized in FY 2023 Q3.</p>
DRC-EVD-NTW-2: Specimen transportation	In progress	<p>IDDS provided financial support for the transportation of seven suspected EVD specimens through commercial flights from INRB sentinel sites in Beni and Butembo to the INRB-Goma laboratory for testing, confirmation, and quality control. IDDS followed up with the INRB-Goma laboratory after specimen receipt to ensure that the laboratory checked the package quality for each specimen.</p> <p>IDDS also engaged the United Nations Humanitarian Air Service to transport 6,966 specimens from previous EVD outbreaks (i.e., the 12th EVD outbreak on February 7–May 3, 2021, and the 13th outbreak on October 8–December 16, 2021) from the INRB sentinel site in Beni to the INRB-Goma laboratory, which is able to ensure that the specimens are stored at the appropriate temperature and with the required biosafety/biosecurity procedures.</p> <p>Thus, the transport of 6,973 EVD specimens was completed this quarter.</p>

DRC EVD**Work plan period of performance: October 20, 2022—April 30, 2023****Work plan approval date: November 22, 2022**

Activity	Status	Activity implementation updates
DRC-SUV-NTW-3: Waste management	In progress	IDDS initiated discussions with the INRB-Goma laboratory and its sentinel sites in the Beni region on the collection and packaging, and transport of all used EVD testing cartridges to INRB-Goma for incineration. In FY 2023 Q3, IDDS plans to support the airfreight costs and the incineration fees for these biohazard materials.
DRC-EVD-NTW-4: Support for joint supportive supervisions (IDDS-DPS-INRB Goma)	Not started	This activity remains on hold due to the tenuous security situation in eastern DRC.

FY 2023, Quarter 2 Kenya EVD

Kenya EVD Work plan period of performance: October 20, 2022—April 30, 2023		
Activity	Status	Activity implementation updates
NTW-1: Train health workers on specimen collection, packaging and transportation and provide essential commodities in high-risk counties	Completed	<p>In preparation for the trainings planned for FY 2023 Q2, IDDS organized a one-day facilitator meeting on January 31, 2023, to review the outcomes and recommendations from the trainings conducted in 10 counties in FY 2023 Q1 and to agree on the approach going forward, given that the outbreak in Uganda had been declared over. The meeting participants reviewed feedback from the FY 2023 Q1 trainees and facilitators and performance in the pretests and posttests. After deliberations, the participants agreed to revise and update the training presentations and training program flow to better meet the needs of the trainees. Each facilitator was assigned modules to revise and share with the Ministry of Health Division of Disease Surveillance and Response for consolidation, to have a uniform set of training materials for all the facilitators. The meeting was attended by 10 (3 female) individuals from the National Public Health Laboratories, the Division of Disease Surveillance, and Response, and IDDS.</p> <p>On February 13–March 14, 2023, IDDS provided technical assistance to the Government of Kenya through the laboratory subcommittee of the national Ebola preparedness incident management team to train health care workers from 10 high-risk counties on suspected Ebola virus disease (EVD) case specimen collection, packaging, and transportation. Each county received two days of training at the county headquarters. The counties trained were West Pokot, Turkana, Uasin Gishu, Kiambu, Nairobi, Kajiado, Machakos, Makueni, Taita Taveta, and Mombasa. A total of 280 people (136 female) were trained. The frontline health workers trained included 99 laboratory workers, 72 clinicians (doctors and clinical officers), 70 nurses, and 39 individuals from other cadre groups, including disease surveillance officers, public health officers, health records officers, a paramedic, and a pharmacist.</p> <p>This brings the total number of health care workers trained on EVD specimen collection, packaging, and transportation since November 28, 2022, to 604 (270 female) from 20 counties considered to be at the highest risk of EVD out of the 47 counties in Kenya. . The 604 health workers comprised 210 laboratory workers, 183 clinicians (doctors and clinical officers), 153 nurses, and 58 individuals from other cadres, including disease surveillance officers, public health officers, health records officers, and a pharmacist.</p>

Kenya EVD Work plan period of performance: October 20, 2022—April 30, 2023		
Activity	Status	Activity implementation updates
		<p>The main purpose of the trainings was to enhance the country's operational readiness and capacity to be able to promptly respond to suspected EVD outbreaks.</p> <p>IDDS supported the training through facilitation of some of the sessions, logistical support to print training materials, and financial support for the national facilitator and trainee travel costs. A pretest and posttest were administered to gauge knowledge gained by the participants through the training, and an evaluation was administered to gather participants' feedback about the quality of training delivery.</p> <p>Training sessions were opened by county directors of health or their designees from the county health management teams. They emphasized the need for capacity building of health care workers to be able to prevent, detect, and rapidly respond to public health threats. They also thanked USAID through IDDS for supporting the training and requested more of such trainings to strengthen counties' preparedness capacity.</p> <p>IDDS completed the procurement of supplies to strengthen EVD specimen collection, packaging, and transportation. The supplies were received at the IDDS office in March 2023 and will be handed over to the Ministry of Health laboratory subcommittee in April 2023 for distribution.</p>
NTW-2: Provide technical assistance to national preparedness coordination and to develop guidelines and standard operating procedures (SOPs)	Completed	<p>IDDS continued to provide technical assistance to the national incident management committee through the laboratory subcommittee to finalize SOPs and job aids on specimen collection, packaging, and transportation. The SOPs and job aids provide guidance to health workers on how to safely collect, package, and transport suspected Ebola virus specimens to designated reference laboratories for testing.</p> <p>In addition to the meeting held on December 15, 2022, to develop the SOPs, job aids, and tools, IDDS organized another one-day meeting on February 1, 2023, to review and validate them. The meeting was attended by four experts from the National Public Health Laboratories and IDDS.</p> <p>The job aids and tools developed include specimen and testing algorithms for suspected EVD cases, the laboratory request form, the EVD laboratory specimen manifest, and the EVD case</p>

Kenya EVD Work plan period of performance: October 20, 2022—April 30, 2023		
Activity	Status	Activity implementation updates
		investigation form. The SOPs validated included blood specimen collection guidelines for health care workers and the triple package of specimens for transportation. Completed documents and tools were disseminated during training in the 10 high-risk counties in FY 2023 Q2.

FY 2023, Quarter 2 IDSR

IDSR Work plan period of performance: May 1, 2022—June 30, 2023 Work plan approval date: USAID approved the period of performance extension to June 30, 2023, on March 21, 2023.		
Activity	Status	Activity implementation updates
IDSR-1-Cameroon	In progress	
CMR-IDSR-SURV2: Provide technical assistance to conduct supportive supervision at the district level	In progress	IDDS provided technical and financial support to the Regional Center for Epidemic Prevention and Control of the Southwest Region of Cameroon to conduct a three-month regional Integrated Disease Surveillance and Response (IDSR) mentoring/coaching pilot program from December 2022 to February 2023. The program, which was initiated after the IDSR training activities, aimed to improve district performance through ongoing coaching. IDDS supported the pilot by providing monthly phone credits to surveillance focal points for regular follow-up with the health care facilities on weekly IDSR data reporting and participating in weekly online data review meetings at the regional level. In total, 10 weekly data review meetings took place at the regional level (2 meetings were not held during January 2023 due to the holidays, and for 1 meeting in February it was impossible to identify a date convenient for all). IDDS also technically supported the assessment of the outcomes on IDSR indicators following the implementation of the coaching program by working with the <i>Direction de la Lutte contre la Maladie, les Epidémies et les Pandémies</i> to analyze key indicators to evaluate the effects of coaching. This activity is ongoing; in FY 2023 Q3, IDDS will continue to provide technical and financial assistance for supportive supervision in the lowest-performing health districts to ensure that IDSR indicators are more accurate, timely, and complete.
IDSR-2-Senegal	In progress	
SEN-IDSR-SURV1: Provide training of nurses and capacity building for health district officers (medical officers,	In progress	Three out of the four IDDS-supported health districts (Dianke Makhan, Goudiry, and Kidira) in Tambacounda Region were trained on the third edition of the IDSR technical guidelines in December 2022. Due to the ongoing health sector strike, the training session in the remaining health district (Bakel) is still on hold. The team is closely monitoring the situation and engaging with the Regional Chief Medical Officer to determine a solution for rescheduling the training session. No training was conducted this quarter.

IDSR Work plan period of performance: May 1, 2022—June 30, 2023 Work plan approval date: USAID approved the period of performance extension to June 30, 2023, on March 21, 2023.		
Activity	Status	Activity implementation updates
surveillance officers, and data managers) in Tambacounda Region		
SEN-IDSR-SURV2: Data review sessions will occur at the district level to ensure adherence to IDSR and assess training impact	Not started	Data review sessions were planned for March 2023; however, due to competing priorities of the majority of stakeholders, including the Directorate of Prevention of the Ministry of Health (MoH) and the Regional Chief Medical Officer, the meeting was postponed to early May 2023.
IDSR-3-Uganda	In progress	
UGA-IDSR-SURV1: Provide training of trainers and capacity building for district One Health teams, village health teams, and health-facility based staff in Eastern Region, Uganda	Completed	IDDS provided technical and financial support to MoH to roll out the third edition of the IDSR technical guidelines to frontline health workers and veterinary staff in Buikwe District, Uganda. A total of 109 health workers (49 female), from 32 of the 65 health facilities, were trained on February 6–10, 2023, at Café Jungle, Mabira.
UGA-IDSR-Surv2: Follow-up supportive supervision sessions will occur at least once after the training to ensure adherence	In progress	IDDS provided technical and financial support to MoH and the Buikwe District Health Office to conduct joint supportive supervision visits focused on strengthening implementation of IDSR at health facilities in Buikwe District. The supportive supervision visits were conducted on March 20–24, 2023, in 16 health facilities (25 percent of the 65 health facilities trained). The supportive supervision was conducted by national MoH IDSR trainers, district IDSR trainers, and IDDS staff, who administered an IDSR checklist that assesses the quality of IDSR data

IDSR		
Work plan period of performance: May 1, 2022—June 30, 2023		
Work plan approval date: USAID approved the period of performance extension to June 30, 2023, on March 21, 2023.		
Activity	Status	Activity implementation updates
and assess training impact		submitted by the health facilities. Real-time feedback was provided to the health workers where gaps were found. The activity report will be submitted in FY 2023 Q3.

FY 2023, Quarter 2 MENA

MENA Work plan period of performance: October 1, 2021—September 30, 2022		
Work plan approval date: As of March 31, 2023, there has been no formal extension of the FY 2022 work plan. These updates relate to the completion of FY 2022 activities.		
Activity	Status	Activity implementation updates
NTW-2: Finalize the IDDS MENA Diagnostic Network Assessment (DNA) tool	In progress	
NTW-2.1: Pilot assessment to validate the IDDS developed MENA DNA tool in one selected MENA country	In progress	<p>IDDS is integrating the DNA verification checklists into SurveyCTO to efficiently collect and analyze facility-based assessment data during verification visits.</p> <p>IDDS shared the DNA scope of work, timeline, and related documents with the Tunisia Ministry of Health and received approvals on March 22, 2023. A formal request was also sent to the Mission for approval. This will be planned as a joint assessment with the World Bank and will tentatively be conducted in late FY 2023 Q3.</p> <p>IDDS and the USAID Bureau for the Middle East also deliberated on other countries where a second pilot could be conducted.</p>
NTW-2.2: Perform MENA DNA assessment using finalized tool in selected USAID priority countries	Not started	This activity is expected to begin after completion of the pilot (NTW-2.1) with USAID MENA Bureau approval.
NTW-3: Perform MENA DNA assessment using	Not started	

MENA Work plan period of performance: October 1, 2021—September 30, 2022 <p>Work plan approval date: As of March 31, 2023, there has been no formal extension of the FY 2022 work plan. These updates relate to the completion of FY 2022 activities.</p>		
Activity	Status	Activity implementation updates
finalized tool in selected USAID priority countries		
NTW-3.1: Conduct MENA DNA assessments in selected countries	Not started	A DNA is planned for Tunisia, pending approval from the Mission.
NTW-3.2: Provide detailed MENA assessment report	Not started	This activity cannot begin until NTW-3.1 is completed.

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
BGD-TB-NTW-1: A comprehensive TB diagnostic network with strong underlying health systems	In progress	
NTW-1.3: Enable functional TB diagnostic equipment	In progress	<p>IDDS organized training on preventive maintenance of TB equipment at the Khulna Regional TB Reference Laboratory (RTRL) on January 10–11, 2023. Seven microbiologists and medical technologists (all male) from the Khulna RTRL participated in this training. With this training, IDDS has completed training of microbiologists and medical technologists from the National TB Reference Laboratory (NTRL) and all five RTRLs, including Shyamoli, Rajshahi, Khulna, Sylhet, and Chattogram, as planned. This training resulted in improvement in routine maintenance practice by the laboratory staff as reflected in the maintenance log sheet that IDDS introduced.</p> <p>IDDS compiled the list of staff trained on preventive maintenance at the Chattogram and Rajshahi RTRLs and will submit this deliverable in FY 2023 Q3.</p> <p>In FY 2023 Q3, IDDS will complete procurement of selected tools and commonly used spare parts to enable the National TB Program (NTP) biomedical engineers to support routine repair and maintenance of TB equipment.</p>
NTW-1.4: Procurement planning and forecasting laboratory supplies	Not started	IDDS postponed this activity because of other implementation priorities. In FY 2023 Q3, IDDS will organize a workshop with NTP, NTRL, and RTRL microbiologists on the use of a tool for forecasting laboratory needs for supplies.
BGD-TB-NTW-2: Strengthened diagnostic	In progress	

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
capacity of the NTRL and RTRLs		
NTW-2.1: Enhance NTRL capacity to lead the TB diagnostic network	In progress	<p>IDDS developed, validated, and finalized a monitoring and supervision checklist for Truenat®, in collaboration with NTP. The checklist is intended for use by NTP, NTRL, and RTRL supervisors to monitor Truenat implementation. The checklist has several sections, including real-time observation of tests performed by the medical technologist, quality of sputum, documents review for accuracy of data recording and reporting, stock status of consumables, and sharing of feedback and recommendations. With Core TB funds, IDDS supported joint monitoring visits to all 38 Truenat sites by staff from NTP Monitoring Unit, NTRL, RTRLs to develop their monitoring and supervision capacity using the checklist. The visits occurred between January 16 and March 19, 2023.</p> <p>The training on quality management systems and biosafety and biosecurity, planned for this quarter, has been delayed due to other implementation priorities, and is anticipated to take place in April 2023.</p>
NTW-2.2: Continue to strengthen the RTRLs to expand availability and capacity for selected TB diagnostics	In progress	IDDS contracted a local engineering firm for refurbishment and upgrading of the Chattogram RTRL with necessary biosafety and biosecurity systems needed for performing liquid culture and drug susceptibility testing (DST). IDDS staff, along with senior NTP officials, including the line director, visited the laboratory on March 28, 2023, and briefed the Chattogram divisional director of health on the proposed upgrading work. The contractor has started the work, which will take about three months to complete.
NTW-2.3: Develop an e-learning platform for TB laboratory capacity building	In progress	Instead of using an e-learning platform as initially planned, IDDS will organize in-person training on biosafety and biosecurity for the laboratory staff from NTRL and all five RTRLs, as preferred by NTP. The training is expected to take place in May 2023.

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
NTW-2.4: Strengthen laboratory capacity for testing extrapulmonary TB (EPTB) specimens and stool for childhood TB at Sylhet, Rajshahi and Chattogram RTRLs	In progress	IDDS organized and delivered training on testing EPTB specimens and stool for pediatric TB for the laboratory staff from the Chattogram RTRL on March 28–29, 2023. A total of nine laboratory staff, including two microbiologists and seven medical technologists (three female), completed this training. The opening session of the training was attended by the line director of NTP and the Chattogram divisional director of health, who praised IDDS for its technical and logistics support in organizing the event. The training was intended to develop the capacity of the laboratory staff to perform quality-assured processing and testing of EPTB specimens, including lymph nodes, cerebrospinal fluid, urine, pleural fluid, and acetic fluid specimens, and stool specimens, for pediatric TB with GeneXpert®. The average post-training test score was 96 percent, compared with 78 percent for the pre-training test. IDDS postponed organizing the EPTB training at Rajshahi RTRL; this training will be held in FY 2023 Q3.
NTW-2.5: Strengthen and expand the specimen referral network for increased access to culture/DST and line probe assay	In progress	<p>IDDS has been reviewing the existing training materials on collection, packaging, and transportation of specimens to reference laboratories for line probe assay and liquid culture and DST. The training of the field staff is expected to take place in FY 2023 Q3 after the training materials have been finalized.</p> <p>For Truenat testing, IDDS has included monitoring of sputum quality in the supportive supervision checklist, which the project helped develop and assessed the quality of during the supervisory visits to Truenat sites (see NTW 2.1 for more details).</p>
BGD-TB-NTW-3: Functional network of TB laboratories using molecular techniques established	In progress	
NTW-3.2: Continue to support improving	In progress	Since IDDS installed uninterruptible power supply devices in 50 GeneXpert sites in FY 2023 Q1, the GeneXpert instruments have been able to operate longer. However, supply shortages of Xpert cartridges undermined the national effort to increase molecular diagnosis of TB

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
access and utilization of GeneXpert		across the whole country, including IDDS-targeted sites. NTP has recently completed the custom clearance for Xpert cartridges and is shipping them to the sites.
NTW-3.3: Develop an external quality assessment (EQA) program for GeneXpert (rapid diagnostic tests)	In progress	In December 2022, IDDS supported the first GeneXpert EQA for 50 GeneXpert sites. The Vietnam NTRL, which has an ISO-certified EQA program, provided the panels it developed with technical support from the U.S. Centers for Disease Control and Prevention. The results of EQA, received in January 2023, show that 90 percent of participating sites (45/50) obtained a “distinction performance” score (scored 100/100), 8.0 percent of sites (4/50) had a “pass” score (scored 85–90/100), and 2.0 percent of sites (1/50) had a “performance not met” score (scored <85/100). Introduction of this EQA is a milestone achievement of IDDS to help NTP Bangladesh monitor and improve the quality of GeneXpert testing.
NTW-3.4: Support installation and functioning of GeneXpert Xpress for bidirectional testing of TB and COVID-19	Not started	NTP has not yet completed procurement of the GeneXpert Xpress for bidirectional testing of TB and COVID-19. As a result, IDDS was unable to implement its planned activities in this area. IDDS support for this activity will depend on whether NTP moves forward with this procurement.
NTW-3.5: Technical assistance to NTP for transition to Xpert/MTB/Rif Ultra	In progress	IDDS, in collaboration with NTP, led the initiative to adapt the standard operating procedure (SOP) for Xpert Ultra for detection of TB and rifampicin resistance and for Xpert MTB/XDR for performing second-line DST. The SOP also includes algorithms for performing these diagnostics. IDDS supported a workshop on March 19 and 20, 2023, attended by diagnostic experts from NTP, non-governmental organization TB implementing partners, and USAID-funded TB implementing partners to review the SOP. IDDS incorporated changes and comments generated from the workshop participants and submitted the SOP to NTP for review.
BGD-TB-NTW-4: Introduce new	In progress	

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
technologies and tools to improve TB diagnosis		
NTW-4.1: Implement Truenat for detection of TB and drug-resistant TB in peripheral laboratories	In progress	<p>All 38 Truenat sites supported by IDDS are functional and made significant contributions to increasing the molecular detection of TB at the peripheral level. From July 2022 through March 2023, these Truenat sites reported testing 46,675 presumptive TB patients, with 3,375 TB cases detected, including 49 rifampicin-resistant TB cases.</p> <p>With IDDS support, the 38 Truenat sites completed a second round of EQA for Truenat in January 2023. Of these, 13 sites (34.2 percent) received a “pass” score, 8 sites (21.1 percent) received an “acceptable” score, 10 sites (26.3 percent) received a “concern” grade, and 7 sites (18.4 percent) received an “unacceptable” score. Several sites received a “concern” grade for reporting rifampicin indeterminate instead of rifampicin detected. Subject to availability of new testing kits, IDDS will organize refresher training in FY 2023 Q3 for the medical technologists operating Truenat, with a focus on improving the proficiency of testing.</p> <p>IDDS supported joint monitoring and supervision with NTP, NTRL, and RTRL staff to all 38 Truenat sites in this quarter between January 16 and March 19, 2023 (as reported under NTW 2.1). The findings show some proficiency gaps in complying with testing procedures as per the SOP and confusion about recording Truenat data. The visit results and recommendations for improvement have been shared with the respective laboratory staff.</p> <p>With IDDS support, the Bangladesh Rural Advancement Committee and the Damien Foundation oriented 877 health providers on Truenat technology, TB screening, and referral of TB presumptive cases for diagnosis. This included 360 village doctors (2 female) through 18 orientation sessions, 232 graduate private practitioners (92 female) through 18 orientation</p>

—Bangladesh TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: November 17, 2022		
Activity	Status	Activity implementation updates
		sessions, and 285 community health workers (all female) through 19 orientation sessions, which also covered specimen collection.
NTW-4.2: Implementation of GeneXpert MTB/extensively drug-resistant (XDR) TB to increase access to second-line DST	In progress	<p>As mentioned under NTW-3.5, IDDS has completed development of the SOP, algorithm, and recording and reporting template for Xpert MTB/XDR testing.</p> <p>The shipment of four GeneXpert 10-color instruments and Xpert MTB/XDR cartridges arrived at the Dhaka airport. IDDS is working with NTP for customs clearance of these items. IDDS plans to support installation of these instruments in FY 2023 Q3.</p>

Burma TB Work plan period of performance: October 1, 2021—February 28, 2023 Work plan approval date: IDDS submitted a revised work plan for Burma on February 28, 2023. As of March 31, 2023, the work plan is pending approval. These activities listed here reflect the FY 2022 work plan.		
Activity	Status	Activity implementation updates
BMA-TB-NTW-1: Strengthen the TB diagnostic network framework and systems	In progress	
NTW-1.2: Conduct a comprehensive TB diagnostic network assessment and spatial analysis on the distribution and functionality of TB diagnostic	In progress	<p>From January to March 2023, IDDS engaged in Global Fund proposal development and participated in planning for a diagnostic network optimization exercise. Following the spatial analysis conducted by IDDS in previous quarters, the National TB Program (NTP) requested support for additional analyses. IDDS provided support to the World Health Organization (WHO) and NTP for data entry and spatial analysis report development during NTP's assessment of the functionality of TB diagnosis and treatment facilities in January 2023. NTP presented the report to the Joint Monitoring Mission. In addition, IDDS is providing technical support to NTP and the United Nations Office for Project Services in conducting an assessment of current chest X-ray (CXR) and GeneXpert facilities to inform implementation of the new diagnosis algorithm (Double X strategy).</p> <p>In FY 2023 Q3, IDDS will continue to provide technical assistance to NTP, the United Nations Office for Project Services, and WHO in strengthening the TB diagnostic network, using the experiences and expertise from the spatial network analysis that IDDS conducted in FY 2022.</p>
NTW-1.3: Introduce a simplified laboratory information management system (LIMS) to strengthen the electronic results reporting	In progress	<p>IDDS continued to engage with the National TB Reference Laboratory (NTRL) for integration of the electronic LIMS (eLIMS). IDDS Information technology consultants defined the software structure, user roles, and data flow based on information collected in FY 2023 Q1 on workflows at the laboratory.</p> <p>In FY 2023 Q3, IDDS will procure the equipment needed (e.g., computers, printers) and identify a software developer to develop the eLIMS software. IDDS will continue to work</p>

Burma TB Work plan period of performance: October 1, 2021—February 28, 2023		
Work plan approval date: IDDS submitted a revised work plan for Burma on February 28, 2023. As of March 31, 2023, the work plan is pending approval. These activities listed here reflect the FY 2022 work plan.		
Activity	Status	Activity implementation updates
		closely with NTRL and WHO on every step of software development and reach consensus on aspects of operational arrangements, such as human resources and sustainability.
BMA-TB-NTW-2: Increase access to quality TB diagnostic services	In progress	
NTW-2.1: Support implementation of updated TB diagnostic algorithms	In progress	Due to delays in obtaining NTP approval, IDDS postponed the country-level dissemination workshop for the new TB diagnosis algorithm. After approval is granted by NTP, IDDS will proceed with the dissemination.
NTW-2.2: Strengthen the TB specimen referral and transport system in the private and the public sector	In progress	IDDS continued to provide transportation support to fill gaps in the current specimen transport system. With IDDS support, NTP is transporting specimens between regional laboratories and NTRL for genotypic and phenotypic culture, and between township laboratories and regional laboratories for molecular diagnostic testing. In addition, IDDS, in collaboration with the USAID-funded Local Action Against TB project, planned for stool specimen transport by TB self-help groups and civil society organizations from collection points to two testing laboratories. Planning included discussions of specimen transportation incentive schemes, engagement practices, and operational details between NTP and the self-help groups and civil society organizations. In FY 2023 Q3, after obtaining approval from the central NTP, IDDS will initiate implementation of a specimen transportation system for stool specimen transport using the self-help groups and civil society organizations, in close collaboration with the Local Action Against TB project.
NTW-2.3: Increase access to quality CXRs	In progress	The implementation of computer-aided diagnosis with ultra-portable CXR activities in Yangon is delayed due to the prolonged NTP approval process. IDDS continued to engage with NTP, technical partners, and the Myanmar Anti-Tuberculosis Association to explore the feasibility of

Burma TB Work plan period of performance: October 1, 2021—February 28, 2023 Work plan approval date: IDDS submitted a revised work plan for Burma on February 28, 2023. As of March 31, 2023, the work plan is pending approval. These activities listed here reflect the FY 2022 work plan.		
Activity	Status	Activity implementation updates
		implementation. IDDS and the Myanmar Anti-Tuberculosis Association will initiate field activities after official approval from NTP is received.
NTW-2.4: Strengthen the access to GeneXpert as an initial diagnostic test for TB	In progress	<p>In FY 2023 Q1, IDDS received delivery of 5 GeneXpert® 10-color machines, together with 250 Xpert MTB/RIF cartridges, 500 Xpert MTB/RIF Ultra cartridges, and 600 Xpert Xpress SARS-CoV-2 cartridges, which the project procured as part of a customized package from Cepheid. This quarter, IDDS donated 420 Xpert Xpress SARS-CoV-2 cartridges to implementation partners (360 tests to Asian Harm Reduction Network and 60 tests to Medical Action Myanmar).</p> <p>IDDS procured the power supply system for GeneXpert instruments after developing the specifications for the power supply in collaboration with WHO during the previous quarter. IDDS continued to advocate NTP for deployment of GeneXpert instruments in the private-for-profit sector, which would increase case finding, strengthen mandatory case notification, and reduce underreporting.</p> <p>In FY 2023 Q3, IDDS will continue to engage with USAID and NTP for placement of the GeneXpert instruments, with priority to strengthen the Double X strategy among private sector partners and childhood TB diagnosis using molecular diagnostic tools.</p>
NTW-2.6: Pilot use of stool specimens for TB diagnosis in children using Xpert Ultra	In progress	IDDS conducted advocacy and coordination meetings with local organizations (as described in NTW-2.2) to finalize the referral and transport mechanism for stool specimens, including defining an incentive scheme. On March 15–16, 2023, IDDS conducted site readiness assessment visits to two potential GeneXpert instruments deployment sites (Lower Myanmar TB Center and Latha TB Center). However, the activity is on hold pending approval from the central NTP.

Burma TB Work plan period of performance: October 1, 2021—February 28, 2023 Work plan approval date: IDDS submitted a revised work plan for Burma on February 28, 2023. As of March 31, 2023, the work plan is pending approval. These activities listed here reflect the FY 2022 work plan.		
Activity	Status	Activity implementation updates
		After the activity is approved by NTP, IDDS will provide training and GeneXpert instruments to the two NTP testing sites and initiate the pilot.
NTW-2.7: Pilot Truenat to expand access to rapid TB diagnostics	In progress	<p>IDDS participated in various discussion sessions for implementation of Truenat® assay. Despite being recommended by WHO and technical partners, the central NTP remains reluctant to launch a new strategy for Truenat testing. This poses significant challenge to partners who plan to implement Truenat testing, including IDDS.</p> <p>In FY 2023 Q3, IDDS, in close collaboration with other technical partners, will continue to advocate NTP for the approval.</p>
NTW-2.8: Organize TB diagnostic education materials for professionals	In progress	<p>IDDS approached NTP and NTRL to review and endorse the TB diagnostic-related learning package that IDDS had compiled in FY 2023 Q1, which included educational materials such as guidelines, standard operating procedures (SOPs), manuals, and training packages. However, NTP has not yet approved this activity, and the official review of these documents is on hold until approval is granted.</p> <p>In FY 2023 Q3, IDDS will continue to follow up with NTP to obtain approval for this activity.</p>
BMA-TB-NTW-3: Strengthen TB and multidrug-resistant TB case detection at TB diagnostic facilities	In progress	
NTW-3.1: Build diagnostic capacity to perform quality-assured culture,	In progress	IDDS obtained approval from the Yangon regional NTP to proceed with the analysis of Xpert MTB/XDR testing data. However, the Yangon regional NTP requested to modify the data collection period to cover January to December 2022 instead of September 2021 to

Burma TB Work plan period of performance: October 1, 2021—February 28, 2023 Work plan approval date: IDDS submitted a revised work plan for Burma on February 28, 2023. As of March 31, 2023, the work plan is pending approval. These activities listed here reflect the FY 2022 work plan.		
Activity	Status	Activity implementation updates
genotypic, and phenotypic drug susceptibility testing, including line probe assay		<p>August 2022, as previously planned. In FY 2023, IDDS will collect, enter, and validate additional data to align with the new study dates before performing the planned data analysis.</p> <p>IDDS finalized two technical deliverables: (1) SOP for second-line drug susceptibility testing with updates to media preparation, and (2) key performance indicators for performance monitoring at NTRL. These documents are now awaiting official endorsement by NTP and NTRL. NTRL also requested IDDS to provide technical assistance in reviewing SOPs for liquid culture, first-line liquid drug susceptibility testing, decontamination with N-acetyl-L-cysteine–sodium hydroxide, maintenance of pipette calibration, and monitoring of quality control, as well as a biosafety manual.</p> <p>In FY 2023, IDDS will continue to work with NTRL to review the outdated SOPs and to revise them per updated global guidelines and recommendations.</p>

Cambodia TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: March 28, 2023 (with contingencies)		
Activity	Status	Activity implementation updates
KHM-TB-NTW-I: Implementation of diagnostic connectivity solution in Community Mobilization Initiative to End Tuberculosis (COMMIT) and Global Fund-supported sites	In progress	
NTW-I.I: Support the establishment of connected GeneXpert instruments in COMMIT and Global Fund project operational districts to a total of 50 GeneXpert instruments	In progress	<p>IDDS, in collaboration with Savics and USAID's COMMIT project, established interconnectivity between DataToCare (DTC) and the TB management information system (TB-MIS). The system is undergoing testing and quality checks. After the testing is complete, Savics (DTC provider) will install the new version of DTC for deployment at the sites connected through IDDS support. This is expected to happen in FY 2023 Q3.</p> <p>IDDS coordinated with Savics and MekongNet (a local bulk SMS provider) to establish SMS notification of the GeneXpert® test results to prescribers and information to the patients through DTC. The SMS notification is functioning well.</p> <p>IDDS convened a meeting with the National Center for Tuberculosis and Leprosy Control (CENAT) and COMMIT on March 24, 2023, to review the DTC connectivity status and discuss the expansion plan to 20 additional GeneXpert sites supported by the Global Fund. A total of 12 people attended the meeting (1 female): 6 from CENAT, 2 from COMMIT, 1 from STAR, and 3 from IDDS. CENAT agreed to expand DTC to all GeneXpert instruments at COMMIT provincial sites.</p> <p>IDDS plans to expand DTC connectivity to 20 new Global Fund-supported operational districts in FY 2023 Q3. The activity was postponed pending work plan approval. IDDS will also encourage laboratory technicians to use DTC to assess the performance of the GeneXpert rapid</p>

Cambodia TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: March 28, 2023 (with contingencies)		
Activity	Status	Activity implementation updates
		testing system and reduce the turnaround time for results reporting. In addition, IDDS will continue working with CENAT to use the system as a monitoring tool to ensure uninterrupted quality testing and use DTC data for decision-making.
NTW-1.3: Expand data connectivity to Truenat instruments and TB-MIS	In progress	<p>IDDS is working with Savics and Molbio Diagnostics (Molbio) to establish connectivity between Truenat® and DTC and enable the transfer of all testing results data accurately to the DTC system. The Truenat software was updated and installed on two Truenat devices by Molbio. A new version of DTC was developed by Savics and will be deployed after its basic environment testing is completed (expected by the end of April 2023). Savics confirmed that after the new DTC version is installed, the connectivity between Truenat and TB-MIS will be established.</p> <p>In FY 2023 Q3, IDDS expects to configure connectivity for the remaining 13 Truenat instruments and provide hands-on training on the use of this connectivity solution.</p>
KHM-TB-NTW-2: Pilot Truenat and 10-color GeneXpert to expand access to rapid TB and drug-resistant TB diagnostics	In progress	
NTW-2.1: Pilot Truenat in selected sites and assess the feasibility of testing for TB and rifampicin resistance at peripheral point-of-care health centers	In progress	IDDS is reviewing the draft of the Truenat pilot report and documenting best practices and user feedback. This report will be submitted to the National Ethics Committee for Health Research in FY 2023 Q3 for review before IDDS finalizes the document. The pilot report will inform scale-up by CENAT.

Cambodia TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: March 28, 2023 (with contingencies)		
Activity	Status	Activity implementation updates
NTW-2.3: Introduce GeneXpert with 10-color system and strengthen the capacity of CENAT and provincial health department staff to implement and manage the 10-color GeneXpert system testing, troubleshooting, analyze data, and recommend corrective actions	In progress	<p>IDDS co-hosted the handover ceremony of three GeneXpert 10-color instruments to CENAT by USAID on February 24, 2023, at CENAT, with 34 people (4 female) attending.</p> <p>IDDS, in collaboration with CENAT, successfully installed all three GeneXpert 10-color instruments at Battambang, Siem Reap, and Svay Rieng provincial referral hospitals in March 2023, and laboratory-level MTB/XDR cartridge verification has been conducted. IDDS conducted training on the use of Xpert MTB/XDR assays for 11 laboratory technicians (4 female) and 3 provincial TB laboratory supervisors (1 female) from the 3 laboratories and the National TB Reference Laboratory, on February 28–March 2, 2023, in Kampot Province. Pre- and post-training test scores show increased knowledge, with average test scores increasing from 65 percent before the training to 88 percent after the training.</p> <p>In FY 2023 Q3, IDDS plans to (1) train laboratory staff on drug susceptibility testing for new and repurposed anti-TB drugs and culture, including improving sputum quality, and (2) train laboratory staff on safe working practices.</p>
KHM-TB-NTW-3: Improve the chest X-ray (CXR) reading and Telegram platform for interpretation of CXR	In progress	
NTW-3.2: Develop and disseminate training materials for the use of the platform for CXR interpretation	In progress	<p>IDDS is in the process of translating training materials on the use of the CXR Telegram platform for dissemination to users of the platform.</p> <p>In FY 2023 Q3, IDDS plans to (1) provide virtual hands-on individual training for users of the CXR Telegram platform, and (2) upload training materials to the Telegram platform and establish a system to update and curate the materials based on CXR reading quality and feedback.</p>

Cambodia TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: March 28, 2023 (with contingencies)		
Activity	Status	Activity implementation updates
NTW-3.3: Develop an online training module and provide training on the correct reading and interpretation of CXR	In progress	<p>The online training module on the correct reading and interpretation of CXR is still being developed and is expected to be completed in FY 2023 Q3.</p> <p>In FY 2023 Q3, IDDS plans to (1) work with CENAT and stakeholders to develop online CXR reading and interpretation guidance and a manual, (2) upload and launch the online training module for learners accessing the online CXR courses through the CENAT website. The FY 2023 work plan is under review, and the activity may be reduced, depending on budget availability.</p>
NTW-3.4: Test the feasibility of artificial intelligence-enabled CXR reading for TB screening at the peripheral sites and for external quality assurance of CXR in selected operational districts	In progress	<p>The procurement of artificial intelligence software from Qure.ai company is on hold, pending FY 2023 work plan revision.</p> <p>IDDS developed a concept note to pilot and test the feasibility of artificial intelligence-enabled CXR reading for TB screening at two sites (CENAT and Battambang) and submitted it to CENAT for review.</p> <p>In FY 2023 Q3, IDDS plans to provide CXR reading, interpretation, and external quality assurance training to the selected sites, using the digitized training materials, and to support the implementation of the external quality assurance program.</p>
KHM-TB-NTW-5: Implementation of stool GeneXpert testing for improving pediatric TB diagnosis in COMMIT and CENAT/Global Fund-supported operational districts and improve biosafety and	In progress	

Cambodia TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: March 28, 2023 (with contingencies)		
Activity	Status	Activity implementation updates
biosecurity at the TB reference laboratories		
NTW-5.1: Implement stool specimen testing with Xpert Ultra for pediatric TB diagnosis	In progress	IDDS finalized the detailed implementation plan, algorithm, training curriculum, standard operating procedures, and materials for stool testing implementation. In FY 2023 Q3, IDDS will conduct the simple one step training for referral hospital staff and health center staff, including pediatricians and laboratorians, and will cover stool specimen testing, sample collection, the referral process, and the new algorithm.
NTW-5.2: Improve biosafety and biosecurity practices at the National TB Reference Laboratory and regional culture laboratories	In progress	The safe working practice training will be conducted in April 2023.

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
CTB-NTW-1: TB-NET tool revisions and translation		
NTW-1.2: Develop quality control component for remote TB Diagnostic Network Assessment (DNA)	Not started	Not applicable because the on-site TB DNAs resumed when travel restriction due to COVID-19 were lifted.
NTW-1.6: Addendum to assessors' manual on selection of priorities in a limited scope DNA	Not started	Implementation will begin in FY 2023 Q3.
CTB-NTW-2: Conduct the TB DNA		
NTW-2.1: Conduct laboratory diagnostic network analyses in USAID priority countries	In progress	<p>Ethiopia: IDDS worked on the spatial analysis report and expects to submit the final report to USAID in FY 2023 Q3.</p> <p>Tanzania: IDDS is finalizing the spatial analysis report and will submit it to USAID in FY 2023 Q3.</p> <p>Malawi: IDDS completed data collection for spatial analysis and performed analysis on the placement of new 10-color GeneXpert® modules and relocation of existing 6-color GeneXpert modules. Preliminary results were presented to the Malawi National TB Program (NTP) and the USAID Mission in Malawi on March 14, 2023. A spatial analysis for referral routes for the three new GeneXpert 10-color sites was conducted (see NTW-5 for details). A new request came in for a spatial analysis of the specimen referral network for the 6-color GeneXpert facilities. IDDS will finalize this analysis in FY 2023 Q3. IDDS also worked on a spatial analysis to suggest the placement of four new Truenat®</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>instruments that IDDS procured. An executive summary of the findings is being prepared and will be shared with the country in FY 2023 Q3.</p> <p>Zimbabwe: IDDS undertook data collection and cleaning in preparation for a spatial analysis and will work on an analysis of the specimen referral network in FY 2023 Q3. IDDS will present the findings and share an executive summary of the findings with the NTP and the USAID Mission in Zimbabwe in FY 2023 Q3. IDDS organized the first online capacity building workshop on data cleaning for spatial analysis on March 10, 2023, and will organize the second online capacity building workshop on calculating TB testing service areas and calculating distances between hubs and spokes in FY 2023 Q3.</p>
NTW-2.2: Expand the Laboratory Network Analysis process to incorporate second-line drug susceptibility testing (DST)	In progress	Spatial analyses in Ethiopia, Tanzania, Malawi, and Zimbabwe incorporated analysis for drug-resistant diagnostics, including include second-line DST, Xpert® MTB/XDR, and Truenat MTB/RIF.
NTW-2.3: Expand, update, and verify the roster of consultants able to implement DNAs	In progress	IDDS contracted about 50 international and national consultants to support TB DNAs in Malawi, the Democratic Republic of the Congo (DRC), Pakistan, and South Africa this quarter. Several consultants joined multiple DNAs.
NTW-2.4: Conduct DNAs	In progress	<p>IDDS worked with NTPs in five countries—DRC, Kenya, Malawi, Pakistan, and South Africa—to conduct TB DNAs.</p> <p>DRC: IDDS participated in and provided logistical support for DNA verification visits in 13 provinces (January 25–February 3, 2023), an assessment reporting workshop in Kinshasa (February 6–9, 2023), and a stakeholders dissemination meeting for DNA findings and recommendations in Kinshasa (February 10, 2023). Verification visits were conducted in Equateur, Haut Katanga, Kabinda, Kasai Central, Kasai Oriental, Kinshasa, Kongo Central, Kwilu, Mai Ndombe, North Kivu, South Kivu, Tanganyika, and Tshopo provinces.</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>Thirteen teams of international and national assessors and NTP observers visited 111 organizations and health facilities (including health centers, diagnostic centers, reference laboratories, regional laboratories, hospitals, and national programs). In March 2023, a draft TB DNA report was shared with DRC NTP leadership for review and comments.</p> <p>Kenya: IDDS began planning for implementation of the TB DNA self-assessment workshop, in which Kenya NTP officers will use the TB-NET tool to evaluate the status of the TB diagnostic network, which is expected to take place in April 2023.</p> <p>Malawi: IDDS participated in and provided financial and logistical support to TB DNA verification visits in five zones (January 16–21, 2023), an assessment analysis and reporting workshop in Lilongwe (January 23–26, 2023), and a stakeholders dissemination meeting for DNA findings and recommendations in Lilongwe (January 27, 2023). Verification visits were conducted in Central East Zone, Central West Zone, Northern Zone, Southeast Zone, and Southwest Zone. Seven teams of international and national assessors and NTP observers visited 133 organizations and health facilities (including health centers, diagnostic centers, reference laboratories, regional laboratories, hospitals, and national programs). In March 2023, a draft TB DNA report was shared with the Malawi NTP leadership for review and comments.</p> <p>Pakistan: See NTW-8 for updates.</p> <p>South Africa: IDDS provided technical and logistical support for the TB DNA self-assessment workshop in Pretoria, in which South Africa NTP officers used the TB-NET tool to evaluate the status of the TB diagnostic network (February 23–24, 2023). IDDS participated in and provided logistical support for the verification visits in six geographic regions (Eastern Cape, Mpumalanga and Limpopo, Northwest and Free State, Northern and Western Cape, Gauteng, and Kwa-Zulu Natal) on February 27–March 3, 2023. Six teams of international and national assessors and NTP observers visited 44 organizations</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		and health facilities (including health centers, diagnostic centers, reference laboratories, regional laboratories, hospitals, and national programs). IDDS provided technical and logistical support to hold an assessment analysis and reporting workshop in Pretoria on March 6–9, 2023, following the verification visits, and a stakeholders meeting to disseminate the DNA findings and recommendations, held in Pretoria on March 10, 2023. A draft TB DNA report is being prepared and will be shared with South Africa NTP leadership for review and comments in FY 2023 Q3.
NTW-2.5: Track status of laboratory network analyses and DNAs for all USAID priority countries	In progress	IDDS continues to track the status of the TB DNAs and spatial analyses supported by the project.
CTB-NTW-3: TB diagnostic new tools implementation		
NTW-3.2: Introduce Truenat in introducing New Tools Project (iNTP) and non-iNTP countries	In progress	<p>Bangladesh: IDDS supported joint monitoring visits to 45 Truenat sites by staff from the NTP Monitoring Unit, National TB Reference Laboratory (NTRL), and Regional TB Reference Laboratories (RTRLs) to develop their monitoring and supervision capacity using the new supervision checklist developed with IDDS support. The visits took place between January 16 and March 19, 2023.</p> <p>Malawi: IDDS supported the procurement of four Truenat instruments as a pilot to support decentralization of the TB network. The instruments are expected to be delivered to the USAID Mission by the end of April 2023. An ongoing spatial analysis, supported by IDDS, will be used to inform instrument placement.</p> <p>Tanzania: IDDS trained 50 Truenat end-users (15 female) in Morogoro on March 13–17, 2023. The sessions were facilitated with Molbio Diagnostics (Molbio) representatives.</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>IDDS supported site readiness assessments to prepare for the installation of the 30 Global Fund-donated Truenat instruments; this will be completed in FY 2023 Q3.</p> <p>Zimbabwe: IDDS conducted supportive supervision visits, along with staff from the Ministry of Health, NTP, National Microbiology Reference Laboratory, and NTRL, to all 20 Truenat sites on February 27–March 3, 2023. During the visits, the supervisory teams assessed Truenat procedures, record keeping, and stock management practices, and provided mentoring to improve practices.</p>
NTW-3.3: Introduce/scale up diagnostic connectivity solutions	In progress	<p>Bangladesh: The first Truenat instrument has been connected to Aspect and is reporting on test data. The installation of the remaining instruments is expected to start in FY 2023 Q3. There are ongoing conversations with the IDDS team and NTP to continue supporting the Truenat program after the SystemOne contract ends in May 2023.</p> <p>Tanzania: IDDS is collecting instrument serial numbers to provide to Molbio to support software upgrades to complete connectivity to Aspect. With support from IDDS, SIM cards have been procured to support data transmission. In FY 2023 Q3, IDDS will work with NTP and Molbio to install the necessary Truenat software upgrades to connect to Aspect.</p> <p>Zimbabwe: Molbio pushed out a software upgrade necessary to connect Truenat instruments to Aspect (SystemOne). One pilot instrument has been successfully connected, and data validation is ongoing.</p>
NTW-3.4: Implementation support for Truenat (super-users)	In progress	<p>DRC: IDDS conducted five Truenat site visits to NTRL, Siloe Peripheral laboratory, Kokolo Military Hospital, Kinshasa Provincial, and Lunda Peripheral laboratory) on February 17–March 1, 2023, to gain a firsthand understanding of challenges faced by the sites IDDS also supported a Truenat super-users debriefing workshop held at NTRL in Kinshasa on February 23, 2023. During the workshop, participants discussed challenges with Truenat implementation and common errors with external quality assessment (EQA) and identified corrective actions to improve performance. There were 20 workshop</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>participants (4 female). Based on the information collected during the site visits and workshop, IDDS developed an end-user refresher training curriculum, and procurement plan for ancillary supplies, with the aim to improve performance of the Truenat laboratories.</p> <p>Kenya: IDDS conducted a super-users review workshop on March 6–13, 2023, in Nakuru. There were 65 participants, which included representatives from NTP, NTRL, IDDS, and a local Molbio agent (StepLabs), and 44 super-users (12 female). Key achievements of the super-users were providing on-site training and technical support and strengthening the quality management systems, including introducing standard operating procedures and job aids, which resulted in improvement of EQA scores. Super-users developed action plans for supportive supervision visits for continual quality improvement.</p> <p>Malawi: IDDS has initiated planning meetings with NTRL and other stakeholders to provide a combined super-user training for Truenat and use of the Xpert MTB/XDR assay on the I0-color GeneXpert instruments.</p> <p>Nigeria: IDDS trained 38 Truenat super-users (10 female) for Truenat MTB/RIF testing. Training was done in two clusters (in Port Harcourt and in Nasarawa) on January 30–February 10, 2023. The training was a collaborative effort, and facilitators included IDDS, USAID, National TB and Leprosy Control Program, KNCV, Institute of Human Virology Nigeria, and Molbio trainers. Pretest and posttest mean scores showed knowledge gain in the north cluster (50 percent to 74 percent) and the south cluster (59 percent to 79 percent). In FY 2023 Q3, IDDS will conduct monthly supportive supervisory visits to monitor the performance of the Truenat implementation in the sites.</p> <p>Philippines: Planning for the Truenat super-user training workshop has been paused, pending USAID approval of the budget for this activity.</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
NTW-3.5: EQA support for molecular diagnostic tools	In progress	<p>Bangladesh: Bangladesh finished with EQA Cycle 2 on January 20, 2023. Preliminary results show that 34 percent of sites earned a “Pass” score, 21 percent earned an “Acceptable” score, 26 percent had a “Concern” score, and 18 percent had an “Unacceptable” score. SmartSpot Quality (SmartSpot) is preparing the official group report for Cycle 2. The Cycle 3 submission deadline was extended, from February 28 to March 31, 2023. IDDS will debrief with the country on Cycle 2 and Cycle 3 results in FY 2023 Q3 to review errors, troubleshoot, and discuss implementing solutions to improve performance.</p> <p>Cambodia: Cambodia completed Cycle 3 in November 2022, and the group report was released by SmartSpot in February 2023. Overall, 73 percent of sites earned a “Pass” score, 13 percent earned an “Acceptable” score, 13 percent had a “Concern” score, and no site had “Unacceptable” results. IDDS debriefed with the country on the results and identified corrective actions to address incorrect results. Cambodia confirmed its participation in the 2023 EQA starting in FY 2023 Q3.</p> <p>DRC: DRC completed EQA Cycle 3 in November 2022. In March 2023, SmartSpot generated the group report for Cycle 3 in both French and English, based on the feedback from the DRC site visit. In Cycle 3, 34 percent of the sites in DRC earned a “Pass” score, 11 percent earned an “Acceptable” score, 18 percent had a “Concern” score, and 24 percent had an “Unacceptable” score. Five sites (13 percent) did not report results. IDDS will debrief the country stakeholders on the performance in FY 2023 Q3. DRC confirmed its participation in the 2023 EQA.</p> <p>Kenya: Kenya finished Cycle 3 of EQA in November 2022, and the group report was released by SmartSpot in February 2023. In Cycle 3, 58 percent of the sites earned a “Pass” score, none earned an “Acceptable” score, 29 percent had a “Concern” score, and 11 percent had an “Unacceptable” score. One site (3 percent) did not report results. This EQA cycle observed a sharp increase in the rates of False Negative in RIF test. The debrief between IDDS and country team on the results was delayed due to schedule conflicts.</p>

CORE TB **Work plan period of performance: April 1, 2022—December 31, 2022****IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.**

Activity	Status	Activity implementation updates
		<p>IDDS will schedule another debriefing meeting in FY 2023 Q3. Kenya confirmed its participation in the 2023 EQA.</p> <p>Philippines: Philippines submitted the enrollment form to SmartSpot in mid-March 2023, with two Truenat instruments still pending to be reassigned to another facility. The first cycle of EQA is expected to start in April 2023.</p> <p>Uganda: Uganda received the Cycle 2 group report in February 2023. Two instruments were relocated to two lower-level facilities between Cycle 1 and Cycle 2. In Cycle 2, 34 percent of the sites earned a “Pass” score, 3 percent earned an “Acceptable” score, 11 percent had a “Concern” score, and 29 percent had an “Unacceptable” score. Nine out of 38 sites did not report results. Uganda completed Cycle 3 on December 30, 2022, and SmartSpot released the group report in March 2023. In Cycle 3, 26 percent of the sites earned a “Pass” score, 5 percent earned an “Acceptable” score, 18 percent had a “Concern” score, and 37 percent had a “Unacceptable” score. Five sites (13 percent) did not submit results due to a variety of reasons, ranging from insufficiently trained human resources, to faulty equipment, to not receiving the panels. IDDS will organize a debrief session on Cycle 2 and Cycle 3 results in FY 2023 Q3. Moving forward, Uganda will start to use EQA panels produced by the Uganda Supranational Reference Laboratory (SRL), instead of those provided by SmartSpot, for its Truenat sites.</p> <p>Zimbabwe: Zimbabwe completed Cycle 3 in December 2022 and received the group report in February 2023. Five out of 20 sites did not report results due to power outages and a lack of trained staff. Among those sites that reported results, 45 percent earned a “Pass” score, 5 percent earned an “Acceptable” score, 15 percent had a “Concern” score, and 10 percent had an “Unacceptable score. IDDS and the country had a debriefing session to discuss the results, identify existing issues, and devise corrective action. Zimbabwe will continue the 2023 EQA activity with IDDS.</p>

CORE TB **Work plan period of performance: April 1, 2022—December 31, 2022****IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.**

Activity	Status	Activity implementation updates
		Overall: Most of the countries completed all three cycles of EQA in 2022 and have received their results. The average score for Cycle 1 in six countries is 90.8, the average score for Cycle 2 in five countries (not including Bangladesh) is 86.8, and the average score for Cycle 3 in five countries (not including Bangladesh) is 90.4. Cambodia performed well and consistently across all three cycles. Zimbabwe showed great improvement, and the country team wrote a success story on the experience included in Annex B of this report. However, performance in DRC, Kenya, and Uganda decreased as the panels become more complex across the cycles. IDDS conducted a site visit to DRC after Cycle 2 results were reported. IDDS identified many existing issues and worked with the country team to address challenges and developed an end-user refresher training curriculum. IDDS will plan similar support to other underperforming countries with the aim of improving performance.
CTB-NTW-4: Introduce stool-based diagnosis using World Health Organization (WHO)-recommended rapid diagnostics for children	In progress	
NTW-4.1: Build IDDS capacity to support pediatric TB detection	In progress	IDDS is collaborating with Malawi and Zimbabwe country teams to fill out the activity tracker tool for countries to use when implementing the simple one-step (SOS) method for pediatric TB detection. The tracker will help countries plan, track, and budget for the different activities.
NTW-4.2: Expand access and use of SOS specimen processing protocol	In progress	DRC: On March 7, 2023, IDDS hosted a virtual webinar to present preliminary findings and lessons learned from the pilot to introduce stool-based TB testing for children at 25 sites in Kinshasa. Thirty participants from NTP, Local Organization Network partners, USAID, and IDDS attended the meeting. IDDS is finalizing the report on the implementation. IDDS also conducted a monitoring visit on March 13–17, 2023, to review the implementation of the pilot to introduce stool-based TB testing for children in

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>Kinshasa and determine the next steps. Next steps include completing the analysis for the pilot phase, widely disseminating results (in the country and beyond) and working with partners to continue planning the expansion of stool-based TB testing beyond Kinshasa.</p> <p>Cambodia: IDDS, in partnership with KNCV, continued planning for a hybrid SOS method training that was postponed in the last quarter pending NTP review of the training materials and implementation plan. IDDS sponsored two officials from NTP to attend a regional SOS training in Kampala in March 2023 to gain practical experience in the SOS method (see NTW-4.4 for more details on this training).</p> <p>Mozambique: IDDS, in partnership with KNCV, started planning for a hybrid training on the SOS method expected to be held in April 2023. In preparation for country implementation, IDDS sent two NTP officials and one consultant master trainer to the Kampala regional training, (see NTW-4.4) to gain practical experience on the SOS method.</p>
NTW-4.3: Expand use of community and home-based stool specimen collection	Not started	Three countries (Malawi, DRC, and Zimbabwe) are piloting SOS and have not yet expanded stool specimen collection to communities. The expansion will start in the next two quarters.
NTW-4.4: Regional capacity building for stool-based Xpert testing	In progress	The Uganda SRL conducted its first regional training on the stool SOS method on March 27–31, 2023, with NTP and laboratory staff from eight countries (Benin, Botswana, Liberia, Rwanda, Sierra Leone, Somalia, Tanzania, and Uganda). The Ugandan facilitators had previously participated in the IDDS-supported training for master trainers in November 2022. During the March 2023 regional training, an IDDS consultant observed the trainers, provided daily feedback on the sessions, and provided technical support. The consultant will also review the training materials that the SRL developed and provide feedback.

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
CTB-NTW-5: Mono-isoniazid and second-line drug resistance testing strengthened in USAID priority countries	In progress	<p>IDDS drug-resistant TB activities are underway in Cambodia, Malawi, Mozambique, Pakistan, and Uganda.</p> <p>Cambodia: IDDS, in collaboration with the Center for Tuberculosis and Leprosy Control (CENAT), successfully installed all three GeneXpert 10-color instruments at Battambang, Siem Reap, and Svay Rieng provincial referral hospitals in March 2023, and laboratory-level Xpert MTB/XDR cartridge verification has been conducted. IDDS conducted training on the use of Xpert MTB/XDR assays for 14 laboratory staff (5 female) from the 3 laboratories, on February 28–March 2, 2023. For phenotypic DST, final drafts of standard operating procedures were submitted to NTRL for approval. IDDS has developed a five-day training agenda for phenotypic DST, and development of training presentations is underway. IDDS also finalized the list of key performance indicators for phenotypic DST and submitted it to CENAT for approval. In FY 2023 Q3, IDDS, in collaboration with CENAT, will conduct phenotypic DST training and conduct supervisory and monitoring visits at the GeneXpert 10-color sites.</p> <p>Malawi: IDDS supported installation of the three procured GeneXpert 10-color instruments at the three high-volume laboratories (at Bwaila District Hospital, Mangochi District Hospital, and Chikwawa District Hospital) on January 29–February 4, 2023, in conjunction with the local Cepheid vendor (MM Africa). IDDS provided on-site training to 32 (13 female) laboratory and clinical staff on Xpert MTB/XDR at the 3 district hospitals on January 31–February 2. The installation report was shared with the USAID Mission. IDDS is close to finalizing a super-user training package to support the training of super-users at the selected GeneXpert sites. The super-users will act as a technical advisory group for issues related to use of the Xpert MTB/XDR assay in the country, after they are trained in FY 2023 Q3. IDDS also conducted a hub and spoke spatial analysis to develop a revised specimen referral route for the newly trained laboratories. The analysis was shared with NTRL and the USAID Mission.</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>Mozambique: The drug-resistant TB country action plan in Mozambique was approved by USAID in FY 2023 Q1, and implementation began in this quarter. IDDS is working with the Mozambique National Institute of Health to finalize the scope and agenda for a national workshop on gene sequencing. The workshop is expected to take place at the end of April 2023. IDDS also conducted site assessment visits to the Carmelo and Manhica laboratories on March 5–8, 2023, to assess existing laboratory capacity for DST.</p> <p>Pakistan: IDDS is close to finalizing the TB Drug-Resistant Survey and sentinel site surveillance protocols. The drafts are currently with WHO for approval. IDDS has identified six pilot sentinel surveillance sites (one health facility each from Lahore, Bahawalpur, Jamshoro, Peshawar, Quetta, and Islamabad Diagnostic Center+ Rawalpindi) following assessment of potential sites based on diagnostic and epidemiological data. To support the pilot sentinel site surveillance activity, IDDS procured 7,200 MTB/XDR cartridges from Cepheid and is currently recruiting 6 laboratory technicians for each of the sites. In FY 2023 Q3, IDDS will build the capacity of the hired laboratory technicians and begin implementing the sentinel surveillance pilot over a six-month period. This activity involves close coordination with NTW-8.</p> <p>Uganda: The two GeneXpert 10-color instruments and 2,000 Xpert MTB/XDR cartridges procured by IDDS arrived in Uganda and are undergoing customs clearance. IDDS met with USAID and NTRL to clarify the capacity building support requested of IDDS to support evidence-based decision-making for TB programs in Uganda. IDDS will work with colleagues from the USAID-funded Demographic and Health Surveys Program to build NTRL capacity to conduct epidemiological analysis using geospatial information systems, develop dashboards, and create maps of outbreak hot spots. Following this, IDDS will provide remote mentoring to support NTRL to conduct its own spatial analysis. IDDS also received approval from USAID to procure genome sequencing and microdilution broth method commodities and has contacted local vendors in Uganda for quotes. Finally, IDDS is developing training materials for use of the microdilution broth method, which will</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>support DST for new and repurposed drugs. USAID is also supporting IDDS to connect NTRL to Thermo Fisher Scientific to establish routine support for the process in the country. In FY 2023 Q3, IDDS will support the installation of the GeneXpert 10-color instruments, along with capacity building of the laboratory staff on the use of the Xpert MTB/XDR assay and will procure phenotypic DST instruments.</p> <p>Overall: To support the introduction of Xpert MTB/XDR testing, IDDS collaborated with Cepheid to procure, free of charge, XDR validation panels produced by SmartSpot. These panels were delivered to Cambodia, Malawi, and Zimbabwe to support a centralized validation.</p>
NTW-5.0: Preparation and management of DST	In progress	Updates have been provided above.
NTW-5.1 and 5.2: Increased number of patients with confirmed rifampicin resistance receiving fluoroquinolone resistance testing	In progress	Updates have been provided above.
NTW-5.3: Increased capacity for susceptibility testing for new and repurposed drugs	In progress	Updates have been provided above.
NTW-5.4: Health care providers follow DST algorithms reflective of WHO guidance	In progress	Updates have been provided above.
NTW-5.5: DST quality and timeliness improved	Not started	Implementation will begin in FY 2023 Q3.

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
NTW-5.6: Evaluations and recommendations	Not started	Implementation will begin in FY 2023 Q3.
CTB-NTW-6: Share relevant information to a wide-ranging audience		
NTW-6.1: Document best practices, guidance, and models	In progress	<p>IDDS developed a super-user training package for Xpert MTB/XDR assay that includes a draft training agenda, scope of work, supervisory visit checklist, and nine training modules. The package was shared with USAID and the Stop TB Partnership in March 2023 for review and feedback.</p> <p>IDDS participated in the Fourth Truenat Information Sharing Webinar, sponsored by the Stop TB Partnership, on Early Implementation Experiences on February 15, 2023, by presenting a summary report on EQA performance in the iNTP countries.</p> <p>IDDS published a blog post in March 2023 on LeaderNet, “Malawi: Uncovering Opportunities to Improve TB Detection,” which shares experiences from the TB DNA completed in January.</p> <p>IDDS drafted a research protocol to assess the feasibility and performance of Truenat pilot implementation in Bangladesh, DRC, and Zimbabwe. The protocol has been approved by the ICF Institutional Review Board. The Institutional Review Board approval process at country level is ongoing.</p> <p>DRC: IDDS completed data collection, report writing, and validation of the Bacteriologically Confirmed TB (Bacc-TB) study: one manuscript and three abstracts have been drafted from this research. The manuscript and the abstracts are pending approval from USAID for submission to a journal and the Union World Conference on Lung Health (2023), respectively.</p>

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		<p>Tanzania: The Bacc-TB study protocol has been approved by the Tanzania Medical Research Council in preparation to start data collection.</p> <p>Zimbabwe: IDDS is drafting the report for the Ultra trace study. Preparations are ongoing to start data collection of other studies: Clinically diagnosed TB study, Smear microscopy hub, and Bacc-TB study.</p> <p>IDDS drafted more than 20 abstracts for submission to the 53rd Union World Conference on Lung Health. Shortlisted abstracts were shared with USAID for review and concurrence before they will be submitted on the Union World Conference on Lung Health website by the deadline on April 6, 2023.</p>
CTB-NTW-8: Strengthening TB diagnostics and surveillance in Pakistan		
NTW-8.1: Conduct a remote laboratory spatial analysis	On hold	USAID put this activity on hold because a Diagnostic Network Optimization activity is being implemented in the country by FIND.
NTW-8.2: Conduct a limited scope TB diagnostic network analysis	In progress	IDDS provided technical and logistical support for a TB DNA self-assessment workshop, in which Pakistan NTP officers used of the TB-NET tool to evaluate the status of the TB diagnostic network on January 22–26, 2023, in Islamabad. Following the self-assessment, IDDS participated in and provided logistical support to conduct the verification visits on January 30–February 2, 2023. Verification visits were conducted in nine regions: Sindh-Karachi, Sindh-Hyderabad, Punjab-Lahore, Punjab-Faisalabad, Islamabad Capital Territory, Khyber Pakhtunkhwa, Balochistan, Azad Jammu and Kashmir, and Gilgit-Baltistan. Nine teams visited 176 facilities (including 1 NTP, 1 NTRL, 15 intermediate reference laboratories, 84 peripheral laboratories, 61 clinics/hospitals, and 14 TB programs). IDDS provided technical and logistical support to conduct an analysis workshop in Islamabad on February 5–7, 2023, following the verification visits, and a stakeholder meeting to

CORE TB Work plan period of performance: April 1, 2022—December 31, 2022 IDDS submitted a revised workplan for FY 2023 on March 8, 2023. Approval is pending.		
Activity	Status	Activity implementation updates
		disseminate DNA findings in Islamabad on February 9, 2023. In March 2023, a draft TB DNA report was shared with Pakistan NTP leadership for review and comments.
NTW-8.3: Develop a TB Laboratory Network Strengthening Roadmap	Not started	Implementation will begin in FY 2023 Q3. The final TB DNA and Diagnostic Network Optimization reports will help inform development of the five-year Laboratory Strengthening Roadmap. The draft report is expected by the end of 2023.
NTW-8.4: Strengthening laboratory management toward accreditation	In progress	<p>IDDS completed training on the last of the 12 modules of the quality management system for the 50 laboratory staff (12 female) from the 4 supported laboratories in Pakistan. IDDS disseminated certificates of participation to all 50 individuals. IDDS provided remote support to the laboratories to conduct internal vertical audits and review findings reports. IDDS procured the first batch of proficiency testing panels through the Uganda SRL, which were delivered to NTP. IDDS is working to ensure delivery of the second batch in the second half of this year.</p> <p>In FY 2023 Q3, IDDS will finish procurement of the second batch of panels and laboratory media consumables and will conduct an in-person external audit at the four laboratories. It is expected that all four laboratories will apply for International Organization for Standardization accreditation by the end of May 2023.</p>

DRC TB Work plan period of performance: May 1, 2021—September 30, 2022 Work plan approval date: As of March 31, 2023, the FY 2023 work plan was pending approval. These updates relate to the completion of FY 2022 activities.		
Activity	Status	Activity implementation updates
DRC-TB-NTW-1: Upgrade DRC National TB Reference Laboratory (NTRL)		
NTW-1.3: Print the new NTRL strategic plan for dissemination	In progress	<p>IDDS supported the working group meetings to validate the new strategic plan. After several reviews by stakeholders and the NTRL team, the NTRL's strategic plan was validated by NTRL and National TB Program (NTP) staff on March 22, 2023. A dissemination plan was also proposed and validated by NTP and NTRL.</p> <p>IDDS will print 200 copies to be distributed to all levels of the diagnostic network in FY 2023 Q3, pending work plan approval.</p>
DRC-TB-NTW-2: Improve service delivery in the three TB reference laboratories		IDDS supported the revision of the NTP/NTRL supervisory manual and checklists, which had not been updated since 2015. This will strengthen the quality and consistency of supportive supervision conducted by NTRL to intermediate-level laboratories.
NTW-2.1: Reinforce diagnostic service capacity in Kinshasa TB Laboratory	In progress	<p>IDDS provided a new incinerator to NTRL to properly handle waste management. The new incinerator was delivered on February 10, 2023. IDDS plans to prepare the space, install the incinerator, and contract a local engineer to train the staff in charge of waste management on its use in FY 2023 Q3.</p> <p>IDDS provided high-speed Internet to NTRL to support the functioning of the laboratory management information system.</p>
NTW-2.3: Reinforce diagnostic service	Completed	Installation of the biosafety cabinet was postponed while NTP/NTRL and the firm that will certify the cabinet agreed on scheduling. Installation and certification are expected to take place in FY 2023 Q3.

DRC TB

Work plan period of performance: **May 1, 2021—September 30, 2022**

Work plan approval date: As of March 31, 2023, the FY 2023 work plan was pending approval. These updates relate to the completion of FY 2022 activities.

Activity	Status	Activity implementation updates
capacity in Kisangani TB Laboratory		

FY 2023, Quarter 2 India TB

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
IND-TB-NTW-1: Institutional strengthening of public sector network of TB laboratories to improve the quality and efficiencies of the TB diagnostics care cascade in the National TB Elimination Program (NTEP)	In progress	
NTW-1.1: Update and upgrade the existing supervision, monitoring, and evaluation framework into an integrated and comprehensive framework	In progress	<p>IDDS shared the revised “Comprehensive Guidance Document for Conducting External Quality Assessment (EQA) by Laboratory Supervisory Staff in National Tuberculosis Elimination Program (NTEP)” with the Central TB Division (CTD) on February 13, 2023, which then shared it with the expert group for review. The document contains supervisory checklists and forms (previously developed as part of the surveillance, monitoring, and evaluation package) and new guidance for supervisory staff, especially new hires, on how to conduct EQA during the supervisory visits at different tiers of the laboratory network. The supervisory checklists and Truenat checklist, both of which are part of the surveillance, monitoring, and evaluation package, are also being digitized. In FY 2023 Q3, IDDS will meet with CTD to discuss piloting these checklists in coordination with intermediate reference laboratories (IRLs) and districts.</p> <p>IDDS prepared a report on the ranking of national reference laboratories (NRLs) and submitted it for technical review by IDDS headquarter staff as a technical deliverable on February 1, 2023, after receiving concurrence from CTD on the content of the report.</p>

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
		<p>IDDS conducted a joint visit to New Delhi Tuberculosis Centre with CTD and NRL National Institute of Tuberculosis and Respiratory Diseases Delhi on February 2, 2023, to IRL Sikkim with an NRL Regional Medical Research Center (RMRC) Bhubaneswar representative on March 13–16, 2023, and to IRL Ahmedabad on March 26–28, to validate the information and scores achieved in a self-assessment. IDDS developed the self-assessment to rank NRLs and IRLs. IDDS will continue discussions with the remaining IRLs and their respective NRLs into FY 2023 Q3 to determine the date of the visit for data validation.</p> <p>IDDS shared the revised TB laboratory biosafety manual and its monitoring mechanisms with the CTD laboratory team on January 12, 2023, after receiving inputs from NRLs. CTD has sent the manual to the expert group for review. IDDS will finalize and disseminate the manual in FY 2023 Q3.</p>
NTW-1.2: Reinforce management capacity of all NRLs and 12 IRLs to lead the laboratory diagnostic network in assigned institutions and geographies and strengthen NRLs and IRLs for supportive supervision, monitoring, mentoring, and troubleshooting	In progress	<p>IDDS provided technical and managerial support to NRL RMRC Bhubaneswar to organize a regional review meeting for IRLs and TB culture and drug susceptibility testing (C-DST) laboratories in the same network on January 19–20, 2023, in Guwahati, Assam. CTD led the meeting, and IDDS developed the presentation and agenda and arranged accommodations for participants. The key objectives of the meeting were to improve coordination among different laboratory tiers, discuss key gaps with underlying challenges, and brainstorm possible solutions to help resolve laboratory-related issues through cross-learning. A total of 55 participants attended, including state TB officers, state TB Training and Demonstration Centre directors, IRLs/TB C-DST lab officer in-charges, consultant microbiologists, biomedical engineers, and NTEP-World Health Organization (WHO) consultants from 10 states (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Tripura, and West Bengal), as well as officials from CTD, WHO, and the USAID Mission. IDDS prepared the minutes of the meeting, in collaboration with NRL RMRC Bhubaneswar, and shared them with CTD on February 1, 2023, for decision-making and necessary action.</p> <p>IDDS supported NRL RMRC Bhubaneswar and NRL Bhopal Memorial Hospital and Research Centre in the implementation of the revised supervisory checklists through joint on-site</p>

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
		<p>evaluation visits to IRL Sikkim in the state of Sikkim on March 13–16, 2023, and to IRL Goa and linked districts (North and South Goa) on March 13–17.</p> <p>IDDS developed a concept note on holding capacity-building sessions for NRLs and IRLs, including potential topics, and shared it with CTD for input. After receiving concurrence from CTD, sessions are expected to start in FY 2023 Q3.</p> <p>IDDS conducted a joint visit, along with the USAID Mission, to NRL Bhopal Memorial Hospital and Research Centre and IRL Bhopal on February 22–23, 2023, to assess the impact of IDDS support provided to the reference laboratories. Based on USAID’s suggestion, IDDS is also developing brochures and planners to help with the implementation of the supervisory checklists and reporting formats. These are expected to be finalized in FY 2023 Q3.</p>
NTW-1.3: Develop a forecasting tool to assist NRLs, IRLs, and TB C-DST laboratories to estimate the requirement of laboratory consumables	In progress	IDDS is developing a forecasting tool that will facilitate the systematic calculation of the required kits/consumables, quantities, and approximate costs of the products for NRLs, IRLs, and C-DST laboratories. A first draft of the tool for 9 out of 10 diagnostic methods has been completed; the tool for Mycobacteria Growth Indicator Tube second-line DST is still being drafted. The tool will be checked internally and shared with CTD for piloting during FY 2023 Q3.
IND-TB-NTW-2: Private sector laboratory engagement for the TB/drug-resistant (DR) TB diagnostic care cascade	In progress	
NTW-2.1: Initiate demonstration of "One-stop TB	In progress	IDDS held regular technical meetings with the Thyrocare Gurgaon and Mumbai team to oversee the model’s execution and address issues with specimen collection and transportation, payment initiation, data entry, and updating of the Google spreadsheet and Ni-kshay. IDDS, in

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
<p>diagnostic solution" model for private sector laboratory engagement for TB/DR-TB diagnostic care cascade in collaboration with CTD</p>		<p>conjunction with the Thyrocare Mumbai team, conducted an in-person monitoring visit to the Thyrocare Gurgaon facility on January 6, 2023, and a remote visit on January 18 and February 8, 2023.</p> <p>IDDS conducted a joint visit with representatives from State TB Cell (STC) Haryana District, NTEP, and WHO consultants on February 13, 2023, to deliberate on the transition plan of the “One-Stop TB/DR-TB Diagnostic Solution” model (Hisar Model) with the district NTEP team and arrive at consensus on the next steps. Deliberation included site identification and preparation for establishing a Central TB nucleic acid amplification test (NAAT) laboratory in Hisar.</p> <p>IDDS presented the model’s progress update and transition plan during a review meeting with district TB officers and NTEP stakeholders at STC Panchkula on February 21, 2023.</p> <p>On February 27, 2023, IDDS presented the findings and lessons learned from the implementation of the Hisar Model to the Stop TB Geneva team.</p> <p>IDDS held a meeting on March 3, 2023, with the civil surgeon (who is the head of health services in the district) and district NTEP staff regarding progress updates on the site identification and strategic preparations for setting up a Central TB NAAT laboratory in Hisar as part of transitioning the Hisar Model from IDDS to Hisar NTEP under the guidance of STC Haryana. Consensus was built for setting up a Central TB NAAT laboratory at the existing molecular lab at Sector 1-4 Urban Primary Health Centre in Hisar district because it can meet the anticipated specimen load flowing through runners from the mapped collection points in the district. There is expected to be minimal infrastructure modifications needed at the site. The site modifications include electrical and plumbing work and setting up work benches for deploying NAAT instruments and the processing of specimens. These modifications are expected to be completed in FY 2023 Q3.</p> <p>IDDS held a joint virtual meeting on March 21, 2023, to share experiences and learnings from the Hisar Model implementation and midline assessment. Participants included representatives from the National Technical Support Unit and State Technical Support Units across five states</p>

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
		<p>(Delhi, Gujarat, Odisha, Andhra Pradesh, Telangana) established by the development partner Health Systems for Tuberculosis, the USAID Mission, and the iDEFEAT TB Project.</p> <p>Model implementation will continue into FY 2023 Q3; after that, specimen collection and sequential testing will be completed.</p> <p>Remote monitoring of model implementation is carried out on a regular basis through periodic coordination meetings with the district NTEP team, IDDS-hired support staff in Hisar, and the Thyrocare Mumbai team.</p> <p>IDDS conducted a supportive supervision visit to Community Health Centre Aryanagar, Hisar on March 2, 2023, to oversee the model implementation and sample collection and transportation mechanism.</p>
NTW-2.2: Review of “One-stop TB diagnostic solution” model for private sector laboratory engagement for TB/DR-TB diagnostic care cascade	In progress	<p>On January 5, 2023, IQVIA (a third-party evaluation agency) and IDDS teams discussed the preliminary findings of the midcourse evaluation of the Hisar Model with the district TB officer and district NTEP officials.</p> <p>IDDS conducted a joint monitoring visit to Hisar on January 10, 2023, with representatives from CTD, STC Haryana, the district NTEP team, USAID Mission, WHO, and IQVIA to review the model’s progress and findings of midcourse evaluation, and to discuss the model adoption for implementation by NTEP, including how the model will be transitioned from IDDS to Hisar NTEP.</p> <p>IDDS helped coordinate with district officials and patients in Hisar, so IQVIA could conduct patient interviews on January 16–19, 2023. The purpose of the interviews was to gain the patients’ perspectives about the Hisar Model.</p>

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
NTW-2.3: Explore other possible options for engagement of private sector laboratories for TB diagnostic care cascade	In progress	<p>IDDS finalized the technical deliverable “Guidance document for National Accreditation Board for Laboratories (NABL) technical assessors as a prerequisite in private laboratories for mycobacteriology laboratory accreditation, in compliance with the NTEP benchmarks” based on the inputs from the CTD lab team and shared it with headquarters on March 7, 2023, for review.</p> <p>In FY 2023 Q3, the guidance document is expected to be shared with NABL assessors to help them assess labs using standard guidelines.</p>
IND-TB-NTW-3: Support CTD and USAID in design and conduct of research on new TB and DR-TB diagnostics	In progress	
NTW-3.1: Comprehensive assessment of Truenat invalid and indeterminate results for <i>Mycobacterium tuberculosis</i> and rifampicin resistance testing at NTEP’s sites and possible solutions to address the same	In progress	IDDS shared a study report on Truenat <i>Mycobacterium tuberculosis</i> and rifampicin (MTB-RIF) invalid and indeterminate rates with CTD for concurrence. This report detailed the evidence, conclusions, and causes of high and low invalid/indeterminate rates in the Truenat assay at several NTEP sites. IDDS also shared revised briefs with CTD for concurrence. These briefs will serve as a guide for the efficient use of Truenat MTB-RIF assay for program managers, supervisory staff, and technical staff at NTEP.
NTW-3.2: Feasibility of using Trueprep extracted DNA for	In progress	The peer-reviewed <i>International Journal of Tuberculosis and Lung Disease</i> accepted the article developed jointly by IDDS and the National Institute for Research in TB on the outcome of phase I of the Trueprep extracted DNA feasibility study. In phase II of the study, IDDS conducted progress monitoring visits to IRL Ahmedabad (February 3–4, 2023), RMRC

India TB Work plan period of performance: October 1, 2022—September 30, 2023 Work plan approval date: January 13, 2022		
Activity	Status	Activity implementation updates
line probe assay testing in NTEP		Bhubaneswar (February 28–March 1), and New Delhi Tuberculosis Centre (March 17) regarding lab testing, results recording, and documentation in compliance with the study protocol. As per the monthly monitoring progress update, specimen intake (total 507, with 400 specimens are $\geq 10^4$ CFU/ml) was completed.
NTW-3.3: Situational analysis, desk review and deliberation with CTD to assess the potential of new technologies, tools and approaches and research questions to be evaluated in NTEP	In progress	IDDS revised the report and a review article titled, “Potential Novel Diagnostic Technologies, Tools, or Approaches to Strengthen Diagnostic Care Cascade in NTEP,” on potential novel diagnostic technologies to be utilized by NTEP. IDDS will share it with CTD in FY 2023 Q3.
NTW-3.4: Support, mentor and monitor relevant USAID-funded programs and partners for development and evaluation of new diagnostic tools	In progress	This sub-activity is based on USAID’s request. IDDS will provide support for capacity building and monitoring as required.

Malawi TB Work plan period of performance: February 1, 2022—May 21, 2023 Work plan approval date: March 23, 2022		
Activity	Status	Activity implementation updates
Malawi-TB-NTW-1: Assessment of TB Testing Access and Demand	In progress	
Milestone-NTW-1.1: Conduct Laboratory Network Analysis	In progress	IDDS completed the data cleaning of the National TB and Leprosy Elimination Program (NTLEP) master facility list through regular weekly calls involving representatives from NTLEP, National TB Reference Laboratory (NTRL), USAID, and IDDS. IDDS then performed a spatial analysis that aimed at evaluating the current rapid molecular diagnostics instrument capacity in the public and private sectors, determining gaps, and proposing a strategy to strengthen access and coverage through instrument placement, including placement of new GeneXpert® I0-color and Truenat® instruments. Preliminary results of the analysis were presented virtually on February 24 and March 14, 2023, to representatives from USAID and NTLEP. IDDS is incorporating feedback obtained from the stakeholders to properly align analyses and results to the country's needs and priorities, as well as to the scope of work. A draft laboratory network analysis report is expected to be shared with stakeholders for review in FY 2023 Q3.
Milestone-NTW-1.2: Conduct Diagnostic Network Assessment (DNA)	In progress	IDDS provided technical and financial support to conduct the Malawi TB DNA on January 11–27, 2023, with Core TB and field funds. IDDS facilitated an orientation workshop for 16 local assessors and Ministry of Health observers (3 female) on January 11–13, 2023, on the TB DNA tools and methodology. Site verification visits were conducted on January 16–21, 2023. Seven teams, each comprising a local assessor, observers, and IDDS staff and led by an international diagnostic expert, visited 133 organizations and health facilities (including health centers, diagnostic centers, reference laboratories, regional laboratories, hospitals, and national programs) in 21 of Malawi's 28 districts. The sites were carefully sampled to represent the diagnostic network at different tiers. Following the site visits, the teams reconvened in Lilongwe to review and analyze results on January 23–26, 2023. Results were shared at a dissemination meeting on January 27, 2023, at Bingu International Convention Centre in

Malawi TB Work plan period of performance: February 1, 2022—May 21, 2023 Work plan approval date: March 23, 2022		
Activity	Status	Activity implementation updates
		Lilongwe, with 57 participants (12 female) in attendance. A draft TB DNA report was shared in March 2023 with the Malawi National TB Program leadership for review and comments.
Malawi-TB-NTW-2: Increase Diagnostic Capacity	In progress	
Milestone-NTW-2.1: Revise diagnostic algorithm to use molecular diagnostic tools as the initial test	Completed	The revised algorithm developed with IDDS support in previous quarters was incorporated into the TB national guidelines. In FY 2023 Q3, IDDS will support the dissemination of the new algorithm.
Milestone-NTW-2.2: Introduce Truenat as a first-line molecular diagnostic tool	In progress	<p>With Core funding, IDDS procured four Truenat instruments, along with and test chips, Truenat MTB and Truenat MTB/RIF cartridges, and consumables. Delivery is expected during the fourth week of April 2023. IDDS and NTLEP identified four peripheral facilities (Nthalire, Ngokwe, Mayani, and Kawamba) for placement of the instruments, but placement will be confirmed with results from the laboratory spatial analysis (see NTW-1.1). Installation of the instruments is planned for FY 2023 Q3.</p> <p>IDDS is finalizing adaptation of the Truenat super-user and end-user training.</p>
Milestone-NTW-2.3: Introduce/expand access to artificial intelligence software to existing digital X-ray instruments	In progress	<p>Refurbishment of the X-ray facility at Ekwendeni Mission Hospital is progressing, and an estimated 90 percent of the work has been completed (walls, ceilings, plumbing fittings, and floor are done). A significant challenge has been the procurement of the lead-lined doors and windows due to their unavailability in Malawi, and IDDS is currently working to procure these in the United States.</p> <p>IDDS procured and received delivery of the Qure.ai software and coordinated and participated in an introductory call with the Qure.ai team and the Ministry of Health's Radiology Department. Installation of the Qure.ai software is contingent on completion of the</p>

Malawi TB Work plan period of performance: February 1, 2022—May 21, 2023 Work plan approval date: March 23, 2022		
Activity	Status	Activity implementation updates
		refurbishment and installation of the Delft Light Full Kit ultra-portable kit X-ray machine, which was delivered to Ekwendeni Mission Hospital last quarter.
Milestone-NTW-2.4: Expand and institutionalize stool-specimen collection, processing and testing for pediatric TB	In progress	<p>The study on stool-based Xpert MTB/RIF as an alternative diagnostic test of pulmonary TB in children is ongoing. As of March 17, 2023, a cumulative total of 298 participants (144 male and 154 female) had been enrolled. Of these, 19 had positive GeneXpert stool tests, and 2 were rifampin-resistant.</p> <p>To encourage cross-learning and sharing of best practices, IDDS organized and funded a meeting on February 15–18, 2023, in Mponela, Dowa. Participants included key study personnel (clinicians, laboratory technicians, and data managers), facilitators from NTLEP/NTRL, and representatives from TB Local Organization Network (LON) 1, TB LON2, and USAID. The platform afforded the stakeholders an opportunity to deliberate on significant challenges that were impeding implementation and mapped the way forward on how best to resolve them. The meeting helped resolve many of the challenges and facilities were able to increase the number of children enrolled in the pilot study. A total of 68 participants (15 female) were in attendance. In FY 2023 Q3, IDDS, in collaboration with NTLEP, will continue with monitoring of study progress towards attainment of the planned sample size.</p>
Milestone-NTW-2.5: Bidirectional testing for COVID-19 and TB	In progress	Through consultation with the Mobile Diagnostic Unit point of contact at NTLEP, IDDS established that the country has already developed a bi-directional testing for COVID-19 and TB in draft form. For the next steps, NTLEP, with support from IDDS, intends to review the draft algorithm and disseminate it to all TB registration sites of the network.
Malawi-TB-NTW-3: Strengthen Existing TB Diagnostic Systems	In progress	
Milestone-NTW-3.1: Support for new rapid	In progress	With Core TB funding, IDDS facilitated installation of the 3 GeneXpert 10-color instruments and on-site training of 32 laboratory and clinical staff (13 female) between January 29 and

Malawi TB Work plan period of performance: February 1, 2022—May 21, 2023 Work plan approval date: March 23, 2022		
Activity	Status	Activity implementation updates
molecular diagnostic instruments		<p>February 3, 2023, in conjunction with the local Cepheid vendor, MM Africa. A 16-module 10-color GeneXpert instrument was installed at Bwaila District Hospital, and two 4-module 10-color GeneXpert instruments were installed at Chikwawa and Mangochi district hospitals. Each instrument came with a computer processing unit, a monitor, a barcode scanner, and an uninterrupted power supply unit. IDDS is collaborating with TB LON through NTLEP to connect the three platforms to Aspect for centralized real-time monitoring.</p> <p>In FY 2023, IDDS expects to conduct training for super-users to support implementation of this new diagnostic technology. The super-users will act as a technical advisory group for issues related to use of the Xpert MTB/XDR assay in the country.</p>
Milestone-NTW-3.2: Improve specimen referral network	Completed	IDDS conducted a limited spatial analysis to design a hub-and-spoke system to optimize specimen referral routes to the three new Xpert MTB/XDR testing facilities. This analysis was conducted with Core TB funds. Through a technical working group meeting held virtually on January 30, 2023, participants discussed how the results from the spatial analysis could inform an integrated specimen transportation system for the whole country. The meeting was attended by USAID, NTLEP, NTRL, TB LON implementing partners, and the IDDS team.
Milestone-NTW-3.3: Build sustainable mechanisms for diagnostic network improvement	In progress	IDDS started discussions with the National TB Program and USAID to plan for the super-user training in the three supported districts (Chikwawa, Mangochi, and Bwaila).
Malawi-TB-DR-CAP-1: Improve Access to and Availability of Drug Susceptibility Testing	In progress	
Milestone-DR-CAP-1.1: Increase testing	In progress	See update under NTW-3.1.

Malawi TB Work plan period of performance: February 1, 2022—May 21, 2023		
Work plan approval date: March 23, 2022		
Activity	Status	Activity implementation updates
for resistance to existing drugs		

Mozambique TB Work plan period of performance: October 1, 2022—May 21, 2023		
Work plan approval date: September 29, 2022		
Activity	Status	Activity implementation updates
MOZ-TB-NTW-I.1: Increase knowledge of the TB diagnostic network	Not started	
MOZ-TB-NTW-I.1.1: Complete Diagnostic Network Assessment	Not started	The activity is delayed while IDDS awaits Ministry of Health (MoH) approval. This activity is still under discussion because MoH proposed to undertake a laboratory mapping exercise to complement the TB diagnostic network assessment, but funding for the mapping has not been identified.
MOZ-TB-NTW-I.2: Increase Testing for Resistance to Existing Drugs Using Rapid Molecular Technologies	In progress	
MOZ-TB-NTW-I.2.1: Optimize detection of resistance to rifampicin, isoniazid and fluoroquinolones using World Health Organization-recommended rapid diagnostic technologies	In progress	IDDS received MoH approval for the procurement of six GeneXpert® 10-color instruments with uninterruptible power supply, electricity stabilizers, and 1,000 Xpert MTB/XDR cartridges, and has started the procurement process.
MOZ-TB-NTW-I.2.2: Expand and institutionalize stool specimen collection,	In progress	IDDS supported the development and finalization of the national guideline for implementation of simple one-step (SOS) stool processing and the Xpert MTB/RIF (Ultra) test for pediatric TB diagnosis.

Mozambique TB		
Work plan period of performance: October 1, 2022—May 21, 2023		
Work plan approval date: September 29, 2022		
Activity	Status	Activity implementation updates
processing, and testing for pediatric TB		<p>MoH shared with IDDS the scale-up plan for SOS stool testing implementation. The scale-up will be in two phases. Phase one will cover five provinces and 58 health facilities, and phase two will cover 6 provinces and 110 health facilities.</p> <p>IDDS identified the master trainers for Mozambique and supported their participation at a regional SOS training conducted by the Supranational Reference Laboratory in Kampala, Uganda, on March 27–31, 2023. The development of the training package is delayed pending engagement of the laboratory consultant and the need to participate in a master training provided by Supranational Reference Laboratory Uganda. In FY 2023 Q3, IDDS will finalize the training package and initiate implementation of the SOS pilot.</p>
MOZ-TB-NTW-1.3: Improve capacity for testing resistance to new and re-purposed drugs	In progress	
MOZ-TB-NTW-1.3.1: Increase capacity for drug susceptibility testing	In progress	<p>On March 5–8, 2023, the IDDS TB specialist and focal points from the Clinical Laboratory Division, the TB Reference Laboratory, and Provincial Health Services visited two TB laboratories: Carmelo TB Laboratory located in Chokwé (Gaza province) and Manhiça Health Research Center's TB laboratory I in Manhiça (Maputo province). The visit aimed to assess the capacity of the laboratories to perform TB culture, drug susceptibility testing, and line probe assay. The team assessed available human resources (in terms of number and status of training), equipment, and infrastructure. IDDS provided technical support during the assessment and drafted the technical report, which will be used to inform the laboratories managers, the National TB Program (NTP), Clinical Laboratory Division, and Provincial Health Services.</p>

Mozambique TB Work plan period of performance: October 1, 2022—May 21, 2023		
Work plan approval date: September 29, 2022		
Activity	Status	Activity implementation updates
		<p>In FY 2023 Q3, IDDS will start training and building the capacity of Carmelo laboratory staff to conduct TB culture and drug susceptibility testing. For Manhiça laboratory, the training will start after a memorandum of understanding with NTP is signed.</p> <p>IDDS is supporting the National Institute of Health and NTP to plan a workshop to discuss the implementation of TB genomic sequencing. IDDS supported the National Institute of Health to develop a list of TB stakeholders, workshop agenda, scope of work, and activity framework. This workshop aims to draft and approve the terms of reference for a technical working group and clinical committees, the use case, and the algorithm of genomic testing. The workshop is expected to be held in April 2023.</p>

Tanzania TB Work plan period of performance: October 1, 2022—September 30, 2023

Work plan approval date: This PEPFAR-funded work plan was approved by USAID in Tanzania in November 2022.

Activity	Status	Activity implementation updates
TZA-PEPFAR-NTW-1: Improve quality of screening for active TB	In progress	
NTW-1.1: Optimize the use of all available diagnostics tools – GeneXpert, Truenat, and other molecular World Health Organization-recommended rapid diagnostics, chest X-ray, TB lipoarabinomannan, and smear microscopy – for active TB among persons living with HIV and others who screen presumptive for TB	In progress	IDDS participated in the internal mid-term review of the five-year National TB Strategic Plan, on January 9–14, 2023, and in follow-up meetings to compile the findings stemming from the review, on February 6–10, all of which took place in Dodoma. The TB diagnostic network assessment and spatial analysis, conducted with IDDS support, were noted for guiding the strengthening of the laboratory network and planning for procurement and placement of diagnostic technologies and services. In FY 2023 Q3, IDDS anticipates providing financial and technical assistance to National TB and Leprosy Program (NTLP), Central TB Reference Laboratory (CTRL) to conduct the TB laboratory technical working group meeting.
NTW-1.2: Support introduction and rollout of new TB diagnostic tools in Tanzania TB diagnostic network in line with Tanzania TB Strategic Plan	In progress	With Core TB funding, IDDS provided logistical and financial assistance to NTLP, CTRL to conduct a Truenat® pre-installation site readiness assessment, on January 30–February 4, 2023, in 27 facilities across Tanzania. The results informed the selection and confirmation of the sites where Truenat instruments will be installed and their respective users. Three additional sites targeted for Truenat installation (CTRL, Magomeni Health Center, and Nyangamara Health Center) did not need a readiness assessment because their infrastructure status was already known.

Tanzania TB Work plan period of performance: October 1, 2022—September 30, 2023**Work plan approval date:** This PEPFAR-funded work plan was approved by USAID in Tanzania in November 2022.

Activity	Status	Activity implementation updates
		<p>IDDS trained 50 Truenat end users (15 female) in Morogoro, on March 13–17, 2023. The training included theoretical and practical sessions at the Sokoine University of Agriculture laboratories. The training was facilitated by national facilitators and Molbio Diagnostics representatives from Tanzania and Kenya.</p> <p>IDDS held meetings with NTLP, CTRL, and Molbio Diagnostics to plan for the installation of the instruments in the respective facilities. Installation and distribution of reagents is expected to take place in FY 2023 Q3.</p>
TZA-PEPFAR-NTW-2: Ensure robust TB/HIV data collection and reporting	In progress	
NTW-2.1: Technical and logistical assistance to scale up quality and integrated TB diagnostic data collection and reporting for incorporation into national surveillance systems, including participation in the government of Tanzania Diagnostic Network Optimization activity	In progress	Through an agreement with SystemOne, IDDS is supporting configuration of the 30 Truenat instruments to enable connectivity to Aspect for automatic results reporting upon installation.

Tanzania TB **Work plan period of performance: October 1, 2022—September 30, 2023****Work plan approval date:** This PEPFAR-funded work plan was approved by USAID in Tanzania in November 2022.

Activity	Status	Activity implementation updates
TZA-PEPFAR-NTW-3: Adapting TB/HIV services to COVID-19	Not started	
NTW-3.1: Support integrated disease screening	Not started	IDDS will support this activity if requested by the government, given that the integration of COVID-19 and TB/HIV services appears to no longer be a priority.

Zimbabwe TB Work plan period of performance: July 1, 2021—May 31, 2023 A revised FY 2023 work plan was approved with contingencies on March 17, 2023, and resubmitted to USAID on March 24, 2023.		
Activity	Status	Activity implementation updates
ZWE-TB-NTW-I: Strengthen a comprehensive TB diagnostic network with strong underlying health systems	In progress	
NTW-I.I: Increase TB case detection through comprehensive strategies in collaboration with local organizations network in Harare province	In progress	<p>IDDS continued supporting the TB laboratories in Harare province to address non-conformances that were identified during supervisory visits held in September 2022.</p> <p>IDDS conducted site visits and mentorship activities at 19 laboratories on January 26–March 23, 2023. The following laboratories were visited: Beatrice Road Infectious Disease Hospital, Budiriro Polyclinic, Chitungwiza Hospital, Glenview Polyclinic, Hatcliffe Polyclinic, Highfields Polyclinic, Kuwadzana Polyclinic, Mabvuku Polyclinic, Manyame Airbase Hospital, Mbare Polyclinic, Morris Depot, Mufakose Polyclinic, Newlands Clinic, Rujeko Polyclinic, Rutsanana Polyclinic, Seke South Polyclinic, Warren Park Polyclinic, Wilkins Infectious Disease Hospital, and Zengeza 3 Polyclinic. A total of 24 persons were mentored (12 female) during these visits. Non-conformances were addressed through the provision of requisite standard operating procedures, technical procedural forms that support specific technical examinations such as AFB microscopy (e.g. stain filtering forms, microscopy maintenance forms, etc.), quality procedural forms that are used to capture quality procedures such as environmental monitoring (e.g. bench disinfection forms, room temperature monitoring, quality indicator forms, corrective action forms, etc.), and on-site mentorship on topics such as clinical-laboratory interface, testing procedures (including testing of stool for pediatric TB), inventory management, review of quality indicators, external quality assessment (proficiency testing) corrective actions, and results management. Some non-conformances have budgetary implications that need to be addressed by the respective facility or hospital management team, such as lack of storage space, plumbing challenges, and the need for the relocation of the laboratory (as in the case of Manyame Airbase). IDDS is helping follow up on</p>

Zimbabwe TB Work plan period of performance: July 1, 2021—May 31, 2023 A revised FY 2023 work plan was approved with contingencies on March 17, 2023, and resubmitted to USAID on March 24, 2023.		
Activity	Status	Activity implementation updates
		<p>these requirements. In addition, issues such as provision of uninterruptible power supply are pending procurements.</p> <p>On January 10–21, 2023, IDDS provided technical and financial support to a team of childhood TB simple one-step (SOS) trainers to conduct on-site training and mentorship in Harare public, private-for-profit, and private and not-for-profit health facilities. A total of 129 (88 female) health care workers were trained on the SOS specimen processing method for childhood TB diagnosis, the epidemiology of childhood TB, and recording and reporting procedures. In FY 2023 Q3, IDDS will conduct a data review workshop to assess the progress made by the health facilities in the diagnosis of TB in children using the SOS method.</p>
NTW-I.2: Strengthen functionality of the GeneXpert network through Driving Xpert Optimization strategy	In progress	IDDS started the procurement of 10 10-color GeneXpert® instruments, which will be placed at the 10 provincial hospital laboratories to increase access to testing for mutations associated with resistance to isoniazid, fluoroquinolones, and second-line injectable drugs. A total of 500 Xpert MTB/XDR cartridges and 10 uninterruptible power supply units are also being procured. This is expected to reduce turnaround time for results for molecular drug susceptibility testing and increase the number of patients linked to quality care and improve treatment outcomes. The machines are expected to be delivered and installed in FY 2023 Q3.
NTW-I.3: Expand and decentralize TB diagnostic network	In progress	With Core TB funding, IDDS provided financial and technical assistance to the national and provincial Truenat® super-users to conduct supportive supervision visits at the 20 Truenat laboratories on February 27–March 3, 2023. During these visits, super-users provided guidance and mentorship on equipment maintenance, internal and external quality control, biosafety, and recording and reporting testing data. In FY 2023 Q3, IDDS will support a data review meeting to provide an opportunity to the end-users to validate their test statistics and share experiences on Truenat implementation.

Zimbabwe TB Work plan period of performance: July 1, 2021—May 31, 2023 A revised FY 2023 work plan was approved with contingencies on March 17, 2023, and resubmitted to USAID on March 24, 2023.		
Activity	Status	Activity implementation updates
NTW-I.4: Reinforce quality in the TB diagnostic network	In progress	IDDS participated in a USAID Zimbabwe laboratory-clinical interface workshop held on January 31, 2023, at Holiday Inn Hotel, Harare. Participants included IDDS (TB laboratory implementation partner), Union Zimbabwe Trust (TB clinical implementation partner), Zimbabwe Health Intervention (HIV clinical implementation partner), and Organization for Public Health Interventions and Development Trust (HIV clinical implementation partner). The implementing partners presented their planned activities and deliberated on opportunities for collaboration to strengthen laboratory-clinical interface activities in their implementation districts. In FY 2023 Q3, IDDS will conduct laboratory-clinical interface meetings in six provinces where IDDS will be working with all the TB laboratories to strengthen TB diagnostic activities.
NTW-I.5: Strengthen childhood TB Diagnosis	In progress	<p>IDDS provided technical support to the Zimbabwe regional training of trainers workshop, which was sponsored by the Global Fund and conducted on March 7–10, 2023, in Masvingo, Zimbabwe. IDDS helped facilitate the training, which trained both clinicians and laboratorians on the pathophysiology and epidemiology of childhood TB, use of stool for TB testing in children using the SOS method, quality assurance, and recording and reporting. In FY 2023 Q3, IDDS will support the cascading of this training through on-site mentorship at all GeneXpert sites in the 10 provinces of Zimbabwe.</p> <p>As described under NTW-I.1, IDDS also trained of 129 laboratory and clinical workers (88 female) in Harare province on the SOS method.</p>
NTW-I.6: Conduct a laboratory network spatial analysis	In progress	IDDS supported the data collection process for the spatial analysis, and data analysis will begin in FY 2023 Q3.

Zimbabwe TB Work plan period of performance: July 1, 2021—May 31, 2023 A revised FY 2023 work plan was approved with contingencies on March 17, 2023, and resubmitted to USAID on March 24, 2023.		
Activity	Status	Activity implementation updates
ZWE-TB-NTW-2: Support the National TB Reference Laboratory (NTRL) and National TB Program to develop and operationalize functional national and provincial TB reference laboratory structures	In progress	
NTW-2.1: Strengthen NTRLs to serve as leading laboratories in the TB diagnostic network	In progress	IDDS provided financial support for the development of the Bulawayo NTRL website. The website will provide a platform for the laboratory to engage its customers and stakeholders and improve the quality of service provided. IDDS also supported procurement of fuel to ensure the functionality of the laboratory's generator during power outages.
NTW-2.2: Support the National TB Program's activities in the TB diagnostic network and deploy the latest technologies	In progress	IDDS provided financial and technical support in the installation of global SIM cards and connection of the 20 Truenat machines to the SystemOne Aspect connectivity platform to enable real-time transmission of data from the Truenat machines to the clinicians ordering the Truenat tests. This will result in shorter turnaround times and improved quality of patient care.
ZWE-TB-NTW-3: Conduct operational research (OR) to	In progress	

Zimbabwe TB Work plan period of performance: July 1, 2021—May 31, 2023 A revised FY 2023 work plan was approved with contingencies on March 17, 2023, and resubmitted to USAID on March 24, 2023.		
Activity	Status	Activity implementation updates
generate evidence on TB diagnostic strategies		
NTW-3.1: Conduct OR on clinically diagnosed TB patients	In progress	No update
NTW-3.2: Conduct OR on GeneXpert MTB/RIF Ultra results in Zimbabwe	In progress	This study was closed in FY 2023 Q2, and IDDS conducted data entry and analysis. In FY 2023 Q3, IDDS will support the report writing process and submission of the manuscript to a peer-reviewed journal.
NTW-3.3: Conduct OR on smear microscopy hub strategy	In progress	No update
NTW-3.4: Conduct OR on bacteriologically confirmed TB case detection in high burden- TB countries	In progress	IDDS engaged the consultants who will be leading the study. An inception meeting was held with the consultants, who submitted their proposed roadmap for the study. In FY 2023 Q3, IDDS will support the data collection process of the study. It's noteworthy to mention that this is a multi-country study implemented in DRC, Tanzania and Zimbabwe.