Infectious Disease Detection and Surveillance (IDDS) Quarterly Report FY22 Q1: Annex A: Activity Implementation Progress

Annex A includes information about activities that were in progress or completed during quarter 1 (Q1) as well as fiscal year (FY) 2022 activities that have not started.

Global Health Security Activity Implementation Progress

Cameroon GHS

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 7.3	In progress	IDDS recruited a senior antimicrobial resistance (AMR) diagnostic consultant who will continue to provide technical and mentorship support to the AMR pilot surveillance sites to implement national AMR standard operating procedures and who will reinforce skills and competencies on quality assurance for organism identification and antimicrobial susceptibility testing.
NTW-1.1: Provide technical assistance, training, and mentorship to IDDS-supported sites (5 human and 2 animal sites) to implement national AMR standard operating procedures (SOPs) and to re-enforce skills and competencies on quality assurance and biosafety and biosecurity for organism identification and antimicrobial susceptibility testing.		In progress	IDDS's work in FY 2022 Q2 will include (1) organizing site trainings to reinforce capacity on AMR detection, (2) providing maintenance contracts for bacteriology equipment, and (3) procuring basic AMR reagents and equipment for the IDDS-supported sites.
NTW-1.2: Support the printing and dissemination of the AMR detection and surveillance SOPs developed.		In progress	
NTW-1.3: Provide maintenance contracts for bacteriology equipment in the IDDS-supported sites.		In progress	
NTW-1.4: Procure basic AMR reagents and equipment for the human and animal sentinel surveillance sites.		Not started	
NTW-1.5: Support the National Public Health Laboratory (LNSP) to develop a national AMR external quality assessment (EQA) plan to		Not started	

Cameroon GHS

Activity	IHR benchmark	Status	Activity implementation updates
improve AMR detection in health facilities.			World Antimicrobial Awareness Week 2021 was celebrated from November 18 to 24, with the theme "Spread Awareness, Stop Resistance," and called on experts and sectors contributing to a One Health approach to come together to combat AMR. As part of World Antimicrobial Awareness Week, IDDS provided financial and technical support to organize the first International Microbiology Days conference, held from November 25 to 26, at the Falaise Hotel in Yaoundé. Organized by the Cameroon Society of Microbiology, the conference was titled "Antimicrobial Resistance: The Next Pandemic?" This conference convened more than 500 microbiologists, clinicians, epidemiologists, and postgraduate students in human, animal, and environment health. The conference provided useful information to stakeholders and governmental bodies on measures that involve working together in a One Health framework to increase awareness of AMR, strengthen knowledge of and capacity for AMR surveillance and detection, and encourage the implementation of the national guidelines for greater impact in curbing AMR. At the conference, IDDS showcased its contributions in building a sustainable One Health AMR surveillance system in Cameroon using a World Health Organization Benchmark step-by-step approach. Dr. Mouiche Moctar, the IDDS Cameroon team lead, presented on IDDS activities in AMR detection and surveillance in a special session. IDDS also hosted a booth during the two-day event that gave participants the opportunity to obtain more information about the IDDS project and discuss opportunities for future collaboration.

IDDS provided technical and logistical support to the National Public Health Laboratory to organize the quarterly AMR data quality review workshop, including six human sentinel surveillance sites (Douala Laquintinie Hospital, Limbe Regional Hospital, Centre Hospitalier Essos, Yaoundé General Hospital, Yaoundé Military Hospital, and University Teaching Hospital of Yaoundé) and two animal sentinel surveillance sites (National Veterinary |
CMR-GHS-SURV-1: Strengthen AMR surveillance through capacity building to analyze, interpret, and report AMR surveillance data and develop national strategic plans.	Benchmark 3.2 Benchmark 9.2	In progress	
SURV-1.1: Provide technical assistance, training, and mentorship on AMR data management and analysis to the IDDS surveillance sites and the National Coordination Center.		Not started	
SURV-1.2: Conduct quarterly AMR surveillance stakeholders review meetings to review progress with AMR surveillance and data quality.		In progress	
SURV-1.3: Provide technical assistance to the National Coordination Center to develop semiannual national AMR bulletins and policy briefs based on surveillance data.		In progress	
SURV-1.4: Provide technical support to the National Coordination Center to report National AMR data to Global Antimicrobial Resistance Surveillance System (GLASS).		Not started	
SURV-1.5: Provide technical assistance to organize the First Cameroon Microbiological Days		Completed	

Cameroon GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
during the 2021 World Antimicrobial Awareness Week and showcase IDDS surveillance activities during this event.			Laboratory: Yaoundé and Garoua). The workshop took place from December 16 to 17 in Dschang and included 19 laboratory managers and technicians (6 men and 13 women). With IDDS support, laboratory staff reviewed the AMR January–November 2021 data collected using WHONET software and reviewed the data from each IDDS-supported sentinel surveillance site for timeliness, consistency, and completeness according to the National AMR Surveillance Guidelines. During this workshop, the AMR surveillance team also discussed the template and timeline for the first annual report of AMR surveillance (January–December 2021). In FY 2022 Q2, IDDS will provide technical and financial support for a National Public Health Laboratory working group to develop the draft of the AMR surveillance report, including 2021 AMR surveillance data from all the surveillance sites.
SURV-1.6: Provide technical assistance to the AMR technical secretariat to develop the AMR strategic plan (2022-2027) to fight against AMR in collaboration with other USAID GHS partners (Medicines, Technologies, and Pharmaceutical Services [MTaPS], Food and Agriculture Organization [FAO]).		In progress	On October 15, IDDS convened a meeting with two USAID GHS partners (the Medicines, Technologies, and Pharmaceutical Services program and the Food and Agriculture Organization of the United Nations) to coordinate activities planned within the framework of AMR control in FY 2022 and to harmonize efforts for greater impact. In FY 2022 Q2, IDDS and the Medicines, Technologies, and Pharmaceutical Services program will work with the National Public Health Laboratory to develop an implementation plan to support the revision of the outdated (2018–2020) AMR National Action Plan and the development of the new AMR National Action Plan (2022–2025).

Democratic Republic of Congo (DRC) GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
DRC-GHSA-NTW-1: Operationalize the national laboratory policy and strategic plan in Eastern DRC	Benchmark 7.3	In progress	IDDS actively followed up with the Directorate of Laboratory Services (DLS) to get the missing signature of the Minister of Health (MoH) on the National Laboratory Policy and Strategic Plan 2021-2025.
DRC-GHS-NTW-1.1: Support the dissemination of the MoH laboratory policy and strategic plan in the Eastern DRC		In progress	IDDS is planning to print and disseminate 500 copies of the final version of the laboratory strategic documents in the IDDS-supported Eastern provinces during FY 2022 Q2.
DRC-GHS-NTW-1.2: Build capacity in the North Kivu and surrounding provinces in the Eastern DRC on equipment maintenance		Completed	IDDS provided technical assistance to the MoH through the DLS to develop and validate additional training materials based on the adapted Laboratory Equipment Maintenance Manual, including training modules, a trainer's guide, standard operating procedures, and job aids. The validation workshop was held in Goma from November 22 to 26. Participants were from the MoH/DLS, the Nord Kivu Provincial Health Division, the *Institut National de Recherche Biomédicale* (National Institute for Biomedical Research) Goma, the MoH/Directorate of Continued Education, and the AMI-Labo Goma. IDDS provided technical and financial support to organize three orientation sessions on equipment and laboratory maintenance for 93 (including 16 women) laboratory workers in Goma (November 29–December 3), Bukavu (December 7–11) and Kindu (December 16–20). In FY 2022 Q2, IDDS will finalize the orientation sessions report and submit it to USAID as a technical deliverable.
DRC-GHS-NTW-2: Support the establishment of a regional public health network in the Eastern DRC	Benchmark 7.3	In progress	IDDS finalized and submitted the laboratory mapping report and the sample transportation and referral assessment report with recommendations as key deliverables to USAID.
DRC-GHS-NTW-2.1: Assess and map the existing sample management (collection, storage, transport) and referral systems in the Eastern region to identify potential synergies		Completed	IDDS also drafted the costed operational plan for the Development of the Rodolph Merieux Laboratory and the Public Health Laboratory Network in the Eastern region (2022–2025). It is currently being reviewed and will be finalized in FY 2022 Q2. The development of the financial sustainability framework is scheduled for FY 2022 Q2.

Democratic Republic of Congo (DRC) GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
DRC-GHS-NTW-2.2: Support the development of an operational plan for the Eastern regional public health laboratory network and operationalize the plan		Completed	
DRC-GHS-NTW-2.3: Cost the operational plan and develop a financial sustainability framework for the Eastern region public health laboratory network		In progress	
DRC-GHS-NTW-2.4: Support Planwise training by ASLM for four staff: two laboratory mapping focal points from government [one from Directorate of Laboratory Services (DLS) and one from Division Provincial de la Santé (DPS)] and two from IDDS staff (SDS and DS or PA)		Not started	
DRC-GHS-NTW-2.5: Organize a technical workshop for platform checklist update: materials, equipment, and laboratory inputs for each level of laboratory in the DRC health pyramid to help equipment procurement (with a focus on detection and surveillance) to support full operation of provincial labs in the Eastern region		Not started	

Democratic Republic of Congo (DRC) GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
DRC-GHS-NTW-2.6: 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		Not started	
DRC-GHS-NTW-3: Enhance priority pathogen detection capacity for epidemic prone diseases	Benchmark 7.2	In progress	Based on the three manuals developed and validated in FY 2021, IDDS will develop training modules and a trainer's guide to be consistent with the MoH requirements for training. In FY 2022 Q2, IDDS will organize a training of trainers for biotechnology technicians with the training materials and disseminate them in IDDS-supported Eastern provinces. In FY 2022 Q2, IDDS will work with the MoH/DLS and the Directorate of Epidemiologic Services to establish a multisectoral technical working group, develop terms of reference for the decentralization of microbiology detection of epidemic-prone disease pathogens, and validate the scope of work for the consultant who will be hired to update the outbreak action plan to align with the National Laboratory Strategic Plan 2021–2025. IDDS will also conduct a workshop to validate the updated outbreak action plan, in collaboration with Directorate of Epidemiologic Services and DLS. In FY 2022 Q2, IDDS, in collaboration with DLS and other partners, will hold discussions with stakeholders on ways to incorporate local airlines (Compagnie Aérienne Africaine, Congo Airways, KinAvia, UNHAS, ASF, and MAF) into the specimen transportation system. IDDS will appoint a consultant to conduct a situational assessment of the specimen referral system and transport for the IDDS-supported Eastern provinces to develop an implementation plan that will be piloted in collaboration with local airlines.
DRC-GHS-NTW-3.1: Support the Directorate of Epidemiologic Services (DSE) to update the outbreak action plan to align with the National Laboratory Strategic Plan (NLSP) and to define resource requirements		In progress	
DRC-GHS-NTW-3.2: Provide technical assistance to the Directorate of Laboratory Services (DLS) to create training materials and job aids for laboratory biosafety officers to train laboratory technicians, non-technician personnel involved in specimen handling and storage, and local transportation vendors in safe specimen handling techniques		In progress	

Democratic Republic of Congo (DRC) GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
DRC-GHS-NTW-3.3: Support of outbreaks response in the DRC		In progress	IDDS will then collaborate with the technical working group on the specimen referral and transport system in the Eastern region and specimen transport partners to validate the findings and implement the recommendations.
DRC-GHS-NTW-3.4: Provide financial resources as needed for the detection of a priority pathogen investigation based on pre-defined criteria		Not started	
DRC-GHS-NTW-3.5: Explore how to incorporate local airlines (Compagnie Aerienne Africaine, Congo Airways, Kinavia, UNHAS, ASF, and MAF) into the specimen transportation system		In progress	
DRC-GHS-NTW-3.6: Support the DSE in the organization of the training of trainers in Integrated Disease Surveillance and Response (IDSR) for the provincial management team in the province of Maniema and South Kivu		Not started	
DRC-GHS-NTW-4: Support the development of a quality assurance and biosafety / biosecurity program for health laboratories in Eastern Region of DRC		Not started	
DRC-GHS-NTW-4.1: Develop documents for quality assurance and biosafety / biosecurity measures for the national laboratory network		Not started	

Democratic Republic of Congo (DRC) GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
DRC-GHS-NTW-4.2: Support a workshop to validate quality assurance and biosafety / biosecurity measures documents for the national laboratory network		Not started	
DRC-GHS-NTW-4.3: Support the printing and dissemination of the quality assurance and biosafety / biosecurity measures documents in the laboratory network in one of the supported Eastern DRC provinces		Not started	
DRC-GHS-NTW-5: Strengthen the capacity of the INRB Laboratory in Goma and the provincial laboratory network to detect priority pathogens in the Eastern DRC region		Not started	
DRC-GHS-NTW-5.1: Develop standard operating procedures (SOPs) and training materials that can be used for the diagnosis of priority zoonoses in the region		Not started	
DRC-GHS-NTW-5.2: Support capacity building (training, mentorship) of public health laboratory staff in Eastern DRC provinces (Nord Kivu, Sud Kivu, and Maniema) on bacteriology testing and diagnostics of priority zoonoses so as to take on testing of more pathogens		Not started	

Guinea GHS

Activity	IHR benchmark	Status	Activity implementation updates
GIN-GHS-NTW-1: Consolidate the capacity of existing human and animal health diagnostic facilities for the detection of priority antimicrobial resistant (AMR) pathogens and enroll three additional AMR surveillance sites to improving reporting structure for surveillance of AMR pathogens	Benchmark 3.2	In progress	IDDS worked with the *Institut National de la Santé Publique* (National Institute of Public Health) to develop a data management system for antimicrobial resistance (AMR) using Kobo Collect. The system includes a tool for the regional laboratories to report AMR data to the national level and a centralized data system for the National Health Laboratory to monitor AMR data and eventually report Guinea AMR data into the **Global Antimicrobial Resistance and Use Surveillance System**. In FY 2022 Q2 IDDS will conduct trainings on the use of the new data management system.
NTW-1.1: Provide technical assistance to the National Institute of Public Health (*Institut National de la Santé*, INSP) to develop a centralized AMR data management system for future reporting into GLASS		In progress	IDDS initiated procurement of reagents and supplies for the *Institut National de la Santé Publique* to support the second round of external quality assessment for the AMR surveillance network, planned for March 2022.
NTW-1.2: Continue to provide technical support to the INSP and to IDDS-supported regional laboratories for proficiency training, quality management system improvement, and management of microbiology data and Antimicrobial Susceptibility Testing (AST)		In progress	
GIN-GHS-NTW-3: Consolidate and finalize the IDDS pilot integrated national specimen referral and transport system	Benchmark 7.2	In progress	The national specimen referral and transport pilot started in December in three IDDS-supported regions: Faranah, Kindia, and Mamou. The pilot will operate through February 2022 and will assess the feasibility and cost of transporting specimens from prefecture laboratories to reference laboratories for bacteriology testing. IDDS provided training to health care workers and drivers on specimen packaging and transport and on the use of monitoring tools (i.e., specimen referral application, thermometers, and Global Positioning System devices). IDDS provided an onsite supportive visit during the launch of the pilot phase in the three regions.
NTW-3.1: Develop a costed report and recommendations for the national specimen referral and transport pilot conducted at the three regional laboratories			

Guinea GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
			In FY 2022 Q2, IDDS will monitor the three IDDS sites on quality assurance and antimicrobial susceptibility testing.

Integrated Disease Surveillance and Reporting (IDSR) GHS		
Activity	**Status**	**Activity implementation updates**
IDSR-Senegal IDSR-1: Provide technical and operational support for rollout of updated IDSR guidelines in St. Louis and Tambacounda Regions in Senegal	Completed	IDDS Senegal supported the district-level training of nurses in three districts of the Tambacounda region: Koumpentoum, Maka Colibantang, and Tambacounda. Ten districts remain for the third edition IDSR training.
IDSR-Cameroon IDSR-2: Provide technical and operational assistance to national adaptation of the IDSR guidelines in Cameroon	Completed in FY 2021 Q4	Activities in Cameroon were completed in FY21. In FY22 Q1, IDDS prepared an implementation report for this activity.

Indonesia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
IDN-GHS-NTW-1: Support the One Health Laboratory Network (OHLN) Sub-Working Group (SWG)	Benchmark 4.1 and 7.1	In progress	On October 1, IDDS held an online meeting with six participants from the Ministry of Health (MoH) Center for Health Resource Training and the Eijkman Institute to finalize the training curriculum for the PREDICT Protocol Laboratory Training. The follow-up action from the meeting was to refine the curriculum document and register the curriculum on the *Sistem Informasi Akreditasi Pelatihan* (MoH Certification Training Center) website. In December, the curriculum was officially registered on the website. In FY 2022 Q2, IDDS will submit all documents required for the accreditation process and support the Government of Indonesia to implement the training.
NTW-1.1: Support and facilitate regular OHLN SWG meetings	Benchmark 4.1	Not started	
NTW-1.3: Provide technical assistance (TA) for the development of outputs from the OHLN	Benchmark 7.1	Not started	
NTW-1.4: Support and facilitate Predict Laboratory Protocol training	Benchmark 4.1 and 7.1	In progress	
IDN-GHS-SURV-1: Integrate Laboratory and Surveillance Systems and Revitalize 4-Way Linking (4WL)	Benchmark 4.1	In progress	IDDS, in collaboration with the Surveillance and Health Quarantine Directorate of MoH, conducted the third online focus group discussion (FGD) on October 8 to develop the 4-Way Linking (4WL) Guidelines. A total of 60 participants attended the meeting, including representatives from Kemenko PMK, the MoH, the Ministry of Agriculture (MoA), the Ministry of Environment and Fisheries (MoEF), the Ministry of Home Affairs, the Cabinet Secretary, the Agency for National Development and Plan, the Center of Environmental Health and Disease Control Agency, the Disease Investigation Center (BBVet), provincial health office representatives, the Center for Natural Resource Conservation (BKSDA), the Indonesian Epidemiology Expert Association, the Indonesian Epidemiology and Veterinary Economic Association, and Global Health Security international partners. During this meeting, the IDDS consultant presented the draft of the "4-Way Linking Guidelines for Health Management in Human, Animal and Environment Interface," which was refined based on inputs from the
SURV-1.3: Develop 4-Way Linking Guideline revitalization review document based on the workshop result with GOI stakeholders	Benchmark 4.1	Not started	
SURV-1.5: Develop/revise 4WL document to revitalize 4WL implementation for various diseases	Benchmark 4.1	In progress	
SURV-1.7: Implementation Pilot of Revitalized 4WL document for various diseases at the cross-sectoral levels	Benchmark 4.1	Not started	

Indonesia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
			previous FGD. IDDS will facilitate the formalization of this document in FY 2022 Q2. The pilot implementation of the Revitalized 4WL Guidelines requires agreement from all ministries. A discussion will be held in early 2022 after the 4WL Guidelines are formalized. The pilot implementation will take place in FY 2022 Q3.
IDN-GHS-SURV-2: Advance National Surveillance Integration in Indonesia	Benchmark 4.1	In progress	On December 2, IDDS facilitated a meeting to coordinate the reporting format of _Instruksi Presiden_ (Presidential Instruction No.4/2019) implementation regarding the public health emergency and non-natural disaster (zoonoses/emerging infectious diseases and antimicrobial resistance). A total of 53 participants attended from related ministries, institutions, and implementing partners. Based on advice from MoH's Center of Health Determinant Analysis, the reporting format to be used is the "Resource mapping tools and impact analysis". On December 24, IDDS facilitated a workshop to finalize the guidelines and roadmap and formulate the preface for these three documents: Cross-Sectoral Integrated Surveillance Guidelines, Four Way Linking Revitalization Guidelines, and _Sistem Informasi Zoonoses dan Emerging Infectious Diseases_ (SIZE, or System for Zoonotic and Emerging Infectious Disease) roadmap. The meeting was conducted in a hybrid method (virtually and in-person), located at the Hotel JS Luwansa Jakarta, with 27 participants attending. The preface for the three documents was formulated and will be signed by the Echelon 1 officials from relevant ministries. IDDS, in collaboration with the Surveillance and Health Quarantine Directorate, MoH, conducted the second FGD on October 21 and the third FGD on November 19 to develop the Cross-Sectoral Integrated Surveillance Guidelines. A total of 59 participants attended both FGDs, including representatives from MoH, Kemenko PMK, MoA, MoEF, the Center of Environmental Health and Disease Control Agency, Indonesian Research Center for Veterinary Science (BBLitVet), BBVet, provincial health office representatives, BKSDA, the Indonesian Epidemiology Expert Association, the Indonesian Epidemiology and Veterinary Economic Association, and Global Health Security international partners.
SURV-2.1: Support and facilitate regular Integrated Surveillance SWG	Benchmark 4.1	In progress	
SURV-2.8: Support and facilitate the development of cross-sectoral integration surveillance system on zoonosis IED's and AMR/AMU guideline	Benchmark 4.1	In progress	
SURV-2.11: Implementation Pilot of Integrated Surveillance Guidelines document for various diseases at the cross-sectoral levels	Benchmark 4.1	Not started	

Indonesia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
			On November 25, IDDS facilitated an informal discussion to finalize the guidelines. A total of 17 participants attended from MoH, MoA, MoEF, the Food and Agriculture Organization of the United Nations (FAO), and the World Health Organization (WHO). IDDS will facilitate the formalization of this document in FY 2022 Q2. The pilot implementation of the Integrated Surveillance Guidelines requires agreement from all ministries. A discussion will be held in early 2022 after the Integrated Surveillance Guidelines are formalized. The pilot implementation will take place in FY 2022 Q3.
IDN-GHS-SURV-3: Support the Development and Operationalization of Sistem Informasi Zoonoses Dan Emerging Infectious Diseases (SIZE) 2.0	Benchmark 9.2	In progress	IDDS, in collaboration with the Coordinating Ministry of Human Development and Cultural Affairs, conducted the Coordination Meeting on National SIZE Management on October 29 to strengthen the cross-sectoral coordination and synergize the roles of each ministry and institution and international partners on the national SIZE's future operationalization and development. A total of 49 participants attended the online meeting from Kemenko PMK, the Ministry of Communication and Information (Kominfo), MoH, MoA, MoEF, MoA, *Badan Riset dan Inovasi Nasional* (BRIN, or National Research and Innovation Agency), the Agency for National Development and Plan, WHO, and FAO. IDDS, in collaboration with the Coordinating Ministry for Human Development and Cultural Affairs and MoH's Surveillance and Health Quarantine Directorate, conducted the second FGD on October 13 and third FGD on November 16 to develop the National SIZE Roadmap. At the meeting, the draft was presented, and participants provided inputs. A total of 95 participants attended the second FGD, and 135 participants attended the third FGD, from Kemenko PMK, MoH, MoA, MoEF, Kominfo, Badan Pengkajian dan Penerapan Teknologi (Agency for the Assessment and Application of Technology-BPPT), BRIN, BAPPENAS, Cabinet Secretariat of the Republic of Indonesia (SETKAB), Global Health Security international partners, BPJS Kesehatan, BBPKH Cinagara, BBPK Ciloto, BKSDA,
SURV-3.3: Support the facilitation and reporting of the SIZE CG regular meeting	Benchmark 9.2	In progress	
SURV-3.5: Development of the SIZE Roadmap by identifying regulations needed and system gaps in SIZE 2.0 that require the attention of GoI and International Partners to ensure the success of SIZE 2.0	Benchmark 9.2	In progress	
SURV-3.6: Support the development of a regulatory strategy on the operationalization of the SIZE	Benchmark 9.2	In progress	
SURV-3.9: Conduct a training for the team managing SIZE 2.0 (Rabies) on data analytics, data visualization, and reporting	Benchmark 9.2	In progress	

Indonesia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
SURV-3.10: Conduct training for OH concept and SIZE 2.0 for technical staff at a district level	Benchmark 9.2	In progress	provincial health office representatives, and Animal Health Office representatives. On November 24, IDDS facilitated an informal discussion to discuss the National SIZE Roadmap document. A total of 18 participants attended from Kemenko PMK, MoH, MoA, MoEF, Kominfo, WHO, and FAO. IDDS will facilitate the formalization of this document in FY 2022 Q2. IDDS, in collaboration with the Coordinating Ministry for Human Development and Cultural Affairs, conducted an online coordination meeting on October 15 related to SIZE's future management and legal aspects. A total of 14 participants attended from Kemenko PMK, Kemenkominfo, BRIN, and FAO. IDDS conducted an online meeting on October 27 to discuss the mechanism of SIZE migration from BRIN to Kominfo, which was facilitated by Kemenko PMK. A total of 16 participants attended from Kemenko PMK, Kominfo, BRIN, and FAO. IDDS conducted an online discussion on October 25 to determine the location (provinces and districts) for the One Health and SIZE training. The district training location was agreed to be determined based on several criteria, and the One Health province training will be supported by WHO in 2022. A total of 20 participants attended from MoH, MoA, MoEF, BBPK Ciloto, BBPKH Cinegara, WHO, FAO, and Indonesia One Health University Network (INDOHUN). On December 21, IDDS facilitated a workshop to decide the One Health training location (based on the scoring method used to select the districts for the Surveillance and One Health Program) and to obtain information and inputs for the curriculum and module. A total of 56 participants attended from related ministries, institutions, and international partners, and they identified the priority provinces for the One Health training. The selected districts will be published in January 2022.

Kenya GHS

Activity	IHR benchmark	Status	Activity implementation updates
KEN-GHS-NTW-1: Enhance national-level multi-sectoral antimicrobial resistance (AMR) detection and surveillance leadership and coordination	IHR benchmark 3.1	In progress	In collaboration with the National Antimicrobial Stewardship Inter-Agency Committee (NASIC), IDDS promoted the antimicrobial resistance (AMR) surveillance training course hosted at the Ministry of Health e-Learning Academy, through a PowerPoint slide presentation at the World Antimicrobial Awareness Week national launch on November 19, which was attended by more than 300 people. IDDS worked closely with the USAID-funded University of Nairobi (UoN) Health IT project to design certificates to be awarded to learners upon completion of the AMR surveillance training, as well as to monitor course uptake by learners. IDDS and Health IT also revised and improved course content by providing additional contextual information about the modules on the course pages. Building on FY 2021 activities, IDDS will work closely with NASIC and Health IT to further promote the AMR surveillance training course (among laboratory technologists, clinicians, veterinarians, pharmacists, nurses, surveillance officers, and other potential learners), improve course contents, and monitor uptake throughout FY 2022. IDDS provided technical assistance to convene meetings of the national and county antimicrobial stewardship committees and participated in the meetings. On November 30, IDDS participated in the launch of the Kilifi County Antimicrobial Stewardship Inter-Agency Committee action plan. During the meeting, IDDS discussed strengthening AMR surveillance in the county with the county executive committee member for health, the county director of health, and the Malindi Sub-County Hospital medical superintendent. IDDS will provide technical and logistical support for the implementation of some of the surveillance activities in the FY 2022 Kilifi County Antimicrobial Stewardship Inter-Agency Committee action plan, including (1) sensitizing clinicians to raise awareness of AMR and increase use of bacteriology services, (2) hosting forums on topics related to the clinical-laboratory interface, and (3) strengthening laboratory testing capacity by training staff and supporting regular maintenance of equipment.
NTW-1.1: Create awareness on the AMR surveillance training course hosted at the Ministry of Health (MoH) e-learning academy, monitor its uptake, and provide technical assistance to address any challenges that arise during implementation		In progress	
NTW-1.2: Hold a follow-up meeting with professional and regulatory bodies to effect actions to allow award of continuing professional development (CPD) points to the learners who take the self-paced AMR surveillance training course on the MoH e-learning academy. This will entail (1) follow-up meetings with the regulatory bodies to present and defend the training materials, and (2) advocating for MoH to offset the required fees or get a waiver for award of CPD points		In progress	
NTW-1.3: Revise the contents and format of the national AMR surveillance training materials hosted on the MoH e-learning academy to make them more user		Not started	

Kenya GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
friendly and interactive, based on feedback received from learners and course managers. The project will also collaborate with Health IT to record and upload video and audio clips as part of the content improvement			
NTW-1.4: Participate in planning and progress review meetings of national and county antimicrobial stewardship interagency committees and provide technical assistance		In progress	
KEN-GHS-NTW-2: Strengthen detection of priority AMR surveillance pathogens at the five IDDS-supported surveillance sites	IHR benchmark 3.2	In progress	Starting in FY 2021, IDDS facilitated discussions on automated equipment placement between Bungoma County Referral Hospital and Hass Scientific (a local distributor for manufacturer bioMérieux), providing mediation and technical guidance. In late November, the county hospital signed a contract with Hass Scientific for the placement of a VITEK 2 system that automates bacterial identification (ID) and antimicrobial susceptibility testing. The equipment was installed onsite on December 1, and laboratory personnel were trained on its use, specimen processing, testing, performance of quality assurance, and maintenance procedures. The ID/antimicrobial susceptibility testing equipment will improve laboratory capacity to detect AMR by facilitating fast and accurate identification of bacteria and their susceptibility patterns, thus improving clinical management, patient outcomes, and AMR surveillance.
NTW-2.1: Conduct field mentorship visits and provide onsite bench training to the five IDDS-supported counties to reenforce skills and competency on quality assurance, biosafety and biosecurity, organism identification (ID), and antimicrobial susceptibility testing (AST)		In progress	
NTW-2.2: Place surveillance site laboratory technologists in busy laboratories for a week to enhance skills on ID, AST, and quality standards		Not started	To complement placement of the equipment by the county, IDDS procured start-up reagents to kick-start use of the equipment. IDDS also partnered with the Bungoma County Referral Hospital to hold a continuous medical education (CME) session for clinicians on diagnostics and antimicrobial stewardship at the Bungoma County Referral Hospital on December 2. The
NTW-2.3: Support preventive maintenance of microbiology		In progress	CME session was attended by 44 (21 female) health care workers representing the following cadres: pharmacists (2), medical officers (14),

Kenya GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
equipment (i.e., servicing of automated equipment and calibration of select auxiliary equipment) in the five IDDS-supported AMR surveillance sites			clinical officers (12), medical laboratory technologists (11), nursing officers (3), and surgeons (2). The aim of the CME session was to provide clinicians with information on microbes causing infections and their resistance to antimicrobial agents, and how bacteriology tests can guide patient management, including treatment to optimize clinical outcomes and limit the spread of AMR.
NTW-2.4: Procure microbiology commodities to supplement county capacity based on the comprehensive list developed during fiscal year 20		Not started	In FY 2022 Q2, IDDS will partner with Bungoma County and the county referral hospital leadership, and bioMérieux, to formally launch the equipment as a way of creating awareness and increasing its use. Clinicians, laboratory technologists, and other health workers from the county referral hospital and high-volume peripheral health facilities in the county will be invited to the launch event.
NTW-2.5: Provide technical and logistical support to IDDS-supported AMR surveillance sites to acquire automated bacteriology equipment through placement		In progress	
NTW-2.6: Conduct two webinars in collaboration with other stakeholders on selected aspects of AMR detection and surveillance		Not started	
NTW-2.7: Provide technical assistance to the five IDDS-supported AMR surveillance sites to quantify, forecast, and budget for microbiology bacteriology commodities, to strengthen the microbiology commodities supply chain management system		Not started	
KEN-GHS-NTW-3: Provide technical assistance to strengthen utilization of bacteriology testing capacity established at the five IDDS-supported AMR surveillance sites	IHR benchmark 7.2	In progress	IDDS continued to provide technical assistance in the selection, packaging, and transportation of priority microbiology isolates to the National Microbiology Reference Laboratory (NMRL) for external quality assessment. All five IDDS-supported sites are actively referring isolates to the NMRL, although it has not yet released results of retesting. Currently,

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Activity	IHR benchmark	Status	Activity implementation updates
NTW-3.1: Provide assistance to two counties (Murang'a and Bungoma) to establish integrated specimen referral system technical working groups (TWGs) and to develop a pilot plan for an integrated specimen referral system in their respective counties		In progress	isolate referral from county hubs to the NMRL is primarily facilitated through the existing TB specimen referral system. In FY 2022 Q2, IDDS will continue to provide technical assistance as needed. On December 7, IDDS supported the Murang'a County Referral Hospital to convene a specimen referral system (SRS) stakeholder meeting to review progress made two years after the launch of the county-owned integrated SRS, and to discuss strategies to integrate AMR surveillance specimens into the county SRS. The county executive committee member for health, county medical laboratory coordinator, sub-county medical laboratory coordinators, county AIDS and STIs coordinator, county tuberculosis and leprosy coordinator, county nurse, county health administration officer, representative from the motorbike riders' crew, and partner representatives attended the meeting. These stakeholders will constitute the county SRS technical working group, which will be convening on a quarterly basis. All in attendance agreed to integrate AMR surveillance specimens into the SRS on a pilot basis and agreed to the indicators that will be used to monitor the performance of the system. An efficient referral system for AMR surveillance specimens will expand access to diagnostic services at the peripheral health facilities, save patients cost and time that would be spent seeking services at the referral health facilities, promote evidence-based prescription of antibiotics at the referring facilities, and generate representative AMR surveillance data for the county.
NTW-3.2: Provide technical assistance to two pilot counties to hold integrated specimen referral system TWG meetings.		In progress	
NTW-3.3: Hold a one-day workshop in each IDDS-supported county to train/sensitize specimen transporters on handling of bacteriology specimens, among other infectious substances		Not started	
NTW-3.4: Conduct a one-day refresher training for clinical and laboratory teams in peripheral health facilities on the role of microbiology and specimen collection/referral in each of the five IDDS-supported counties		Not started	
NTW-3.5: Provide assistance to two counties (Murang'a and Bungoma) to transport specimen from high-volume peripheral health facilities to the county referral hospital laboratories within existing specimen referral mechanisms		Not started	

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Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
NTW-3.6: Hold a one-day meeting with both clinical and laboratory personnel at each of the IDDS-supported sites to review AMR surveillance data and promote the use of diagnostics to improve prudent use of antibiotics		Not started	
NTW-3.7: Provide technical and logistical assistance to the IDDS-supported AMR surveillance sites to refer bacteriology isolates to the National Microbiology Reference Laboratory for external quality assessment (EQA), using existing specimen referral mechanisms. This will involve support for packaging and transporting items and courier costs where applicable		In progress	
KEN-GHS-NTW-4: Strengthen national- and county-level laboratory quality systems, including EQA and internal quality control processes	IHR benchmark 3.2	In progress	IDDS provided onsite technical assistance to the Malindi Sub-County Hospital Laboratory in preparation for assessment by the Kenya National Accreditation Services (KENAS) for compliance with requirements of ISO 15189:2012 medical laboratories standard. KENAS assessed the laboratory from November 29 to December 2. For the first time, bacteriology tests, under which AMR detection tests fall, were included in the assessment. The KENAS assessment team identified two minor nonconformities that required corrective action but ultimately recommended that Malindi laboratory's accreditation include bacteriology tests. Accreditation of the bacteriology tests will boost confidence among clients and stakeholders on the quality of test results and of the AMR surveillance data generated by the laboratory. In FY 2022 Q2, IDDS will continue to provide offsite technical assistance to the laboratory to fill gaps.
NTW-4.1: Provide technical assistance to National Antimicrobial Stewardship Inter-Agency Committee (NASIC) to conduct quarterly virtual EQA sessions targeting all AMR surveillance sites in the country		Not started	
NTW-4.2: Provide technical assistance to Nyeri County Hospital Laboratory and Malindi Sub-County Hospital Laboratory to		In progress	

Kenya GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
include bacteriology tests (gram stain, culture, and antimicrobial susceptibility tests) in the scope of accreditation by Kenya Accreditation Service (KENAS)			The project has also begun to provide onsite and offsite technical assistance to the Nyeri County Referral Hospital Laboratory to prepare for its accreditation assessment, which is scheduled for FY 2022 Q3. IDDS continued to monitor monthly workload at the five IDDS-supported bacteriology laboratories through review of AMR detection and surveillance data generated by the sites and followed up with the sites that reported a reduction in workload to identify and address causes. IDDS will continue to monitor AMR surveillance sites bacteriology workload on a monthly basis throughout FY 2022.
NTW-4.3: Provide technical and logistical support to the National Microbiology Reference Laboratory to hold a one-day workshop with all AMR surveillance sites in the country to strengthen laboratory quality management system		Not started	
NTW-4.4: Conduct monthly monitoring of AMR detection and surveillance progress at the county level (i.e., virtual workload and quality monitoring using tools IDDS supported NASIC to develop during fiscal year 20)		In progress	
KEN-GHS-SURV-1: Enhance national- and subnational-level capacity to analyze, interpret, report, and use AMR surveillance data	IHR benchmark 3.2	In progress	From November 22 to 26, IDDS organized a centralized hands-on training on the use of WHONET software for AMR data management and analysis. The training was held at Sarova Panafric Hotel in Nairobi and was attended by 17 people (7 females): 2 people (a microbiologist and quality officer) from each of the 5 IDDS-supported AMR surveillance sites, 4 people from the IDDS Kenya team, and 1 person from the National Public Health Laboratories (NPHL). The training was facilitated by two WHONET expert consultants and a member of the NPHL monitoring and evaluation team. The training enhanced the capacity of the surveillance sites to manage and analyze AMR data for use at the facility level to inform patient management decisions.
SURV-1.1: Train staff from the five IDDS-supported sites on the use of WHONET software for AMR surveillance data analysis		Completed	
SURV-1.2: Conduct a two-day visit to each IDDS-supported AMR surveillance site to support site-specific implementation of		In progress	

Kenya GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
WHONET by ensuring appropriate installation, data entry, and analysis			From November 30 to December 15, the IDDS surveillance specialist conducted site-specific follow-up visits to support implementation and use of WHONET software for AMR surveillance data management and analysis in the Murang'a, Kitale, and Bungoma hospital laboratories. During the visits, the IDDS surveillance specialist helped the sites set up and configure WHONET to reflect data variables collected for national reporting, pilot the WHONET tool, and address any issues that arose. She mentored three staff from each site on use of the WHONET software. The laboratories without a laboratory information system, such as Murang'a, will use the WHONET software to manage and analyze AMR surveillance data. In FY 2022 Q2, IDDS will visit Malindi and Nyeri to provide similar onsite support for WHONET implementation. IDDS will continue to provide virtual support to the five IDDS-supported AMR surveillance sites throughout FY 2022 to ensure successful use of WHONET software.
SURV-1.3: Conduct in-person, semi-annual AMR surveillance stakeholder data review meetings with all AMR surveillance sites that are reporting in the country		Not started	
SURV-1.4: Review on a monthly basis data submitted to the Central Data Warehouse (CDW) from IDDS-supported and other AMR surveillance sites in the country to identify major gaps, including failure to submit, poor timeliness, and incompleteness, and prepare internal summary of progress and actions to address identified gaps.		In progress	IDDS continued to monitor weekly submission of AMR surveillance data by the supported surveillance sites to the NPHL Central Data Warehouse (CDW) and reviewed the data for any quality gaps. This ensured early identification of major gaps, including poor timeliness and incompleteness, and prompted actions to address the gaps.
SURV-1.5: Organize quarterly virtual AMR surveillance data review meetings for AMR surveillance sites, NASIC, and other stakeholders to discuss submitted data and address any quality gaps		In progress	The quarterly virtual AMR surveillance data review meetings did not happen as initially planned due to unavailability of some of the relevant stakeholders, particularly the NPHL and the NASIC secretariat. IDDS plans to hold one review meeting in FY 2022 Q2 as well as a workshop to provide feedback to the surveillance sites on the data cleaning and review gaps identified during the workshop conducted by the AMR surveillance technical working group with support from IDDS in August 2021.
SURV-1.6: Conduct semi-annual AMR surveillance supportive supervision to the sites jointly with NASIC and other stakeholders		Not started	
KEN-GHS-SURV-2: Enhance AMR surveillance data quality, sharing, and use within and across sectors and partners	IHR benchmark 3.2	In progress	IDDS continued to work closely with NASIC and the software developer responsible for the real-time AMR surveillance dashboards to identify gaps and propose solutions. IDDS also followed up with the surveillance sites on access and use of AMR dashboards and provided technical assistance as

Kenya GHS

Activity	IHR benchmark	Status	Activity implementation updates
SURV-2.1: Continue to work with the NASIC informatics team to refine and improve real-time AMR surveillance dashboard capabilities at the CDW based on feedback from surveillance sites and partners		In progress	needed. In FY 2022 Q2, IDDS will continue to provide technical assistance to improve the contents of the AMR dashboard and help surveillance sites easily access and use their data to inform site-level policy and practice. IDDS continued to monitor the quality of AMR surveillance data submitted to the CDW weekly. In FY 2022 Q2 and Q4, IDDS will provide technical assistance to NASIC to review and clean data in preparation for submission to the World Health Organization Global Antimicrobial Surveillance System during the 2022 data call.
SURV-2.2: Support NASIC to develop a quarterly AMR bulletin for the country with a focus on the AMR surveillance content		In progress	
SURV-2.3: Support the development or generation of antibiograms for the five IDDS-supported sentinel surveillance sites		Not started	
SURV-2.4: Support NASIC to collate, clean, prepare, and submit data to GLASS during the 2022 data call		Not started	
KEN-GHS-SURV-3: Strengthen national- and county-level integration and use of information systems to manage AMR surveillance data	IHR benchmark 9.2	In progress	The linkage of the Bungoma County laboratory information system to the CDW has stalled due to unavailability of the IT expert from the NPHL to complete the process. To provide temporary support to Bungoma County to share data with the CDW, IDDS provided technical assistance to the county to engage a data clerk to retroactively enter AMR data for 2019–2021 on WHONET. The WHONET file will be sent to the NPHL for uploading to the CDW. Bungoma County will thereafter continue to share data prospectively with the NPHL using the WHONET software until the laboratory information system can be linked to the CDW by the NPHL. The process of linking the CDW to District Health Information Software, version 2 (DHIS2) has temporarily stalled due to inadequate informatics staff at NPHL to finalize the linkage. Prior to this, the NPHL shared data elements with Health IT, which created a placement in DHIS2, and access credentials were given to the NPHL. In FY 2022, IDDS plans to work with
SURV-3.1: Provide IT technical support to NASIC to maintain AMR surveillance information systems and respond to system challenges at the CDW and AMR surveillance sites to assure uninterrupted transmission of data.		In progress	
SURV-3.2: Provide technical assistance to finalize the linkage of the Bungoma County laboratory		Not started	

Kenya GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
information system to the CDW to share data in real time			Health IT and the Foundation for Innovative New Diagnostics to complete the linking of the CDW to DHIS2.
SURV-3.3: Provide technical assistance to NPHL informatics to link the AMR CDW to District Health Information Software, version 2 (DHIS2) to facilitate data exchange between the two sectors		In progress	

Liberia GHS

Activity	IHR benchmark	Status	Activity implementation updates
LBR-GHS-NTW-1: Provide technical assistance (TA) to the National Diagnostic Division (NDD) to support its diagnostic system leadership role	IHR benchmark 7.3	In progress	On November 25, IDDS held a working session with four technical leads of the National Diagnostic Division (NDD) to finalize the monitoring and evaluation tracker that will be used for monitoring progress of implementation of the five-year laboratory strategic plan. This tracker is based on the indicators defined in the plan. In FY 2022 Q2, IDDS will provide guidance on data collection and analysis.
NTW-1.1: Strengthen NDD technical oversight of the laboratory system by providing technical guidance on coordination, collaboration, and continuous improvement of the laboratory network to the NDD staff at the central and county level		In progress	IDDS convened a meeting with the NDD technical team on December 1 to discuss strategies for collaborating with the supply chain management unit and the central medical stores to address the recurring challenge of commodity stockouts in all the laboratories. At the county level, the diagnostic specialists worked with county diagnostic officers in engaging county and hospital pharmacists who oversee all supply stock. IDDS also advised the NDD to engage all implementing partners for laboratory activities to address the supply gaps in the laboratory system.
NTW-1.2: Provide support for the NDD to conduct biannual laboratory review meetings with counties and stakeholders		In progress	
NTW-1.3: Provide TA on tracking the implementation of the laboratory strategic plan and policy		In progress	
LBR-GHS-NTW-3: Improve network efficiencies through the implementation of a decentralized integrated specimen referral system in the three supported counties (Lofa, Nimba, and Bong)	IHR benchmark 7.2	In progress	IDDS provided onsite mentorship on bacteriology specimen collection to two laboratory technicians working in the bacteriology section at Tellewoyan laboratory and one technician at G.W. Harley Hospital laboratory. The mentorship included demonstrations in hospital wards on specimen collection at bedsides. IDDS provided financial support for the NDD bacteriology champion to provide onsite training and mentorship on how to aseptically collect bacteriology specimens, including blood cultures, safe handling, and transportation of the specimens to the laboratory. The onsite mentorship was provided at both Tellewoyan and G.W. Harley laboratories.
NTW-3.1: Support the development of county-specific operational frameworks for implementation of Integrated Specimen Transport in the supported counties		In progress	In FY 2022 Q2, IDDS will provide financial support to procure specimen transport material and to carry specimens from three district hospitals (Kolahun, Curran, and Foya Boma) to Tellewoyan laboratory in Lofa.
NTW-3.2: Support the procurement of biosafe specimen		Not started	

Liberia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
courier boxes for transportation of bacteriology specimens to Tellewoyan laboratory in Lofa and provide funds to support the transportation of specimens using motorbikes			
NTW-3.3: Support transportation of bacteriology specimens to decentralized bacteriology testing laboratories in Lofa county		Not started	
NTW-3.4: Support training and mentorship to build capacity of laboratory staff at the district level on specimen management and shipping of priority pathogen specimens in Bong, Lofa, and Nimba counties		In progress	
LBR-GHS-NTW-4: Strengthen County level implementation of Strengthening Laboratory Management Toward Accreditation (SLMTA)-based quality management system (QMS) in the supported laboratories in Lofa, Nimba, and Bong counties	IHR benchmark 7.4	In progress	IDDS diagnostic specialists assisted the technicians at Tellewoyan, Phebe, and G.W. Harley Hospital laboratories to address the gaps noted during the FY 2021 Q4 Stepwise Laboratory Improvement Process Towards Accreditation audit. IDDS provided guidance to the county diagnostic officers on developing the management calendar for their county activities and provided mentorship to laboratory technicians on the quality management system, emphasizing adherence to laboratory procedures and good laboratory practices in fulfillment of Strengthening Laboratory Management Toward Accreditation/Stepwise Laboratory Improvement Process Towards Accreditation requirements.
NTW-4.1: Provide SLMTA-based on-site mentorship and support visits to the facilities enrolled in QMS in Bong, Nimba, and Lofa		In progress	
NTW-4.2: Develop a SLMTA-based mentorship model for Liberia based on the mentorship being provided in the three counties		Not started	Feedback received from the World Health Organization indicated that it would provide external quality assessment panels for bacteriology to the National Public Health Reference Laboratory, which, in turn, should provide panels to county laboratories. In FY 2022 Q2, IDDS will assist with National Public Health Reference Laboratory capacity building for interlaboratory

Liberia GHS

Activity	IHR benchmark	Status	Activity implementation updates
NTW-4.3: Conduct biannual Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) audits to monitor SLMTA implementation in the IDDS-supported laboratories in the three counties		Not started	comparison. The three IDDS-supported bacteriology laboratories will initiate an interlaboratory comparison program as a quality assurance measure in FY 2022 Q2.
NTW-4.4: Provide on-line QMS auditor training to five laboratory professionals		In progress	
NTW-4.5: Enroll facilities conducting bacteriology in an External Quality Assurance (EQA) proficiency testing scheme		In progress	
LBR-GHS-NTW-7: Strengthen capacity to perform and report quality-assured microbiology, including antimicrobial resistance (AMR) detection in the three supported counties	IHR benchmark 7.1	In progress	IDDS provided financial support for the NDD bacteriology champion to provide three weeks of onsite bacteriology mentorship (October 25–November 13) at Tellewoyan Hospital laboratory. The mentorship was provided to two technicians who are permanently assigned to the bacteriology section, and other laboratory staff attended when available.
NTW-7.1: Provide on-site mentorship, in collaboration with the NDD and the National Public Health Reference Laboratory (NPHRL), on bacteriology culture and antimicrobial susceptibility testing of priority pathogens to the three facilities conducting bacteriology testing in the supported counties		In progress	The mentorship included media preparation, specimen collection and processing, and antimicrobial susceptibility testing. The mentor ensured that the technicians were trained on the various bacteriology techniques, including disinfection, sterility testing, and decontamination of waste, by allowing the mentees to conduct the activities with him watching and correcting where necessary. The mentorship emphasized aseptic techniques in bacteriology. IDDS diagnostic specialists, with the assistance of the NDD bacteriology champion, convened a meeting on October 25 with the management of Tellewoyan Hospital to discuss the availability of bacteriology testing
NTW-7.2: Provide TA on microbiology diagnostic stewardship		In progress	services at their laboratory. This laid the foundation for diagnostic stewardship meetings in which the laboratory team directly engages the

Liberia GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
NTW-7.3: Support procurement of bacteriology reagents and provide contracts for equipment service and calibration		In progress	clinicians in improving bacteriology specimen collection, testing, and reporting.
IDDS procured antibiotic disks and other consumables to support the bacteriology testing at G.W. Harley laboratory. The biosafety cabinet for G.W. Harley was delivered to the facility in December.
IDDS installed desktop computers in each of the three bacteriology laboratories, (Tellewoyan, G.W. Harley, and Phebe) and installed the WHONET software. In FY 2022 Q2, IDDS will strengthen data reporting from the three bacteriology sites using the WHONET software.
NTW-7.4: Strengthen bacteriology data reporting to the central level		In progress	
NTW-7.5: Provide support for electricity for bacteriology work at Tellewoyan and G.W. Harley Hospital laboratories		In progress	

Madagascar GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
MDG-GHS-NTW-1: Support finalization of the National Laboratory Strategic Plan (NLSP)	Benchmark 7.1	Completed	IDDS finalized the key deliverable, the final edited and formatted document of the National Laboratory Strategic Plan and submitted it to USAID.
MDG-GHS-NTW-2: Establish peripheral testing capacity in Mahajanga region for COVID-19 and other infectious and emerging diseases	Benchmark 7.3	Completed	IDDS submitted the report for this activity, including the number of COVID-19 tests performed on the Mahajanga polymerase chain reaction platform and a brief synopsis of the remaining challenges to address in project year 2, to USAID.
MDG-GHS-NTW-3: Support capacity building of laboratories in the RESAMAD network for bacteriology capacity building to identify priority pathogens	Benchmark 7.4	Completed	IDDS held a training workshop on bacteriology for *Reseau des Laboratoires à Madagascar* biologists and laboratory technicians in October.
MDG-GHS-SURV-1: Support the national government to assess current surveillance systems to identify gaps and opportunities for integrating surveillance	Benchmark 9.1	Completed	IDDS submitted the key deliverable, a report from the workshop on next steps to strengthen the surveillance system and integrate surveillance data, to USAID.
MG-GHSA-SURV-2: Support the review and finalization of the National surveillance Strategic Plan (NSSP)	Benchmark 9.3	Completed	IDDS reviewed, finalized, and submitted the key deliverable, the National Surveillance Strategic Plan, to USAID.
MG-GHSA- SURV-3: Support the effective review of the monthly surveillance bulletin (SIMR) and dissemination, thus improving on the coordination of the IDSR	Benchmark 9.1	Completed	IDDS finalized and submitted the key deliverable, the June 2021 integrated disease surveillance and response bulletin, submitted to USAID.

Mali GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
MLI-GHS-NTW-1: Map national diagnostic facilities and their capacities	Benchmark 7.3	Not started	This activity is planned for FY 2022 Q2.
MLI-GHS-NTW-1.1: Complete the mapping of the country's laboratory capacity by collecting data in the remaining regions (Mopti, Gao, Timbuktu, Kidal, Taoudenit, and Menaka) (continuation of activities started in FY21)		Not started	
MLI-GHSA- NTW-1.2: Hold a data verification and validation session (in Mopti) with data collectors before uploading on to the ASLM platform (continuation of activities started in FY21)		Not started	
MLI-GHS-NTW-2: Strengthen diagnostic equipment systems (procurement, availability, operating status, and preventive maintenance)	Benchmark 7.3	In progress	IDDS provided technical and financial support to the *Institut National de Sante Publique* (INSP, or National Institute for Public Health) to hold a meeting of the multisectoral committee for laboratory system strengthening on December 14. The meeting participants were the 15 multisectoral committee members from the key ministries of the One Health platform. The objectives of the meeting were to present (1) the laboratory equipment maintenance procedure for the INSP and (2) the research protocol, "Antibiotic resistance of E. coli strains isolated from ruminants in the peri-urban area of Bamako."
In FY 2022 Q2, IDDS will continue to provide financial and technical support to the multisectoral committee meetings and support the INSP to conduct the first round of biannual equipment maintenance follow-up visits to the regional hospital laboratories (Ségou, Mopti, and Sikasso) that received equipment maintenance training with IDDS support.
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 (SOPs) through one meeting every other month (continuation of activities started in FY20)		In progress	
MLI-GHS-NTW-2.2: Provide a limited quantity of testing reagents for priority pathogens for the two IDDS-supported facilities: National Institute of Public Health (Institut National de Santé		Not started	

Mali GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
Publique (INSP) and the laboratory of Segou Regional Hospital			
MLI-GHS-NTW-2.3: Support INSP to conduct an annual equipment maintenance follow up visit to regional hospital laboratories which received training with IDDS support (Segou, Mopti, and Sikasso)		Not started	
MLI-GHS-NTW-2.4: Develop a costed plan for identified equipment needs (maintenance contracts, equipment repair, and/or procurement) (continuation of activities started in FY20) to be done during a 3-day workshop		Not started	
MLI-GHS-NTW-3: Strengthen support for the accreditation process for the serology section at the National Institute of Public Health (Institut National de Santé Publique (INSP) and the laboratory of Segou Regional Hospital	Benchmark 7.3	Not started	This activity will start in FY 2022 Q2.
MLI-GHS-NTW-3.1: Organize two assessment and coaching visits for the Quality Management System (QMS) consultant to INSP and Ségou Hospital (continuation of activities started in FY20)		Not started	
MLI-GHS-NTW-3.2: Conduct quarterly visits to INSP and the Segou Regional Hospital Laboratory to follow up the implementation of the international		Not started	

Mali GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
QMS expert assessment recommendations (continuation of activities started in FY20)			
MLI-GHS-SURV-1: Support community-based surveillance (CBS) standardization and implementation by continuing support to districts already covered (Kadiolo, Kati, and Kangaba) and expanding to Sikasso and Kadiolo health districts, according to the national expansion plan produced with IDDS support	Benchmark 9.3	In progress	IDDS financially supported communication costs (SMS and Internet fees) for community-based surveillance actors in the health districts of Kadiolo and Kati. IDDS printed the data collection tools and handed them over to the health districts. IDDS continued monitoring the quality of the data collected from the health districts of Kadiolo and Kati. In FY 2022 Q2, IDDS will continue data monitoring and provide technical and financial support to the *Direction General de la Sante et de l'Hygiene Publique* (General Directorate of Health and Public Hygiene) to conduct the first round of biannual post-training supervision visits combined with data review in the Kadiolo health district (Sikasso region) and in the Kati and Kangaba health districts (Koulikoro region).
MLI-GHS-SURV-1.1: Support the communication costs (SMS and internet fees) of CBS actors in the health districts of Kadiolo, Kati, and Kangaba (continuation of activities started in FY21)		In progress	
MLI-GHS-SURV-1.2: Print and hand over CBS data collection tools to the health districts of Kadiolo, Kati, and Kangaba (continuation of activities started in FY21)		Completed	
MLI-GHS-SURV-1.3: Conduct semi-annual supportive supervision visits to CBS actors in the health districts of Kadiolo, Kati, and Kangaba (continuation of activities started in FY21)		Not started	
MLI-GHS-SURV-1.4: Expand CBS (introduction visit, trainings, and equipment) to two health districts of		Not started	

Mali GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
the Sikasso region (Sikasso, Kolondièba)			
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 9.3	Not started	In FY 2022 Q2, IDDS will provide technical and financial support to Ségou region to conduct the first round of biannual integrated disease surveillance and response supportive supervision visits to underperforming community health centers.
MLI-GHS-SURV-2.1: Support health districts in Ségou region to organize two rounds of quarterly IDSR supportive supervision visits to underperforming community health centers (continuation of activities started in FY20)		Not started	
MLI-GHS-SURV-3: Improve sharing of real-time monitoring information	Benchmark 9.2	In progress	IDDS provided financial, technical, and coordination support to the General Directorate of Health and Public Hygiene to produce three bulletins (September, October, and November). All the bulletins are uploaded onto the IDDS-developed surveillance website. The December bulletin will be produced in FY 2022 Q2. This bulletin cannot be processed before January 15 due to continued data entry through that date.
MLI-GHS-SURV-3.1: Provide technical assistance to the Direction Generale de la Sante et de l'Hygiene Publique (DGSHP) to develop and disseminate IDSR monthly and annual bulletins to stakeholders at central, regional, and district levels (continuation of activities started in FY20)		In progress	
MLI-GHS-SURV-3.2: Support DGSHP internet connection for surveillance document storage and data monitoring through the developed web-based online platform (continuation of activities started in FY21)		In progress	

Mali GHS

Activity	IHR benchmark	Status	Activity implementation updates
MLI-GHS-SURV-3.3: Support DGSHP to hold two online training sessions for surveillance officers in the different regional health directorates (Direction Regionale de la Santé, DRS) on the use of the web-based platform		Not started	

Senegal GHS

Activity	IHR benchmark	Status	Activity implementation updates
SEN-GHS-NTW-1: Strengthen capacity of IDDS-supported laboratories for implementation of the National Standard Operating Procedures (SoPs) for AMR Surveillance	Benchmark 3.2 Benchmark 7.2	In progress	IDDS developed a summary of all reports shared with the Directorate of Laboratories during FY 2021. This summary is meant to provide in a single document all the results of activities implemented by IDDS in FY 2021 in the seven diagnostic facilities supported in collaboration with the Directorate of Laboratories. IDDS met with the Directorate of Laboratories on December 17 to discuss the FY 2022 work plan and the selection of two additional laboratories to be supported by IDDS. The team will be following up with the Directorate of Laboratories during FY 2022 Q2 to complete the final selection and start the assessment of capacities and needs of new laboratories to conduct antimicrobial resistance surveillance.
NTW-1.1: Provide equipment, microbiology reagents, and consumables to two new diagnostic facilities in order to have adequate commodities for AST		In progress	
NTW-1.2: Provide technical assistance to two newly supported diagnostic facilities to adapt and implement the National SOPs for AMR		Not started	
NTW-1.3: Support the Directorate of Laboratories to conduct hands-on training of lab personnel on AMR detection and surveillance in two new facilities		Not started	
SEN-GHS-SURV-1: Increase the capacity of IDDS-supported sites to report high quality AMR data electronically, completely, and on time	Benchmark 9.1	In progress	IDDS followed up with the seven original IDDS-supported diagnostic laboratories on entering the antimicrobial resistance reports into DHIS2. The Tivaouane, Linguere, Guediawaye, and Kaffrine FY 2022 Q1 data reports have been completed.
SURV-1.1: Provide TA and training to the designated facilities for AMR surveillance to begin reporting AMR data electronically		In progress	
SURV-1.2: Conduct supportive supervision of IDDS-supported laboratories on DHIS2 reporting of AMR data		Not started	

Senegal GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
SEN-GHS-SURV-2: Improve the quality of surveillance data reported into DHIS2 in two new regions as well as in the previous two regions	Benchmark 9.2	In progress	IDDS completed the selection of two new regions to be supported, in addition to Saint Louis and Tambacounda: Kolda and Kédougou, with the Division of Health Information Systems of the Ministry of Health. IDDS developed terms of reference for training sessions, which were validated by the Ministry of Health health information division. The training schedule will next be validated by regional medical officers.
SURV-2.1: Organize training at the regional and district level on DHIS2 quality modules (i.e., data verification and data approval) in Tambacounda Region, St. Louis Region, and two new regions		In progress	
SURV-2.2: Support quarterly data review meetings at the regional level		Not started	
SURV-2.3: Conduct supportive supervision in the Tambacounda and St. Louis regions and in two additional regions to improve the quality of reported data in low performing health districts		Not started	

Tanzania GHS

Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-NTW-1: Support national diagnostics supply chain logistic system to ensure essential, quality-assured microbiology commodities are available at IDDS-supported AMR surveillance sites to enable uninterrupted detection of AMR	IHR benchmark 3.2	In progress	IDDS worked with the National Public Health Laboratory to finalize procurement and clearance of standard organisms (started in FY 2021); these are expected to be completed in January 2022. The standard organisms will be used by the National Public Health Laboratory to implement quality control and external quality assurance at antimicrobial resistance (AMR) surveillance sites across Tanzania.
NTW-1.1: Procure microbiology laboratory commodities, including sheep blood and standard organisms, to support uninterrupted culture and antimicrobial susceptibility testing (AST) for priority pathogens		In progress	In FY 2022 Q2, IDDS will procure other AMR laboratory commodities. These include media and supplements, biochemical identification tests and reagents, and antibiotic sensitivity discs for AMR testing at the four IDDS-supported sites: Benjamin Mkapa Hospital in Dodoma, Maweni Regional Referral Hospital (RRH) in Kigoma, Temeke RRH in Dar es Salaam, and Morogoro RRH in Morogoro.
NTW-1.2: Conduct bi-annual onsite mentorship programs with integrated supportive supervision on supply chain and inventory management for laboratory supplies required for AMR testing		Not started	IDDS anticipates starting implementation of these activities in FY 2022 Q2. The country experienced a surge of COVID-19 cases in Q1, and the project was mainly focused on implementing the COVID-19 ARP activities.
NTW-1.3: Support a workshop to review microbiology commodities, standardize according to tier, assign catalogue numbers and incorporate into the electronic Logistics Management Information System (eLMIS)		Not started	
NTW-1.4: Support annual microbiology commodity forecasting and quantification meeting. (IDDS will incorporate input from the national quantification team and laboratory		Not started	

Tanzania GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
experts from AMR surveillance sites during the quantification exercise.)			
NTW-1.5: Support annual preventive maintenance, minor repairs (as needed), and calibration of main equipment in the microbiology laboratory at the IDDS-supported sites		Not started	
NTW-1.6: Assist the NPHL to provide proficiency testing and external quality assessment materials to participating laboratories including IDDS-supported sentinel sites		In progress	
TZA-GHS-SURV-1: Enhance AST performance, AMR data collection, analysis and reporting on urine, blood and wound specimens at IDDS-supported sites	IHR benchmark 3.2	In progress	IDDS submitted the following FY 2021 deliverables to USAID Washington: • Standardized supportive supervision checklists for antibiotic susceptibility testing of wound site specimens. This tool will enable AMR surveillance supervisors to plan and conduct a coordinated supervisory activity across AMR sentinel sites electronically using the Afya SS platform in FY 2022 Q2. It is expected that the enhanced laboratory performance, quality service delivery, and use of data will lead to improved reporting across the IDDS-supported sentinel sites: Benjamin Mkapa Hospital in Dodoma, Maweni RRH in Kigoma, Temeke RRH in Dar es Salaam, and Morogoro RRH in Morogoro. • PowerPoint slide deck on pilot wound site AMR data from IDDS-supported sites, which was presented to the National AMR Surveillance and Research Technical Working Group
SURV-1.1: Conduct bi-annual onsite mentorship programs with integrated supportive supervision on clinical sample collection, handling, culture, AST, result reporting, and archiving		In progress	
SURV-1.2: Work in collaboration with stakeholders, Integrated Disease Surveillance and Response (IDSR) and AMR actors, and clinicians to develop standards/eligibility criteria/case		Not started	

Tanzania GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
definition for culture and AST in urine, blood, and wound-site specimens			• Slide deck from the IDDS-supported webinar on the National AMR Surveillance Framework, which was implemented in FY 2021
SURV-1.3: Provide logistics and financial support for one national TWG surveillance meeting and ensure visibility for the contribution of IDDS activities to national AMR data		In progress	In FY 2022 Q2, IDDS will build on the activities that led to these deliverables (e.g., supportive supervision and data review) to enhance antimicrobial susceptibility testing performance and AMR data collection, analysis, and reporting for urine, blood, and wound specimens at IDDS-supported sites.
SURV-1.4: Participate in key coordination mechanisms (e.g., WHO-IHR annual conference organized by Prime Minister's Office and the One Health coordination desk) as needed		Not started	
TZA-GHS-SURV-2: Pilot AMR surveillance at the community level	IHR benchmark 3.2	Not started	No updates.
SURV-2.1: Provide technical assistance to one or two IDDS-supported regional facilities to analyze AMR surveillance data from samples referred from peripheral facilities to track AMR at the community level		Not started	
SURV-2.2: Prepare and present AMR data to national coordination mechanisms (e.g., AMR surveillance and research technical working group, Multisectoral Coordination Committee [MCC], and others as needed)		Not started	

Tanzania GHS

Activity	IHR benchmark	Status	Activity implementation updates
TZA-GHS-SURV-3: Enhance AMR data quality for reporting and use at subnational, national, and global levels	IHR benchmark 3.2	In progress	On November 8, IDDS, in collaboration with the USAID mission, the Ministry of Health, and the USAID-funded Medicines, Technologies, and Pharmaceutical Services program, conducted a joint site visit at Kigoma Regional Hospital, which is jointly supported by IDDS (AMR surveillance) and Medicines, Technologies, and Pharmaceutical Services (antimicrobial stewardship). This visit aimed at improving AMR data sharing and use across the different interventions to enhance synergy and complement the ongoing AMR interventions, including surveillance, infection prevention and control, and antimicrobial stewardship. In December, IDDS submitted quarterly reports for FY 2021 Q1–Q3 on supportive supervision visits and data quality management at each of the four IDDS-supported sites to USAID Washington as a key deliverable.
SURV-3.1: Conduct bi-annual data quality assessment review at the four IDDS sites in collaboration with NPHL and other AMR stakeholders		In progress	
SURV-3.2: Prepare quarterly data quality reports for the four IDDS sites, based on routine AMR data that are submitted from sites to the national level		Not started	
SURV-3.3: Provide technical assistance on AMR data analysis, interpretation, management, presentation, and reporting to enable sentinel sites to develop facility-specific antibiograms for patient management		Not started	
SURV-3.4: Conduct quarterly data collection to track progress of AMR activities and facilitate quarterly reporting		Not started	
TZA-GHS-SURV-4: Support implementation of National AMR Surveillance Framework in animal health surveillance sites	IHR benchmark 3.2	In progress	IDDS initiated this activity by engaging relevant stakeholders (e.g., the Food and Agriculture Organization of the United Nations) and briefing them on the project's intention to implement the National AMR Surveillance Framework in animal health surveillance sites. The Food and Agriculture Organization of the United Nations shared the Laboratory Capacity Assessment for AMR Surveillance tool. IDDS will use this tool to conduct a laboratory assessment at one veterinary AMR surveillance site in FY 2022
SURV-4.1: Review veterinary AMR surveillance sites listed in the NASF and identify one site for IDDS to support		In progress	

Tanzania GHS

Activity	IHR benchmark	Status	Activity implementation updates
SURV-4.2: Conduct assessment at one selected veterinary AMR surveillance site to establish laboratory and surveillance capacity, equipment and supply needs, current personnel capacity, and training needs		Not started	Q2. The assessment will establish laboratory and surveillance capacity, equipment and supply needs, personnel capacity, and training needs.

Thailand GHS

Activity	IHR benchmark	Status	Activity implementation updates
THA-GHS-NTW-1: Support the Regional Public Health Laboratories (RPHL) Network	IHR benchmark 7.1	Completed	With IDDS's technical and administrative support, the 14th videoconference was conducted on October 14. Nineteen participants (five male and fourteen female) attended, including the Regional Public Health Laboratories (RPHL) Network contact persons from Brunei Darussalam, Myanmar, Singapore, the Philippines, Nepal, and Thailand, as well as RPHL laboratory experts and key development partners, including the Food and Agriculture Organization of the United Nations, the Ministry of Public Health-United States Centers for Disease Control and Prevention Collaboration, the USAID Regional Development Mission for Asia, Integrated Quality Laboratory Services, the Department of Medical Sciences (DMSc), and IDDS. Dr. Archawin Rojanawiwat, Director of the Thai National Institute of Health, delivered a technical session on "COVID-19 Laboratory Diagnosis in the Association of Southeast Asian Nations (ASEAN) Country" through a video clip (posted on www.therphl.net). IDDS finalized the inventory of laboratory experts, and the RPHL secretariat and DMSc plan to upload the list to the RPHL website. IDDS successfully transferred the support for the RPHL website to the RPHL secretariat and the DMSc team. The RPHL secretariat and the DMSc team have been updating and supporting RPHL website content since October 2021, including uploading the documents and video clips on the website. The RPHL secretariat distributed the survey questionnaire that IDDS developed in FY 2021. IDDS received feedback from 39 participants, including member and non-member representatives of the RPHL Network. IDDS prepared the summary of the survey and presented it during the RPHL annual meeting. The hybrid RPHL annual meeting was conducted on December 7–8 at Grand CenterPoint Ploenchit in Bangkok. About 148 (49 onsite and 99 virtual) (58 male and 90 female) attendees who registered through Google link attended. They included members, and non-member representatives from the Department of Disease Control, the Bureau of Laboratory Quality Standard, universities, regional medical science centers, the Emerging Infectious Diseases Clinical Center, the National Institute of
NTW-1.1: Provide technical and administrative support to the Regional Public Health Laboratory (RPHL) Network, including seconding a consultant to assist in coordination activities		Completed	
NTW-1.5: Provide technical support for implementation of the RPHL Network operational plan		Completed	
NTW-1.6: Provide support for the regular maintenance and update of content shared through the website		Completed	
NTW-1.7: Support travel of 8 representatives from RPHL Network countries to attend the Regional Specimen Referral Transportation System Workshop (this activity was delayed from PY1 work plan due to COVID-19)		Dropped	
NTW-1.8: Support travel of 8 representatives from RPHL Network countries to attend the Regional Waste Management Workshop (this activity was delayed from PY1 work plan due to COVID-19)		Dropped	
NTW-1.9: Support the RPHL Network to conduct table-top exercises among countries in the		Dropped	

Thailand GHS

Activity	IHR benchmark	Status	Activity implementation updates
region. The technical topics for the table-top exercise will be related to emergency preparedness response plans in the areas of laboratory and epidemiology. IDDS will provide technical assistance through the consultant and will provide logistical support for the meetings through the IDDS local team.			Health in Thailand and other countries, and key partners. The event's program description was also uploaded on the RPHL website and DMSc Thailand Facebook page for wider visibility. The IDDS consultant finalized the transition plan from IDDS to the DMSc and RPHL secretariat. The IDDS consultant presented the plan to the director of the Thai National Institute of Health and the DMSc team at the handover meeting held on December 20. The RPHL secretariat and the DMSc IT team began to upload the content to the RPHL website with the support from Techfive, the website developer, and IDDS. There was a transition of the director and organization staff in the DMSc, and the DMSc requested IDDS to organize a re-training session on the key functions of the RPHL website maintenance. The re-training was conducted on November 15 and December 21 to train the DMSc IT staff on uploading the documents onto the website, transferring the site to become part of the DMSc website, and creating data accessibility control.
NTW-1.11: Carry out data collection and M&E analysis, and highlight and describe the success story of the RPHL Network		Completed	
NTW-1.12: Organize consultative meeting(s)/workshop(s) to develop the RPHL transition plan after IDDS support ends in 2021		Completed	
NTW-1.13: Organize the IT training for at least 2 IT staff from the DMSc		Completed	

Uganda GHS

Activity	IHR benchmark	Status	Activity implementation updates
UGA-GHS-NTW-4: Improve quality management systems for priority zoonotic diseases in four (Gulu, Mbale, Mbarara, and Moroto) supported Regional Animal Disease Diagnostics and Epidemiology Centers (RADDECs)	Benchmark 7.1	In progress	No activities were implemented during this quarter. After receiving FY 2022 work plan approval confirmation on October 26, 2021, an exemption allowance memo/waiver was submitted to the USAID Mission in Uganda on November 16, 2021, and it was approved on December 15, 2021.
NTW-4.1: Conduct a third on-site mentorship as per the established mentorship cycle guidance in the mentorship tool kit to strengthen laboratory systems in line with ISO 17025:2017 at the four IDDS-supported RADDECs (Gulu, Mbale, Mbarara, and Moroto). The third cycle will focus on resource requirements 6.1–6.6 and a follow up on the process improvement plans from the second mentorship cycle (which was conducted in FY21)		In progress	
NTW-4.2: Hold workshops with key stakeholders to review quality management documents (e.g., relevant SOPs, Quality Manual, Laboratory Handbook and Biosafety Manual) and align content with ISO 17025:2017		Not started	
NTW-4.3: Hold a training on Biosafety and Biorisk management for national and regional laboratory staff based on the new ISO 15190:2020 and ISO 35001:2019		Not started	

Uganda GHS

Activity	IHR benchmark	Status	Activity implementation updates
NTW-4.4: Hold a training on auditing management systems based on ISO 19011:2018 for national laboratory staff		Not started	
NTW-4.5: Conduct a fourth on-site mentorship as detailed in the mentorship tool kit to strengthen laboratory systems in line with the ISO 17025:2017 at the four IDDS-supported RADDECs (Gulu, Mbale, Mbarara, and Moroto). This cycle of mentorship will focus on process requirements 7.1–7.10 and follow up on the process improvement plans from the third cycle of mentorship (conducted under NTW-4.1).		Not started	
NTW-4.6: Hold training on corrective action, preventive action (CAPA), and handling nonconformities based on ISO 17025:2017		Not started	
NTW-4.7: Train 15 to 20 participants from the national and regional laboratories in statistical process control, including uncertainty of measurement and method and equipment verification and validation		Not started	
NTW-4.8: Hold a virtual training on annual management review for the four IDDS-supported RADDEC		Not started	

Uganda GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
NTW-4.9: Support an internal audit at each of the four supported RADDECs (Gulu, Mbale, Mbarara, and Moroto) using South African National Accreditation System (SANAS) audit tools and the auditors trained under NTW-4.4		Not started	
UGA-GHS-SURV-5: Operationalize coordinated surveillance and reporting as outlined in the Uganda One Health Strategic Plan 2018 – 2022 at two selected districts	Benchmark 4.1	In progress	IDDS anticipates providing sensitization to the district leadership and officials from the animal, human, and environment sectors on the One Health integrated surveillance and reporting strategy in FY 2022 Q2.
SURV-5.1: Support the National One Health Platform (NOHP) to provide sensitization on the integrated OH surveillance and reporting, operationalizing this strategy in two locations		In progress	
UGA-GHS-SURV-6: Improve surveillance and data analysis of priority zoonotic diseases in the animal health sector at four selected district sites	Benchmark 9.3	In progress	No update.
SURV-6.1: Install the new electronic data entry and analysis database tool in selected districts and train the district staff		In progress	
SURV-6.2: Pilot new data entry and analysis database tool in four selected districts		Not started	
SURV-6.3: Review and update the electronic system based on		Not started	

Uganda GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
feedback and observations from pilot			
SURV-6.4: Support Trainer of Trainers (TOT) on data analysis and use at the national level		Not started	
SURV-6.5: Support the training of veterinary staff from the four selected districts on data analysis, routine data quality assessment, and use		Not started	
SURV-6.6: Conduct geo-spatial mapping of GHS partner support in IDDS-supported regions		Not started	
SURV-6.7: Hold first data review meetings at national level		Not started	
SURV-6.8: Hold data review meetings at four districts		Not started	

Vietnam GHS

Activity	IHR benchmark	Status	Activity implementation updates
VNM-GHS-NTW-1: Strengthen the Human Specimen Referral System (SRS)	Benchmark 7.2	In progress	IDDS completed procurement of the materials and tools necessary for piloting the human health specimen referral system (SRS). These include barcode printers, scanners, and thermometers. SRS key chain cards are in production and will be ready to use for the implementation of the SRS pilot in FY 2022 Q2. A training video clip on specimen packaging and transport was produced, and a video clip on handling of specimen spilling and leakage during transport will be finalized in early February 2022.
NTW-1.6: Develop human health SRS pilot plans in three provinces and prepare tools and materials for implementation and monitoring		Completed	
NTW-1.7: Initiate the implementation of the human health SRS pilot plans in three provinces		Completed	IDDS worked with regional public health institutes to develop or update 16 standard operating procedures (SOPs) needed for the human and animal SRS pilot. Accompanying forms for each SOP are currently under revision.
NTW-1.8: Continue implementing the pilot human SRS in the three pilot provinces (Binh Dinh, Dong Thap, and Thai Nguyen), monitor and provide technical assistance to the sites		In progress	IDDS continued discussions with courier companies, including Vietnam Post and Viettel Post, for developing specialized specimen transport services. There is no company in Vietnam currently providing the specialized service for specimen transport. IDDS collaborated with the National Institute of Hygiene and Epidemiology to develop a preliminary specimen information management system to support the implementation of the SRS pilot for the health sector in three provinces. As a follow-up to the development process, IDDS provided 4 training courses on using the system for the SRS pilot, training a total of 73 participants from human and animal health sectors. This preliminary system is currently being tested in Binh Dinh and Thai Nguyen provinces to obtain feedback in January and February 2022. After that, IDDS will revise and adjust the system to ensure that each province has the most effective tool for the SRS pilot.
NTW-1.9: Develop the advocacy roadmap with key stakeholders of the Government of Vietnam (GVN) on Social Health Insurance (SHI) coverage of specimen referral costs in the human health curative sector		Not started	
NTW-1.10: Evaluate the pilot human SRS, including technical performance measures, operational costs, and potential to reduce costs per specimen referred once scaled up		Not started	In November and December, IDDS conducted SRS meetings with participants from the Pasteur Institute of Nha Trang and the Provincial Centers for Disease Control of Binh Dinh and Thai Nguyen provinces to discuss plans for using an SRS information management system in these two provinces.
NTW-1.11: Refine the human SRS based on results from the pilot and make recommendations for scale-		Not started	IDDS's work in FY 2022 Q2 will include the following: (1) conducting similar meetings and training in Dong Thap province (same as in Binh Dinh and Thai Nguyen provinces as described above) to implement the SRS pilot, with support from the Pasteur Institute of Ho Chi Minh City; (2) finalizing a

Vietnam GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
up/application of the system to additional provinces/sites			specialized transport service contract with a selected courier company to support the SRS pilot; and (3) providing trainings on SRS SOPs for local health staff and courier staff who will be involved in the pilot.
VNM-GHS-NTW-2. Strengthen the Animal SRS	Benchmark 7.2	In progress	Updates for NTW-2 (animal health sector) are similar to those for activity NTW-1 provided above (human health sector) because the SRS pilots in the human health and animal health sectors are analogous (i.e., similar activities are conducted in each sector, but separate and independent SRSs are being set up because the stakeholders and managing agencies are different). The only notable difference is that the key stakeholders in the animal health sector are provincial Sub-Departments of Animal Health (SDAHs) and Regional Animal Health Offices (RAHOs).
NTW-2.5: Develop the animal health SRS pilot plans in three provinces and prepare tools and materials for implementation and monitoring		Completed	
NTW-2.6: Initiate the implementation of the animal health SRS pilot plans in three provinces		Completed	
NTW-2.7: Continue implementing the pilot animal SRS in the three pilot provinces (Binh Dinh, Dong Thap, and Thai Nguyen), monitor, and provide technical assistance to the sites		In progress	
NTW-2.8: Evaluate the pilot animal SRS on various aspects, including technical performance measures, operation costs, and potential to reduce costs per specimen referred once scaled up		Not started	
NTW-2.9: Refine the animal SRS based on results from the pilot and make recommendations for scale-up/application of the system to additional provinces/sites		Not started	

Vietnam GHS

Activity	IHR benchmark	Status	Activity implementation updates
VNM-GHS-SURV-1: Increase use of Vietnam Animal Health Information System (VAHIS)	Benchmark 9.2	In progress	In November, IDDS collaborated with RAHOs to organize five virtual bimonthly meetings with SDAHs of pilot provinces (Thai Nguyen, Binh Dinh, Khanh Hoa, Can Tho, and Dong Thap) to operationalize the pilot Vietnam Animal Health Information System (VAHIS) use enhancement plan. During these meetings, participants reviewed VAHIS reporting by SDAH staff and discussed challenges and solutions. IDDS provided technical support to correct the errors of SDAH staff on VAHIS data entry and export. In the bimonthly meetings, participants also discussed a general plan to extend VAHIS use to the district level. In addition, IDDS worked closely with Department of Animal Health, RAHOs, provincial SDAHs, and the Food and Agriculture Organization of the United Nations to improve VAHIS, based on feedback obtained from provincial SDAH users. IDDS collaborated with the Department of Animal Health to organize an online training course on the use of the upgraded version of VAHIS on November 18. Seven RAHO surveillance and data management staff and 20 SDAH surveillance and data management staff attended the training. Through the training, VAHIS users at regional and provincial levels gained proficiency in data entry and export from VAHIS. Based on results of this training course, RAHOs extended this virtual training to other provinces in their respective regions in December. At the end of December, IDDS organized three VAHIS data quarterly review meetings with focal points at provincial, regional, and central levels. In the meetings, participants reviewed the animal disease data reported to VAHIS; timeliness, completeness, and accuracy of the data; and discussed improvement solutions. The meetings were organized for project provinces in each region with the participation of representatives from other RAHOs to share experiences and exchange lessons learned between regions. IDDS's work in FY 2022 Q2 will include the following (1) supporting provincial and regional animal health agencies to improve VAHIS reporting timeliness, completeness, and accuracy; and (2) supporting the operationalization of the pilot VAHIS use enhancement plan in the five pilot provinces.
SURV-1.7: Operationalize the pilot VAHIS use enhancement plan developed in FY21 in the five provinces (Binh Dinh, Can Tho, Dong Thap, Khanh Hoa, and Thai Nguyen)		In progress	
SURV-1.8: Assist RAHOs and provincial SDAHs to conduct quarterly data reviews and propose solutions to improve VAHIS reporting timeliness, completeness, and accuracy		In progress	
SURV-1.9: Evaluate and refine the model for strengthening VAHIS use at regional, provincial, and lower levels		Not started	

Vietnam GHS			
Activity	**IHR benchmark**	**Status**	**Activity implementation updates**
VNM-GHS-SURV 3: Support event-based surveillance (EBS) using One-Health approaches	Benchmark 4.1	In progress	IDDS continued to provide virtual support and coaching to provincial and district surveillance staff on recording and classifications of event-based surveillance (EBS) signals to improve accuracy and coverage of EBS reporting. Quarterly data review meetings for Q1 were delayed due to the COVID-19 pandemic and have been rescheduled to late January 2022. In FY 2022 Q2, IDDS will continue to provide virtual support and coaching to provincial and district surveillance staff on recording and classifications of EBS signals. IDDS will also organize quarterly data review meetings with Dong Thap and Thai Nguyen provinces in late January Evaluation and refinement of the IDDS-supported EBS approach is planned to start in FY 2022 Q3.
SURV-3.6: Monitor and provide technical assistance to the two existing pilot provinces (Dong Thap and Thai Nguyen), including online support/coaching and on-site supportive supervision.		In progress	
SURV-3.7: Coordinate with relevant human and animal health agencies to conduct quarterly data reviews		In progress	
SURV-3.8: Evaluate and refine the approach and materials and develop a transition plan to phase out this activity		Not started	

Tuberculosis Activity Implementation Progress

Core TB		
Activity	**Status**	**Activity implementation updates**
CTB-NTW-1: TB-NET tool Revisions and Translation		The TB-NET tool has been updated to Airtable, a cloud-based database platform, instead of separate Excel sheets. This system will preserve data quality and allow IDDS to add new questions without losing the integrity of past questions, while ensuring version control. In addition, the Airtable database will feed into the existing mobile app for the TB Diagnostic Network Assessment (DNA) with the most updated questions. IDDS adapted the TB-NET tool and developed a checklist to assess the capacity and availability of testing for drug-resistant (DR)-TB and drug susceptibility. The current checklists focus on bacteriological confirmation and rapid molecular diagnostics. Assessing DR-TB capacity will expand the application of the DNA and incorporate more of the network into the assessment. The checklist was sent to USAID for review in December. The checklist will be piloted in Ethiopia in February 2022.
NTW-1.1: Adapt existing training materials to account for remote application and verification visits	Completed	
NTW-1.2: Develop quality control component for Remote TB DNA	Not started	
NTW-1.3: Update the TB Net Tool to incorporate pediatric specific checklist	Completed	
NTW-1.4: Adapt TB Net Tool to include more information on DR-TB	In progress	
NTW-1.5: Implement an electronic version of the TB NET Tool	Completed	
CTB-NTW-2: Conduct the TB DNA		IDDS presented two laboratory diagnostic network spatial analyses to the national TB programs and other stakeholders for Kenya on November 2 and for the Democratic Republic of Congo (DRC) on November 24. Another laboratory diagnostic network spatial analysis was presented to USAID Washington and to the Mission in Zambia on December 21. IDDS will present final results to the National TB Program (NTP) and other stakeholders in FY 2022 Q2. The spatial analysis results for Kenya and DRC have been used by the respective NTPs to inform placements of the Truenat rapid molecular testing instruments.
NTW-2.1: Conduct laboratory diagnostic network analyses in USAID Priority Countries	In progress	
NTW-2.2: Expand the LNA tool to incorporate second-line DST	Not started	

Core TB		
Activity	**Status**	**Activity implementation updates**
NTW-2.3: Expand, update, and verify the roster of consultants able to implement DNAs	In progress	IDDS started data collection activities for Ethiopia and Malawi. The IDDS team has requested master facility lists for health centers, GeneXpert inventories, and routine TB programmatic data on diagnostic testing and results.
NTW-2.4: Conduct DNAs	In progress	In FY 2022 Q2, IDDS will develop questions and strategies and identify data sources to expand the Laboratory Network Analysis to include second-line drug susceptibility testing (DST).
NTW-2.5: Track status of laboratory network analyses and DNAs for all USAID priority countries	In progress	IDDS supported planning for the TB-DNA in Ethiopia scheduled for February 2022. IDDS provided technical guidance to the country team and participated in weekly planning meetings.
CTB-NTW-3: TB Diagnostic New Tools Implementation		IDDS and the Stop TB Partnership completed delivery of Truenat instruments to Zimbabwe and Nigeria. A total of 20 Truenat Duo instruments were delivered to Zimbabwe, and 38 were delivered to Nigeria. In addition, IDDS financed and facilitated centralized Truenat training for 22 participants in Zimbabwe (15 men and 7 women) and 39 (28 men and 11 women) in Nigeria. Participants included lab managers, NTP representatives, and other decision makers involved with modifying the TB diagnostic algorithm and operational planning moving forward.
NTW-3.1: Develop curriculum and training materials for Truenat introduction	In progress	
NTW-3.2: Introduce Truenat in iNTP and non-iNTP countries	In progress	IDDS supported ultra-portable X-ray/computer-aided detection (CAD) device procurement for increased access to digital X-ray to diagnose TB in rural settings in which access has been limited. IDDS also supported a centralized training of trainers on the use of ultra-portable X-ray/CAD in Nigeria in November, which included 37 radiographers and technical staff, in partnership with the Stop TB Partnership, Institute of Human Virology, Nigeria (IHVN), and Koninklijke Nederlandse Chemische Vereniging (KNCV).
NTW-3.3: Introduce / Scale-up diagnostic connectivity solutions	In progress	
		IDDS collaborated with the Stop TB Partnership for revision and translation of training modules and facilitator guides for X-ray/CAD and Truenat implementation. In addition, IDDS helped adapt the training materials for the Zimbabwe and Nigeria context.
		IDDS added external quality assessment (EQA), warranty information, and biosafety training slides to further improve the Truenat implementation training modules.

Core TB		
Activity	**Status**	**Activity implementation updates**
		IDDS contracted with SmartSpot, a long-established *Mycobacterium tuberculosis* EQA provider in Africa, to provide validated dry culture spot panels for Truenat sites. A total of 263 sites in 8 countries (Bangladesh, Cambodia, DRC, Kenya, the Philippines, Uganda, Vietnam, and Zimbabwe) will receive 3 cycles of EQA in FY 2022. These panels will provide an early assessment of the effectiveness of the implementation and identify weaknesses in the test system, which will help direct additional technical support resources to low-scoring sites.
CTB-NTW-4: Introduce Stool-Based Diagnosis Using WRDs for Children		IDDS is collaborating with the KNCV Tuberculosis Foundation to provide training to countries that are implementing stool-based GeneXpert testing for detection of pediatric TB using the simple one-step method. IDDS signed an agreement with KNCV to offer training in Bangladesh, Burma, DRC, Malawi, Ukraine, and Vietnam. The first of these trainings is expected to take place in DRC in FY 2022 Q2.

In DRC, IDDS shared the protocol for implementing the simple one-step stool method with national stakeholders and experts before submission to the ethics committee. IDDS translated the protocol into French to facilitate review and localization by the NTRL. Also, in collaboration with the NTP, IDDS drafted implementation timelines and training plans. In FY 2022 Q2, IDDS will train 12 laboratory technicians from 7 GeneXpert sites in Kinshasa. The trained technicians will conduct stool testing for children with presumptive TB at the respective sites. |
NTW-4.1: Build IDDS capacity to support pediatric TB detection	In progress	
NTW-4.2: Expand access and use of simple-one step specimen processing protocol	In progress	
NTW-4.3: Expand use of community and home-based stool specimen collection	Not started	
CTB-NTW-5: Mono-Isoniazid and Second-line Drug Resistance Testing Strengthened in USAID Priority Countries	In progress	IDDS received contingent approval for the DR-TB Addendum Work Plan in December. DR-TB activities will target six countries: Cambodia, Malawi, Mozambique, Pakistan, Uganda, and Ukraine.

IDDS hired and on-boarded two DR TB advisors for Asia and Africa to support DR-TB activities in the six selected countries. |
| NTW-5.0: Preparation and Management of DST | In progress | |
| NTW-5.1: Increased number of patients with confirmed rifampicin | In progress | |

Core TB		
Activity	**Status**	**Activity implementation updates**
resistance receiving fluoroquinolone resistance testing		
NTW-5.2: Increased number of patients with drug susceptibility testing for isoniazid	In progress	
NTW-5.3: Increased capacity for susceptibility testing for new and repurposed drugs	In progress	
NTW-5.4: Health care providers follow DST algorithms reflective of WHO guidance	In progress	
NTW-5.5: DST quality and timeliness improved	In progress	
NTW-5.6: Evaluations and Recommendations	In progress	
CTB-NTW-6: Share Relevant Information to a Wide-ranging Audience	In progress	Four IDDS country teams from India, Bangladesh, Vietnam, and Zimbabwe presented five posters at the 52nd Annual Union World Conference on Lung Health held in October. Poster titles included: "*Expenditure incurred by households for TB diagnostic services during hospitalisation in India,*" "*Impact of the Covid-19 pandemic on TB notification rates in high-burden states in India,*" "*Impact of the Covid-19 pandemic on TB case detection using GeneXpert, Dhaka, Bangladesh,*" "*Childhood TB case detection by culturing samples submitted for Xpert testing at the National TB Reference Laboratory Zimbabwe, January 2018–December 2020,*" and "*Community-based stool specimen collection, storage and transport to improve TB diagnosis in children.*"
NTW-6.1: Document best practices, guidance, and models	In progress	
		IDDS organized a satellite session at the 52nd Annual Union World Conference on Lung Health, entitled "Infectious Diseases Detection and Surveillance (USAID-IDDS) resilience

Core TB		
Activity	**Status**	**Activity implementation updates**
		strategies to mitigate Covid-19," with participation by IDDS teams from Bangladesh, India, Tanzania, and Zimbabwe. In December, IDDS participated in an episode of the TB People (of the Philippines) Internet radio program. IDDS presented on DR-TB and the potential of the Truenat instruments for TB testing in the Philippines and highlighted the role of IDDS in the Introducing New Tools Project. As of December, 10 TB research protocols were under development in 6 of 8 IDDS TB countries. India had two protocols cleared by the ICF Institutional Review Board (Truprep DNA pilot and root cause analysis of indeterminate/invalid Truenat results), and Zimbabwe had one protocol cleared (Analysis of Truenat ultra trace calls). The ethical review of these protocols at the country level is underway. In addition, IDDS initiated a study (Bacc-study) to investigate the root causes of the stagnation of the detection of bacteriologically confirmed TB cases and the impact of systematic use of rapid diagnostic tests on this indicator. The concept note for this research was finalized, and the study is anticipated to be implemented in five countries (DRC, Tanzania, Zimbabwe, India, and Vietnam). In FY 2022 Q2, IDDS will engage with targeted countries for buy-in. Thereafter, the concept will be developed into a full research protocol, submitted to respective Institutional Review Boards. Data collection is expected to start in Q3.
NTW-6.2: Convene a TB technical working group across the project and the consortium	In progress	IDDS formed a subject matter expert (SME) working group with consortium partners and NTPs to develop Country Action Plans (CAP) for NTW 5 to guide activities and strengthen TB drug susceptibility testing (DST) in the six countries. The working group met several times to review country context for expanded DST and offer cross-cutting expertise for CAP development for all countries. The six CAPs will be completed in FY22 Q2.

Bangladesh TB		
Activity	**Status**	**Activity implementation updates**
BGD-TB-NTW-1: A comprehensive TB diagnostic network with strong underlying health systems	In progress	The TB Diagnostic Network Assessment was postponed because the National Tuberculosis Program (NTP) is prioritizing the COVID-19 response until the pandemic situation improves.
NTW-1.1: Continue to support the NTRL and NTP to finalize and operationalize a functional national TB laboratory network, regional and peripheral TB (GX) laboratory facilities according to the developed Terms of Reference (TORs)	In progress	IDDS addressed comments from the Global Fund on the draft TB Laboratory Strategic Plan (LSP) and resubmitted the LSP to the NTP. Per the NTP's request, IDDS will organize a two-day costing workshop for LSP implementation, to take place in January 2022. IDDS submitted the revised algorithm for GeneXpert as an initial test for TB to the NTP, and the NTP incorporated the algorithm into the National Guidelines and Operational Manual for TB.
NTW-1.2: Support the further review, update, and correct use of the diagnostic algorithm to improve accurate and timely bacteriological confirmation and reporting of TB	Completed	IDDS conducted onsite training on preventive maintenance of TB equipment for Shyamoli TB Hospital on December 12–13 and for the Rajshahi Regional TB Reference Laboratory (RTRL) on December 29–30. A total of 19 laboratory staff (9 from Shyamoli Hospital and 10 from Rajshahi RTRL, and 3 of whom were female) participated in the training. In FY 2022 Q2 a similar training will be held at the Chattogram RTRL.
NTW-1.3: Enable functional TB diagnostic equipment	In progress	
BGD-TB-NTW-2: Strengthened capacity of the national, regional, and peripheral GeneXpert (GX) TB laboratories	In progress	IDDS organized a National TB Laboratory Working Group meeting with the NTP on December 22, discussed activities planned for strengthening the laboratory network, and rescheduled implementation of activities as per Laboratory Working Group recommendations.
NTW-2.1: Enhance NTRL capacity to serve as the lead institution of the TB diagnostic network	In progress	IDDS organized a 3-day line probe assay (LPA) training at the Shyamoli TB Hospital RTRL from October 4 to 6, for 13 microbiologists (7 female) from the National TB Reference Laboratory (NTRL) and 5 RTRLs. Also at the Shyamoli TB Hospital RTRL,
NTW-2.2: Continue to strengthen the Sylhet and Rajshahi RTRLs and the Shyamoli TB Hospital and expand support to the Khulna and Chattogram RTRLs to expand TB diagnostic services at those facilities	In progress	IDDS organized a two-day training in November on processing and testing specimens for extrapulmonary tuberculosis (EPTB) and childhood TB for seven microbiologists and eight medical technologists (6 female) from the NTRL and the Shyamoli TB Hospital RTRL. IDDS selected an engineer for assistance in specifications development and monitoring of refurbishment work planned for Sylhet, Rajshahi, Chattogram, and

Bangladesh TB

Activity	Status	Activity implementation updates
NTW-2.3: Propose and get buy-in to transition the NTRL testing activities to a more suitable space	In progress	other laboratories at the district level as selected in discussion with the NTP. The agreement with the engineer is expected to be signed by the first week of January 2022.
NTW-2.4: Develop an e-learning platform for TB laboratory capacity building	In progress	IDDS completed evaluation of quotations for the procurement of falcon tubes, refurbishment of the Sylhet RTRL training room and external quality assurance (EQA) room, and local procurement of laboratory equipment and consumables for Shyamoli and Rajshahi RTRLs. In FY 2022 Q2, IDDS will complete procurement of falcon tubes and refurbishment works for Sylhet RTRL. IDDS will also develop specifications and selection of bidders to complete refurbishment of Shyamoli and Rajshahi RTRL.
NTW-2.5: Strengthen laboratory capacity for testing Extra-pulmonary TB (EPTB) and childhood TB at Rajshahi, Sylhet, Khulna, Chattogram RTRLs, Shyamoli TB Hospital, and Rangpur (selected laboratory)	In progress	
NTW-2.6: Strengthen and expand the specimen referral network for increased access to culture/DST and LPA	In progress	IDDS provided technical assistance to start the process of partial transition of the LPA and liquid culture testing from the NTRL to the Shyamoli RTRL for multidrug-resistant TB patients being treated at the Shyamoli TB Hospital. This transition would require no referral of specimens or patients to the NTRL for testing. IDDS also provided technical support that enabled the newly established Rajshahi RTRL to perform LPA and liquid culture testing for all patients from Rajshahi and Rangpur divisions, which contributed to the elimination of referral needs for these tests. IDDS developed standard operating procedures (SOPs) for EPTB and LPA and training materials on EPTB and stool processing, which are currently in the internal review process. IDDS developed a report with an analysis of LPA test results for Sylhet RTRL and circulated it with IDDS experts for review and feedback. Development of the quality management system (QMS) training materials by IDDS is in progress. In FY2022 Q2, IDDS will conduct QMS training at two laboratories to be identified in discussion with NTP. IDDS revised training materials for biosafety and biosecurity, which will be offered as an online course. Training materials are currently being reviewed internally. A web outline for the training course has been developed. In FY22 Q2, IDDS will hire a local IT company to complete development of Software Requirement Specifications

Bangladesh TB		
Activity	**Status**	**Activity implementation updates**
		and host the online biosafety and biosecurity training for laboratory staff through NTP's website. IDDS has completed procurement of ph meters, sterile surgical blades, forceps, and petri dish, chlorine tablets, and supplied these materials to NTP to support specimen processing of Extra-pulmonary TB specimens. IDDS and NTP staff jointly visited a laboratory in Mymensingh on November 16-17 to assess the facility condition for upgrading it to Biosafety Level-2+. Findings from this assessment have been shared with NTP and the Damien Foundation to plan renovation works for upgrading the facility. IDDS' M&E Specialist along with the NTP M&E expert and Training Coordinator conducted a joint visit to three sub-district hospitals and TB laboratories on December 27-28, to monitor and supervise TB data collection and reporting.
BGD-TB-NTW-3: Functional network of TB laboratories using molecular techniques is established	In progress	IDDS submitted the GeneXpert Assessment Report and Database for Khulna and Chattogram divisions to USAID. IDDS is reviewing paperwork for a subcontracting arrangement with two local nongovernmental associations (NGOs)—the Bangladesh Rural Advancement Committee and the Damien Foundation, which maintain a large network of GeneXpert laboratories, to improve the functionality and use of GeneXpert. These two NGOs will be IDDS' implementing partners in this activity to provide technical assistance to laboratories on GeneXpert IDDS proposed to the NTP to replicate the GeneXpert EQA model that was implemented in Vietnam. The NTP has not yet confirmed its decision to go with this EQA model.
NTW-3.1: Implement a package of comprehensive and linked interventions enabling functional GX sites at the national and subnational levels and connecting the sites with regional reference laboratories	In progress	
NTW-3.2: Continue to support improving access and utilization of GX	In progress	

Bangladesh TB

Activity	Status	Activity implementation updates
NTW-3.3: Develop an External Quality Assurance (EQA) program for rapid diagnostic tests	In progress	IDDS Diagnostic Specialists placed at the Sylhet RTRL conducted two joint visits with NTP staff on November 11 and December 27 to monitor performance of GeneXpert in four sites.
NTW-3.4: Support installation and functioning of GX for bidirectional testing of TB and COVID-19 among TB presumptive cases and patients	Not started	IDDS's work in FY 2022 Q2 will include the following: (1) finalizing the subcontract arrangements with the Bangladesh Rural Advancement Committee and the Damien Foundation, (2) providing technical assistance for the training of medical technologists on GeneXpert operation and maintenance, and (3) organizing a meeting with the Bangladesh NTP and the Vietnam NTP to discuss EQA technical and implementation modalities.
BGD-TB-NTW-4: Piloting of new technologies and tools to improve TB diagnosis	In progress	IDDS finalized the Truenat implementation plan. IDDS also updated and shared the Truenat SOP with the NTP for feedback. IDDS also completed adaptation of Truenat training materials. In addition, IDDS developed the relevant tools for recording and reporting Truenat data and several job aids.
NTW-4.1 Pilot Truenat, a new diagnostic tool, to improve access for rapid detection of TB and rifampicin-resistant TB	In progress	IDDS's work in FY 2022 Q2 will include the following: (1) organizing a workshop with the NTP and partners to finalize the Truenat training materials and SOP; (2) updating the GX/XDR implementation plan; (3) organizing a training of trainers for
NTW-4.2: Pilot of Xpert/MTB/XDR to assess its operation and efficiency for detection of 1st and 2nd line resistance	In progress	Truenat in collaboration with the NTP, NGO partners, and the local agent of the Truenat manufacturer (Molbio); (4) organizing basic training on Truenat for the medical technologists who will be responsible for Truenat implementation and testing, in collaboration with the NTP and NGO partners; and (5) coordinating with FHI 360 HQ on the procurement of four GX/XDR equipment and cartridges through core TB funds.

Burma TB		
Activity	**Status**	**Activity implementation updates**
BMA-TB-NTW-1 Strengthen the TB diagnostic network framework and systems	In progress	IDDS collaborated with stakeholders, USAID, the World Health Organization, and the Global Fund in the TB Diagnostic Network Assessment process. IDDS and the TB Diagnostic Network Assessment consultants finished cleaning the data collected in previous quarters and initiated the spatial analysis. They also conducted a discussion session with USAID using the outputs of the preliminary spatial analysis to give USAID a better understanding of the available data and expected results.
NTW-1.2: Conduct a comprehensive TB diagnostic network assessment (DNA) and spatial analysis on the distribution and functionality of TB diagnostic.	In progress	In FY 2022 Q2, IDDS will conduct a scenario analysis to identify potential GeneXpert expansion sites in which new GeneXpert machines should be installed for better diagnostic network and coverage accessibility. IDDS will share and discuss the results with more partners to synthesize meaningful recommendations for priority diagnostic network expansion.
NTW-1.3: Introduce a simplified laboratory information management system (LIMS) to strengthen the electronic results reporting	Not started	IDDS drafted the costed plan with a scope and design for an electronic laboratory information management system (LIMS) which is suitable to deploy at the National TB Reference Laboratory (NTRL) and two other biosafety level 3 laboratories. The electronic LIMS is intended to improve access to diagnostic testing and accurate, timely information for patient care, public health planning, and policy decisions. In FY 2022 Q2, after the coordination consultant is recruited, IDDS will finalize the costed plan and continue providing technical assistance to develop the LIMS system.
BMA-TB-NTW-2 Increase access to quality TB diagnostic services	In progress	IDDS submitted an updated TB diagnosis algorithm for drug-resistant (DR) TB to include in the national DR-TB management guidelines as a FY 2021 key deliverable to USAID in October. This new algorithm will ensure accessibility to molecular World Health Organization-recommended diagnostics in line with international standards.
NTW-2.1: Support implementation of updated TB diagnostic algorithms	In progress	
NTW-2.2: Strengthen the TB specimen referral and transport system in the private and the public sector	In progress	IDDS reviewed and revised the laboratory request form for extensively drug-resistant (XDR) TB testing to ensure linkage of diagnosis services in the LIMS. Due to a disrupted coordinating mechanism at the National TB Program, IDDS could not continue to provide technical assistance in strengthening the Xpert *Mycobacterium tuberculosis* (MTB)/XDR diagnosis capacity and follow-up technical support for implementing the updated DR-TB diagnosis algorithm in Burma. In FY 2022 Q2, IDDS will seek opportunities to provide technical assistance through the newly recruited coordination consultant.
NTW-2.3: Increase access to quality CXR	In progress	

Burma TB		
Activity	**Status**	**Activity implementation updates**
NTW-2.4: - Strengthen the access to GX as an initial diagnostic test for TB	In progress	IDDS explored further collaborations with the non-profit and profit private sector to roll out an innovative approach by developing a mobile application and a web-based system for strengthening the specimen transport and referral system (SRS) in the community. The mobile application will provide patients with better and equitable access to sputum microscopy by enabling them to access specimen transportation services through social media or a hotline or web application through their mobile phone. This initiative will complement the existing sputum transport system to overcome the physical and social barriers posed by security concerns during COVID-19 pandemic and political crisis.
NTW-2.6: Pilot use of stool specimens for TB diagnosis in children using GX Ultra	Not started	
NTW-2.7: Pilot Truenat to expand access to rapid TB diagnostics	In progress	
NTW-2.8: Increase continuous medical education opportunities for TB diagnostic professionals	In progress	In FY 2022 Q2, IDDS will recruit an information technology consultant, who will design the software architecture of the SRS mobile application and web-based system. IDDS will also focus on collaboration with more implementing partners to increase the use of this innovative SRS initiative. The SRS system is expected to be launched in FY 2022 Q3. IDDS developed the draft implementation plan for the SRS application to identify patient pathways and technology integration to the existing sputum referral system. IDDS continued collaboration with the USAID-funded Local Action To TB-free Myanmar project to define pilot areas and implementation strategies. IDDS conducted two virtual sessions of the "TB Chest X-ray (CXR) Taking Procedures Training" for 39 participants (10 female) from nongovernmental organizations, international nongovernmental organizations, and private hospitals, including X-ray technicians and medical doctors, during October and November. IDDS submitted the training report with comprehensive findings and recommendations as a deliverable. IDDS prepared videos for chest X-ray taking procedures as training materials. In FY 2022 Q2, these videos will be released after final review. To improve access to GeneXpert diagnosis in the private sector, IDDS started the procurement process for GeneXpert machines and Xpert MTB/rifampicin cartridges. In FY 2022 Q2, IDDS will hold a consultative meeting with nongovernmental organization laboratory supervisors and assess the performance of international nongovernmental organization GeneXpert sites through the collection of performance indicators. Based on the results and recommendations, IDDS will conduct refresher trainings as necessary. IDDS collected global and local TB diagnostic guidelines, standard operating procedures (SOPs), and training materials (e.g., video clips) to include as technical content in an e-learning platform that will serve as a technical guidance tool to ensure quality diagnostic services.

Burma TB		
Activity	**Status**	**Activity implementation updates**
		In FY 2022 Q2, IDDS will hold a consultative meeting with the World Health Organization to discuss learning strategies. After identifying approaches and content, IDDS will work with an information technology company on the development of an e-learning platform.
BMA-TB-NTW-3 Improve TB and MDR-TB case detection at TB diagnostic facilities	In progress	IDDS reviewed the "SOP on the preparation of first- and second-line drugs stock solutions" and identified the areas to update. In FY 2022 Q2, if coordination with NTRL can be resumed, IDDS will ask the NTRL to update the SOP.
NTW-3.1: Build diagnostic capacity of technical staff to perform quality-assured culture, genotypic and phenotypic drug-susceptibility testing (DST), including line probe assay (LPA)	In progress	The NTRL requested IDDS to revise the "SOP for second-line DST with automated BACTEC Mycobacteria Growth Indicator Tube (MGIT) 960 culture system" to include two new drugs (delaminid and pretomanid). The revisions were completed in November. With the objective to assess performance characteristics of Xpert MTB/XDR assay for second-line drug resistance detection, IDDS developed the "SOP for laboratory validation of Xpert MTB/XDR assay for detection of TB second-line drug resistance" in November.
NTW-3.2: Strengthen TB laboratory infection control at national and sub-national levels in public and private sectors	In progress	IDDS submitted the infection control chapter for subnational facilities in the national guideline on infection control as a FY 2021 key deliverable in October. This new chapter provides guidance to TB laboratory staff and managers working in public health laboratories, TB hospitals, and private clinics. It will serve as a technical guidance document, as part of the comprehensive manual on TB infection control. IDDS prepared the assessment tool (minimal checklist for external assessment visit) for TB laboratory biosafety measures for each tiered level adapted to the local situation, which is under review. In FY 2022 Q2, this assessment tool will be launched. IDDS initiated the preparation of training materials, including training videos, for the TB laboratory biosafety and biosecurity training, which will be held in February 2022.

Cambodia TB

Activity	Status	Activity implementation updates
KHM-TB-NTW-1: Implementation of diagnostic connectivity solution in COMMIT and Global Fund-supported sites	In progress	IDDS worked with Savics, the National Center for Tuberculosis and Leprosy Control (CENAT), and Community Mobilization Initiatives to End Tuberculosis (COMMIT) to develop the DataToCare (DTC) training and installation plan, expected to take place in February 2022. In FY 2022 Q2, IDDS will support travel to Cambodia for one Savics technical consultant to conduct training and install DTC in person across the 10 COMMIT-supported operational districts (ODs). IDDS worked with CENAT to issue an announcement letter in the 10 COMMIT-supported sites for DTC training and installation. In collaboration with Savics, CENAT, and COMMIT, IDDS developed the Connectivity Detailed Implementation Plan for the DTC connectivity solution in the 10 COMMIT-supported sites.
NTW-1.1: Support the establishment of connected GX instruments in COMMIT project ODs and scale-up diagnostic connectivity to the GX instruments in selected Global Fund-supported ODs	In progress	
NTW-1.2: Build the capacity of CENAT and local OD staff to implement and manage the connectivity solution, analyze data, and recommend corrective actions	Not started	In FY 2022 Q2, IDDS will provide technical support to operationalize DTC including setting up a server, finalizing an interactive dashboard, installing DTC for GX instruments in the COMMIT ODs, and supporting CENAT staff to extract, analyze, and use DTC data. IDDS will also test the feasibility of DTC integration and interoperability with the TB-management information system (MIS) in selected sites, and work toward the connectivity of Truenat instruments.
NTW-1.3: Expand data connectivity to Truenat instruments and TB-MIS	Not started	
KHM-TB-NTW-2: Pilot Truenat and 10 color GX to expand access to rapid TB and DR-TB diagnostics	In progress	IDDS submitted the Truenat pilot protocol to the National Ethics Committee for Health Research for clearance. IDDS worked with the Stop TB Partnership, Molbio, CENAT, and stakeholders to develop a detailed plan for Truenat installation and training, which will be held on February 14–24, 2022. Truenat delivery was delayed, but the Stop TB Partnership confirmed with IDDS that the Truenat instruments will arrive in Cambodia by mid-January 2022. IDDS worked with CENAT to localize all Truenat training modules and materials. Training modules are currently being translated into Khmer. In FY 2022 Q2, IDDS will provide technical assistance to CENAT, COMMIT, and OD staff to implement the Truenat pilot and collect and analyze data to evaluate the impact on TB case finding. In conjunction with COMMIT, IDDS will monitor implementation of the pilot and assess the competency of CENAT, COMMIT, and local TB program staff to perform Truenat tests and
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	
NTW-2.2: CENAT and OD staff capable of conducting Truenat testing and pilot completed.	Not started	
NTW-2.3: Introduce GX with 10 color system	Not started	

Cambodia TB

Activity	Status	Activity implementation updates
NTW-2.4: Perform a spatial analysis of the rapid molecular diagnostic (RMD) network to inform the placement of new TB WHO Recommended Diagnostics (WRD) for future expansion of molecular diagnostics	Not started	provide mentorship; IDDS will also select the sites for the GX 10-color system by conducting a spatial analysis and defining site selection criteria.
KHM-TB-NTW-3: Improve the CXR reading and Telegram platform for interpretation of CXR	In progress	IDDS conducted a debriefing with CENAT and stakeholders about the chest x-ray (CXR) Telegram platform assessment report, standard terms of reference (TOR) for the Telegram platform, and its detailed Implementation Plan to operationalize the TOR, including recommendations to improve the quality of CXR reading. The report and TOR were shared with CENAT and stakeholders. CENAT agreed on the findings and is committed to work with IDDS to improve the CXR Telegram platform, with a particular focus on developing an action plan to outline improvements to the CXR Telegram platform. IDDS's work in FY 2022 Q2 will include the following: (1) developing standardized reporting formats for experts to advise on CXR in a consistent manner and assist the decision making on CXR reading and interpretation; (2) developing and adapting training materials and job aids for Telegram; (3) procuring a suitable artificial intelligence (AI) software based upon the IDDS experience in other countries; and (4) developing a detailed implementation plan for AI feasibility study.
NTW-3.1: Improve a platform (Telegram) for interpretation of CXR	In progress	
NTW-3.2: Develop and disseminate training materials for the use of the platform for CXR interpretation	Not started	
NTW-3.3: Develop an online training module and provide training on the correct reading and interpretation of CXR	Not started	
NTW-3.4: Test the feasibility of artificial intelligence (AI)-enabled CXR reading for TB screening at the peripheral sites and for EQA of CXR in selected ODs	Not started	
KHM-TB-NTW-4: Provide technical support to improve bi-directional screening for TB-Diabetes Mellitus (DM) comorbidity	In progress	In collaboration with COMMIT, IDDS finalized the situational analysis report of the TB-diabetes mellitus (DM) assessment in five COMMIT ODs. IDDS developed the standard TOR for the TB-DM technical working group, which has been approved by CENAT. IDDS's work in FY 2022 Q2 will include the following: (1) disseminating the situational analysis report outlining recommendations to enhance implementation of the bidirectional screening in
NTW-4.1: Support COMMIT for the implementation and expanding	Not started	

Cambodia TB		
Activity	**Status**	**Activity implementation updates**
bi-directional TB-DM in 10 COMMIT supported ODs		ODs and presenting the report to the TB-DM technical working group for consideration and to the CENAT director for approval; (2) collecting additional data (if required) to develop a manuscript using the TB-DM report and publishing the results; and (3) preparing documents for local and HQ institutional review board approval of the manuscript, if required.
KHM-TB-NTW-5: Implementation of stool GX testing for improving pediatric TB diagnosis	Not started	The FY 2022 work plan was approved with contingency on January 5. IDDS will start activities under NTW-5 in Q2.
NTW-5.1: Implement stool specimen testing with GX ultra for pediatric TB diagnosis	Not started	

India TB		
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 NTEP	In progress	IDDS, in collaboration with the NRL National Institute for Research in Tuberculosis (NIRT) Chennai, conducted the pilot testing of the guiding supervisory checklist and feedback formats at the Intermediate Reference Laboratory (IRL) Pune and one linked district (October 11-14), along with the National Tuberculosis Institute Bangalore, IRL Puducherry (November 8-9) and IRL Madurai (November 10-12).
NTW-1.1: Update and upgrade the existing supervision, monitoring and evaluation (SME) framework into an integrated and comprehensive framework	In progress	IDDS prepared the minutes of the Central TB Division (CTD)-NRL review meeting and facilitated sharing the document with all NRLs on November 9 for compliance and implementation of action points.
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	IDDS organized the first IRL and TB culture and drug sensitivity testing laboratory review meeting linked with the NRL Bhopal Memorial Hospital and Research Centre, in coordination with the Bhopal Memorial Hospital and Research Centre and the CTD, on November 25. The objective of this review meeting was to improve the coordination among different laboratory tiers and help resolve laboratory-related issues by providing a platform for direct discussion and cross-learning among the laboratories. IDDS refined the laboratory ranking tool based on inputs received from NRLs and the CTD laboratory unit and finalized the tool for piloting planned at selected NRLs and IRLs. IDDS prepared the framework for developing the National TB Laboratory Biosafety Manual and discussed and received inputs from the CTD laboratory unit. IDDS is currently hiring a
NTW-1.3: Develop a forecasting tool to assist NRLs, IRLs and TB C&DST laboratories to estimate the requirement of laboratory consumables	Not started	consultant/agency to provide short-term technical assistance. IDDS participated in joint supportive supervisory mission visits organized by CTD to monitor the implementation of NTEP policies from October 17-20 to two districts in the state of Manipur and on October 22-25 to two districts in the state of Nagaland. IDDS team also visited IRL Thiruvananthapuram, Kerala state on December 24 along with CTD representative to assess the performance and propose solutions to the potential issues limiting the laboratory from performing efficiently and effectively for supportive supervisory visits, mentoring, monitoring, and troubleshooting to the linked set of institutions and geographies.

India TB		
Activity	**Status**	**Activity implementation updates**
		IDDS conducted a visit to the TB culture and drug sensitivity testing Laboratory, Rajan Babu Institute of Pulmonary Medicine and Tuberculosis, Delhi on December 28, along with representatives from CTD, NRL National Institute of Tuberculosis and Respiratory Diseases, and IRL New Delhi TB Centre. During the visit, IDDS assessed the progress made toward panel testing and re-testing related to the application for the National Tuberculosis Elimination Program (NTEP) certification for liquid culture and drug susceptibility testing, deliberated on the key issues with underlying challenges, and proposed potential solutions with mutual consensus for initiation of drug-resistant (DR) TB diagnostic services at the earliest time possible. In FY 2022 Q2, IDDS will follow up with the CTD on key challenges, including shortages of laboratory staff and laboratory consumables, arranging for the required resources and improving laboratory efficiencies.
IND-TB-NTW-2: Private sector laboratory engagement for the TB/DR-TB diagnostic care cascade	In progress	IDDS visited Hisar district in Haryana on October 4–5, a site identified for demonstrating the "One-stop TB/DR-TB diagnostic solution" model. IDDS deliberated with key district officials, collected baseline information (geography, functioning status of NTEP health facilities, access and coverage, historic TB rates, and TB/DR-TB test volume), and calculated the anticipated volume of tests expected to feed into the model. IDDS conducted a coordination meeting with Haryana state officials (state TB officer, district TB officer, World Health Organization consultant, medical officer TB control), along with USAID and the IQVIA team on November 9, to deliberate on the scenarios for the volume of tests for implementation of the model. As suggested by the state TB officer Haryana, IDDS developed a brief proposal document on the conceptualized model and shared it with the state TB officer Haryana on November 18 for necessary approvals. IDDS received approval on December 9.
NTW-2.1: Initiate demonstration of "One-stop TB diagnostic solution" model for private sector laboratory engagement for TB/DR-TB diagnostic care cascade in collaboration with CTD	In progress	
NTW-2.2: Review of "One-stop TB diagnostic solution" model for private sector laboratory engagement for TB/DR-TB diagnostic care cascade	Not started	On December 13, IDDS posted the request for proposals (RFP) in the job portal for engaging a private laboratory in the implementation of the "One-stop TB/DR-TB diagnostic solution" model in NTEP, Hisar District, Haryana, and published the RFP in national leading newspapers (*Times of India* and *Navbharat Times*) on December 14.
NTW-2.3: Explore other possible options for engagement of private sector laboratories for TB diagnostic care cascade	In progress	IDDS received diagnostic TB data from the National Health Resources Repository from the CTD on December 19 and initiated the mapping exercise of potential laboratories for engagement with the NTEP.

India TB		
Activity	**Status**	**Activity implementation updates**
IND-TB-NTW-3: Support the Central TB Division and USAID in design and conduct of research on new TB and DR-TB diagnostics		IDDS prepared two proposals: one on the feasibility of using Truenat DNA for line probe assay testing, and the second on assessing invalid and indeterminate rates of Truenat results at diagnostic facilities in the NTEP.
NTW-3.1: Comprehensive assessment of Truenat invalid and indeterminate results for Mycobacterium tuberculosis and Rifampicin resistance testing at NTEP's sites and possible solutions to address the same	In progress	IDDS received Institutional Review Board approval on the Truenat invalid and indeterminate study in the "Not Human Subjects Research" category on October 4. IDDS conducted the systematic analysis of retrospective data for 1,690 out of 1,972 Truenat sites in the NTEP, as part of the Truenat invalid and indeterminate study. The IDDS team visited NIRT, Chennai on October 7–8 to receive input on the data analysis from the NIRT team. The data analysis results of the study were presented to the CTD lab unit on November 22. IDDS received concurrence from CTD on the 12 shortlisted sites for a field visit on December 9. IDDS conducted the first visit to Truenat sites in Kerala and IRL Thiruvananthapuram on December 22–24 for root cause analysis of high invalid and indeterminate rates in the Truenat results. The team is planning to visit the remaining sites in January 2022. IDDS received Institutional Review Board approval of the Trueprep DNA feasibility study proposal in the "Not Human Subjects Research" category on October 2. The team prepared the terms of reference for the laboratory technician and data entry operator positions and developed the RFP document for procurement of consumables and kits for the study.
NTW-3.2: Feasibility of using Trueprep extracted DNA for line probe assay testing in NTEP	In progress	
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	Not started	
NTW-3.4: Support, mentor and monitor relevant USAID-funded programs and partners for	Not started	

India TB		
Activity	**Status**	**Activity implementation updates**
development and evaluation of new diagnostic tools		
IND-TB-NTW-4: Support NCDC and identified laboratory(ies)/ laboratory networks for AMR containment and surveillance	In progress	IDDS is coordinating with the National Centre for Disease Control and other key stakeholders to get approval on the proposal to support the FY 2022 concurred antimicrobial resistance (AMR) activities and guidance to move forward.
NTW-4.1: Technical and managerial support for development of new NAP-AMR with the leadership of NCDC	Not started	IDDS conducted a meeting with the focal point for AMR in the World Health Organization on November 15 and the principal advisor at the National Centre for Disease Control on December 29 for synergies in the intended AMR activities.
NTW-4.2: Support developing the State Action Plan on Containment of Antimicrobial Resistance (SAP-CAR) for the identified state(s) aligned to NAP-AMR	Not started	
NTW-4.3: Develop and demonstrate a model of district level AMR surveillance in the identified district(s) of Punjab	Not started	

Tanzania TB		
Activity	**Status**	**Activity implementation updates**
TZA-TB-NTW-1: Strengthen the TB Diagnostic Network	In progress	IDDS completed, edited, and submitted the following FY 2021 deliverables to USAID Washington:
NTW-1.1: Strengthen the capacity and quality of testing in four zonal laboratories	In progress	• Procurement Documents for External Quality Assessment (EQA) Panels for GeneXpert Machines in Tanzania
NTW-1.3: Provide GxAlert connectivity	In progress	• Summary of Quarterly Meeting Minutes from the National Tuberculosis (TB) Laboratory Technical Working Group for FY 2021
• Report on GeneXpert Connectivity in Tanzania from January–September 2021

IDDS also submitted the country operational plan 2021 (USAID FY 2022) for United States President's Emergency Plan for AIDS Relief-funded activities and is writing a workplan for FY 2022, which will be submitted to USAID Washington in early Q2. Activities in the FY 2022 work plan will build on completed FY 2021 activities to enhance universal access to TB diagnostic services, improve the quality of screening and diagnostic evaluation for active TB, and strengthen and optimize the use of all available diagnostics (GeneXpert and other molecular World Health Organization-recommended rapid diagnostic tests, C-reactive protein, chest X-ray, and TB lipoarabinomannan) for active TB among people living with HIV who screen positive and are presumed to have TB. |

Vietnam TB		
Activity	**Status**	**Activity implementation updates**
VNM-TB-NTW-1: Optimize the diagnostic network to address issues of access, timeliness, and diagnostic accuracy	In progress	IDDS discussed with System One, the National TB Program (NTP), and the mission regarding the pilot of the specimen referral system (SRS) module in Nghe An province. System One offered a pilot SRS module for three to six months free of charge and shared the draft memorandum of understanding for this pilot.
NTW-1.1 Strengthen and digital transformation of specimen referral network	In progress	In FY 2022 Q2, IDDS will implement the pilot of the artificial intelligence-enabled chest X-ray to strengthen the double X strategy in Khanh Hoa province and start the pilot of the SRS after the NTP signs the memorandum of understanding with System One.
NTW-1.2 Support the expansion of molecular testing systems	In progress	
NTW-1.3 Strengthen the DST testing laboratory system to enhance diagnosis and treatment of drug-resistant TB (DR-TB), MDR-TB, and XDR-TB	In progress	
NTW-1.4: Provide continuous technical assistance for laboratory quality improvement	In progress	
NTW-1.5 Support the artificial intelligence-enabled chest X-ray to strengthen the Double X strategy	In progress	
VNM-TB-NTW-2 Improve pediatric stool testing using GX	In progress	IDDS had discussions with the NTP, the mission, and implementing partners about this activity. IDDS is working with the NTP and provincial hospitals to collect the pediatric stool testing data. IDDS will share the updated report with the mission after the NTP and provincial hospitals provide the data.
NTW-2.1 Provide technical assistance to GX facilities on stool GX testing to enhance the pediatric TB diagnosis	In progress	In FY 2022 Q2, IDDS will revise the report of stool GeneXpert (GX) activities in seven USAID provinces with updated data from Support to End Tuberculosis and the NTP. IDDS will also start providing technical assistance to the provincial laboratory on stool GX testing.
VNM-TB-NTW-3 Deploy innovative tools and equipment for Vietnam TB diagnostics	In progress	IDDS started the data analysis of trace results of GX Ultra. IDDS is developing a detailed implementation plan for the implementation of whole genome sequencing for drug-resistant TB detection.

Vietnam TB		
Activity	**Status**	**Activity implementation updates**
NTW-3.1 Conduct an evaluation of trace results in application of GX Ultra testing	In progress	In FY 2022 Q2, IDDS will complete the data analysis on trace results of GX Ultra and present the draft report to the NTP and the mission for their review. IDDS will also finalize the detailed implementation plan for whole genome sequencing for drug-resistant TB detection.
NTW-3.2: Support the implementation of whole genome sequencing for DR-TB detection	In progress	
VNM-TB-NTW-4: Technical assistance for new TB tools	In progress	IDDS worked with the NTP to prepare for the import of equipment delivered by the Introducing New Tools Project. IDDS finalized the relevant paperwork, which was submitted to the Ministry of Health for approval by the NTP. IDDS is working with the National Reference Laboratory technical team to prepare for the technical assistance schedules. IDDS met with the NTP and the mission in December to organize a handover ceremony of Truenat machines and develop an implementation plan for the Truenat feasibility for TB and rifampicin resistance testing. The NTP is finalizing the selection of implementation sites. IDDS's work in FY 2022 Q2 will include the following: (1) organizing a handover ceremony in collaboration with the mission, the NTP, and other stakeholders; (2) collaborating with Molbio and its local agency, Tekmax, to discuss training materials for Truenat; (3) discussing the implementation plan of the feasibility assessment of artificial intelligence-enabled ultra-portable X-ray after the NTP's final selection of implementation sites; and (4) working with a vendor selected through the STOP TB Partnership's bidding process on diagnostic connectivity solutions.
NTW-4.1: Molbio Truenat—Assess the feasibility of testing for TB and rifampicin resistance at peripheral point-of-care health centers and active case finding sites	In progress	
NTW-4.2: Computer-aided detection with Ultra-portable X-ray— Assess the feasibility of ultra-portable X-ray with AI in TB active case finding	In progress	
NTW-4.3: Diagnostic connectivity Solutions developed by SystemOne (GxAlert Aspect) or SAVICS (DataToCare)—Expand a diagnostic connectivity solution to improve functioning of diagnostic equipment and to ensure timely service and maintenance is provided by manufacturers	Not started	

Zimbabwe TB		
Activity	**Status**	**Activity implementation updates**
ZWE-TB-NTW-1: Strengthen a comprehensive TB diagnostic network with strong underlying health systems	In progress	IDDS awarded the tender for the installation of solar systems in 50 Ministry of Health and Child Care (MoHCC) TB laboratories to ThulaSiso. In collaboration with engineers from the MoHCC and the Ministry of Local Government and Public Works, ThulaSiso conducted an onsite verification process to identify the individual solar needs of the 50 TB laboratories. Findings from this assessment will inform next steps of procurement and installation, which will occur in FY 2022 Q2 and Q3. The solar systems are expected to provide uninterrupted power supply in the selected laboratories for continuous testing services for TB patients. The MoHCC TB-HIV Public Private Partnership, which is being developed through IDDS financial and technical support, is still undergoing final review by the MoHCC. The framework is expected to be finalized in FY 2022 Q2. IDDS trained 44 laboratory personnel in 2 training workshops held in Kadoma on use of the GxAlert system. The Northern region training was conducted on October 20, during which 26 (12 female/14 male) participants were trained. The Southern region training was conducted on October 21, during which 18 (8 female/10 male) participants were trained. The trainings focused on use and maintenance of GeneXpert machines, inventory management, and analysis of data transmitted through the GxAlert system. IDDS provided financial and technical support for the MoHCC to conduct GxAlert troubleshooting visits in 29 GeneXpert laboratories located in 8 provinces (Manicaland, Midlands, Masvingo, Mashonaland Central, Mashonaland East, Mashonaland West, Matabeleland South, and Matabeleland North) that were facing connectivity challenges. These visits were conducted from December 13 to 17, by IDDS team members in collaboration with GxAlert super users. The teams also trained laboratory personnel at these sites on the use of the GxAlert system, results recording and reporting, and inventory management. A total of 36 (21 female/15 male) participants were trained.
NTW-1.1: Increase TB case detection through comprehensive strategies in collaboration with local organizations network in Harare Province	In progress	
NTW-1.2: Strengthen functionality of the GeneXpert network	In progress	

Zimbabwe TB		
Activity	**Status**	**Activity implementation updates**
NTW-1.3: Expand and decentralize TB diagnostic network	In progress	
NTW-1.4: Strengthen quality in the TB diagnostic network	In progress	
NTW-1.5: Reinforce the TB diagnostic network within the private sector	In progress	
NTW-1.6: Expand supportive supervision and analysis of quality TB data to improve program performance	In progress	
NTW-1.7: Implement the DXO strategy to strengthen the GeneXpert network	In progress	
ZWE-TB-NTW-2: Support the NTRL and NTP to develop and operationalize functional national and provincial TB reference laboratory structures	In progress	The National Health Laboratory Strategy (2022–2026) was submitted to IDDS headquarters for review. IDDS provided financial support to engineers from the MoHCC and the Ministry of Local Government and Public Works to support the installation of the modular laboratory, which was procured with USAID support through the Challenge TB funding mechanism and delivered in FY 2021. The modular laboratory will serve as a stopgap measure as the main Bulawayo National TB Reference Laboratory is renovated. In FY 2022 Q2, IDDS will
NTW-2.1: Strengthen the NTRLs to serve as the leading laboratories in the TB diagnostic network	In progress	
NTW-2.2: Support the NTP's leadership activities and TWGs sessions	In progress	financially support the relocation of the Mycobacteria Growth Indicator Tube machines from the main laboratory to the modular laboratory so that culture activities can be conducted in the modular laboratory. IDDS started the procurement process of air conditioners for the Harare National TB Reference Laboratory. The air conditioners will be installed in FY 2022 Q2 to control temperatures in the line probe assay laboratory.
ZWE-TB-NTW-3: Conduct OR to generate evidence on TB diagnostic strategies in Zimbabwe context	In progress	ICF's Institutional Review Board approved the protocol for *GeneXpert MTB/RIF Ultra "trace call" results in Zimbabwe,* and IDDS submitted the protocol to the Medical Research Council of Zimbabwe for ethical approval. After feedback is received in FY 2022 Q2, IDDS
NTW-3.1: Conduct OR on clinically diagnosed TB patients using CXR and other TB clinical signs	In progress	will start conducting the operational research.

Zimbabwe TB		
Activity	**Status**	**Activity implementation updates**
NTW 3.2: Conduct OR on GeneXpert MTB/RIF Ultra "trace call" results in Zimbabwe	In progress	IDDS submitted the draft protocol on *Clinically diagnosed TB patients using chest X-ray (CXR) and other TB clinical signs,* which was developed in FY 2021, to the MoHCC for review. This protocol is expected to be submitted to ICF's Institutional Review Board in FY 2022 Q2.