

Infectious Disease Detection and Surveillance (IDDS) Quarterly Report FY22

Q3: Annex A: Activity Implementation Progress

Annex A includes information about activities that were in progress or completed during quarter 3 (Q3) as well as fiscal year (FY) 2022 activities that have not started.

Global Health Security Activity Implementation Progress

Cameroon GHS		
Activity	Status	Activity implementation updates
CMR-GHS-NTW-I: 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.	In progress	
NTW-I.I: 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 continued to provide technical and mentorship support to the National Public Health Laboratory (NPHL) in operationalizing SOPs for AMR detection to ensure harmonization of pathogen identification and antimicrobial susceptibility testing (AST) across human and animal AMR sentinel surveillance sites. IDDS also mentored relevant staff on the use of SOPs for culture media preparation, pathogen identification, and AST in compliance with international norms, the implementation of internal quality control, and participation in external quality controls. A total of 8 mentoring sessions took place from April to May 2022, mentoring 87 laboratory staff (56 female) in 7 AMR surveillance sites (Yaoundé Military Hospital, University Teaching Hospital of Yaoundé, Centre Hospitalier d'Essos, Limbé Regional Hospital, Douala Laquintinie Hospital, National Animal Laboratory-LANAVET Yaoundé, and National Animal Laboratory-LANAVET Douala). Particular emphasis was placed on the internal quality control for

Cameroon GHS		
Activity	Status	Activity implementation updates
		<p>antibiograms and updating the AST breakpoint on the antibiogram job aids in accordance with the latest version of AST referential guidelines (CASFM/EUCAST, version V1.0, 2022).</p> <p>In FY 2022 Q4, IDDS will continue training and mentoring of AMR sentinel surveillance sites and ensure the procurement and distribution of essential laboratory needs for AMR detection. IDDS will also re-assess the capacity of the surveillance sites using the Laboratory Assessment of Antibiotic Resistance Testing Capacity tool.</p> <p>IDDS continued to support the National Veterinary Laboratory of Douala to operationalize the bacteriology unit, thus enabling the diagnosis of bacterial animal health diseases in one of the biggest cities and one of the biggest poultry-producing zones of Cameroon, as well as working toward the possible integration of the site into the national AMR surveillance network. From April 26 to 30, IDDS supported staff mentorship in bacteriological diagnosis (culture media preparation, priority bacteria isolation and identification, and AST). Mentorship emphasized internal quality assessment at each of the testing stages. At the end of the training, 12 laboratory staff (8 female) acquired hands-on skills for AMR detection.</p>
NTW-I.4: Procure basic AMR reagents and equipment for the human and animal sentinel surveillance sites.	In progress	IDDS donated the required reagents and small equipment to support the launching of bacteriological testing at the National Veterinary Laboratory of Douala in April.
NTW-I.5: Support the National Public Health Laboratory (LNSP) to develop a national AMR external quality assessment (EQA) plan to improve AMR detection in health facilities.	Completed	IDDS provided technical support to NPHL to develop and validate the action plan for setting up a national EQA program. This was accomplished through workshops that took place May 10 to 14 and June 21 to 25 in Mbankomo. This activity was organized with the financial support of WHO. Activities in the action plan include: EQA program governance (policies, procedures, guidelines, coordination, and monitoring and evaluation), piloting the EQA program, and mobilization of financial resources (through advocacy and for sustainability purposes).

Cameroon GHS		
Activity	Status	Activity implementation updates
CMR-GHS-SURV-1: Strengthen AMR surveillance through capacity building to analyze, interpret, and report AMR surveillance data and develop national strategic plans.	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.	In progress	<p>IDDS supported the development of a monthly AMR surveillance bulletin template and SOPs for AMR surveillance data analysis to guide subsequent AMR monthly reports and to use for training new staff.</p> <p>IDDS provided technical and financial assistance to the AMR National Coordination Center to train five members of the AMR surveillance technical working group (TWG) on AMR data management and analysis. The training took place June 7 to 10.</p> <p>During the training, five monthly AMR surveillance bulletins (covering the period of January–May 2022) were developed, which will be validated by and shared with various national stakeholders in FY 2022 Q4. These are the first AMR surveillance bulletins produced in Cameroon.</p>
SURV-1.2: Conduct quarterly AMR surveillance stakeholders review meetings to review progress with AMR surveillance and data quality.	In progress	<p>IDDS provided technical support to the NPHL to organize an online data quality review meeting, which took place on June 30 and included nine AMR surveillance sites (Douala Laquintinie Hospital, Limbe Regional Hospital, Centre Hospitalier Essos, Yaoundé General Hospital, Yaoundé Military Hospital, University Teaching Hospital of Yaoundé, National Public Health Laboratory, National Veterinary Laboratory Yaoundé, and National Veterinary Laboratory Yaoundé Garoua). Data quality gaps from the previous quarter were discussed with the point of contact for the different surveillance sites and some recommendations for improvements were formulated. The meeting also served as an opportunity to share best practices among points of contact from the different surveillance sites. In FY 2022 Q4, IDDS will support the development of SOPs for data quality review in surveillance sites and at the national level.</p>

Cameroon GHS		
Activity	Status	Activity implementation updates
SURV-I.3: Provide technical assistance to the National Coordination Center to develop semiannual national AMR bulletins and policy briefs based on surveillance data.	In progress	IDDS continued to support the finalization of the country's first annual (2021) AMR surveillance report by facilitating a technical, editorial, and formatting and branding review prior to resubmitting it to the TWG at the national level for final review. The report is at the final stage of validation and is expected to be released in FY 2022 Q4.
SURV-I.4: Provide technical support to the National Coordination Center to report National AMR data to the Global Antimicrobial Resistance and Use Surveillance System (GLASS).	In progress	In FY 2022 Q4, IDDS will provide technical support to NPHL to submit the 2021 AMR data to GLASS during the annual data call.
SURV-I.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	IDDS supported the National AMR Coordination Committee by recruiting two consultants to perform a situational analysis of AMR in Cameroon and to elaborate the new National AMR Strategy Plan (2022-2026). IDDS organized a consultation meeting in collaboration with MTAps on June 20 in Yaoundé, with participation of stakeholders from the different sectors involved in AMR (human health, animal health, agriculture, and environment) as well as university and other partners. The approach for the elaboration of the new strategic plan was discussed and validated during the meeting. In FY 2022 Q4, IDDS will support the elaboration of the draft plan.

DRC GHS		
Activity	Status	Activity implementation updates
DRC-GHSA-NTW-1: Operationalize the national laboratory policy and strategic plan in Eastern DRC	In progress	
DRC-GHS-NTW-1.1 Support the dissemination of the MoH laboratory policy and strategic plan in the Eastern DRC	In progress	<p>IDDS provided financial support to ship printed copies of the National Laboratory Policy and the Directorate of Laboratory Services (DLS)'s national Laboratory Strategic Plan (LSP) 2021–2025 from Kinshasa to Goma, and to have these transported and distributed to the health zones in three supported DRC Eastern provinces. Maniema received: 60 copies of each document, South Kivu received 100 of each, and North Kivu, 100 of each.</p> <p>IDDS worked with the Ministry of Health (MoH) DLS and the Provincial Health Division (DPS) of North-Kivu to plan the dissemination workshop of the National Laboratory Policy and LSP documents for the Eastern provinces. The workshop will take place in July in Goma. In FY 2022 Q4, IDDS will also distribute the documents to Ituri Province.</p>
DRC-GHS-NTW-2: Support the establishment of a regional public health network in the Eastern DRC	In progress	
DRC-GHS-NTW-2.4: Cost the operational plan and develop a financial sustainability framework for the Eastern region public health laboratory network	In progress	IDDS finalized the financial sustainability framework for the Eastern region public health laboratory network. IDDS prepared a final publication that includes both the costed operational plan and the financial sustainability framework, which was submitted to USAID.

DRC GHS		
Activity	Status	Activity implementation updates
DRC-GHS-NTW-2.5 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 Provinciale de la Santé (DPS)] and two from IDDS staff (SDS and DS or PA)	In progress	Two IDDS staff attended the Planwise training session organized by the DLS and ASLM in Kinshasa, on April 4–8 to improve capacity for conducting laboratory mapping analysis. IDDS team is planning to organize another multi-country training session in FY 2022 Q4.
DRC-GHS-NTW-2.6: 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	Completed	IDDS worked with the DPS of North Kivu to organize a workshop to update the laboratory platform checklist regarding materials, equipment, and laboratory supplies needed for disease detection and surveillance for each level of laboratory. The checklist serves as a reference for procuring laboratory equipment, reagents, and supplies. The 4-day workshop was held in Goma on April 27–30 with 15 participants from the MoH/DPS, INRB Goma, Goma University, Ami Labo, veterinary laboratory, and IDDS. The workshop report and updated platform checklist produced are being reviewed by IDDS technical advisors. In FY 2022 Q4, IDDS will finalize the workshop report and the updated platform checklist.

DRC GHS		
Activity	Status	Activity implementation updates
DRC-GHS-NTW-2.7: Develop advocacy roadmap with key stakeholders (DRC government officials, international donors) to mobilize domestic and external resources to sustain operations of the Eastern region diagnostic network	In progress	IDDS hired a consultant to develop the advocacy roadmap document and started technical discussions internally and with other partners related to the scope and expectations for this document. In FY 2022 Q4, the advocacy roadmap document will be ready for internal review and final edit as a key deliverable.
DRC-GHS-NTW-3: Enhance priority pathogen detection capacity for epidemic prone diseases	In progress	
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	IDDS interviewed consultant candidates to update the outbreak action plan. In FY 2022 Q4, the hiring process for the consultant will be finalized, and IDDS will update the outbreak plan, and hold a workshop to validate the updates.
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	Completed	<p>IDDS conducted a training of trainers (ToT) in Kindu on biosecurity/biosafety, sample collection, handling, storage, and transportation. The ToT, which took place from May 14–19 was attended by 14 participants (4 female) from the DPS and medical laboratories in Kindu, Maniema. The training allowed participants to adapt the training tools for use in their province's context and will be used, in the coming months, for the training of other users throughout the province.</p> <p>IDDS drafted a report of the ToTs in all three provinces (including those conducted in Q2 in North and South Kivu).</p>

DRC GHS		
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DRC-GHS-NTW-3.3: Support of outbreaks response in the DRC	In progress	No activities in Q3, but IDDS continued to monitor outbreaks and engage with the MoH/DSE and DLS to explore their needs for outbreak responses.
DRC-GHS-NTW-3.4 Provide financial resources as needed for the detection of a priority pathogen investigation based on pre-defined criteria	In progress	No activities in Q3, but IDDS continued to monitor outbreaks and engage with the MoH/DSE and DLS to explore their needs for outbreak responses.
DRC-GHS-NTW-3.5: Explore how to incorporate local airlines (Compagnie Aérienne Africaine, Congo Airways, Kinavia, UNHAS, ASF, and MAF) into the specimen transportation system	In progress	<p>IDDS contacted airline companies to discuss the possibility of a collaboration with IDDS to facilitate sample transportation.</p> <p>IDDS also identified and started the hiring process of a consultant who will conduct a situational assessment of the specimen referral system (SRS) and transport in the supported Eastern DRC region. In FY 2022 Q4, the hiring process for the consultant will be finalized, and the consultant will conduct a situational assessment of the SRS and transport in the supported Eastern DRC region prior to developing an implementation plan that will be piloted in collaboration with local airlines. IDDS will also facilitate the technical working group (TWG) discussions on challenges within the specimen referral and transport systems in the DRC Eastern region.</p>
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	In progress	IDDS conducted preparatory discussions with the MoH/DLS on the ToT for Integrated Diseases Surveillance and Response (IDSR). The discussion points included the terms of reference, training facilitation, participant list, training materials, final agenda, and training dates.

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Activity	Status	Activity implementation updates
		The ToT is scheduled for July 2022. The trained trainers will be expected to train other health workers in other health zones and communities.
DRC-GHS-NTW-4 Support the development of a quality assurance and biosafety / biosecurity program for health laboratories in Eastern Region of DRC	In progress	
DRC-GHS-NTW-4.1. Develop documents for quality assurance and biosafety / biosecurity measures for the national laboratory network.	In progress	IDDS has identified a consultant and the hiring process is ongoing. In FY 2022 Q4, the IDDS consultant will draft the quality assurance (QA) and biosafety/ biosecurity measures documents and hold a workshop to validate them.
DRC-GHS-NTW-4.2. Support a workshop to validate quality assurance and biosafety / biosecurity measures documents for the national laboratory network	Not started	This activity will start in FY 2022 Q4 once the consultant is engaged.
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	The printing and the dissemination of validated QA and biosafety/biosecurity measures was postponed to FY 2022 Q4 due to the delay in the consultant hiring process.

DRC GHS		
Activity	Status	Activity implementation updates
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		
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.	In progress	IDDS engaged a consultant and drafted the standard operating procedures (SOPs) and training materials for the diagnosis of priority zoonoses. In FY 2022 Q4, IDDS will complete the review of these materials.
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	In progress	IDDS finalized the training materials on bacteriology testing and diagnostics for priority zoonoses and has scheduled a training in Goma for July 2022.

Ethiopia GHS		
Activity	Status	Activity implementation updates
ETH-GHS-NTW-I Strengthen the antimicrobial resistance (AMR) surveillance diagnostic facility network	In progress	
NTW-I.1. Support operationalization of standardized SOPs, guidelines, forms/templates, and job aids for five human health (HH) surveillance sites	In progress	<p>IDDS conducted a rapid baseline assessment of its five human health (HH) and one animal health (AH) AMR surveillance sites between March 31 and April 14. The findings of the assessment were used to develop the revised workplan. The sites assessed were:</p> <ol style="list-style-type: none"> 1. <i>St. Paul Hospital Millennium Medical College Microbiology laboratory</i> 2. <i>University of Gondar Referral Hospital Microbiology laboratory</i> 3. <i>Jimma University Hospital Microbiology laboratory</i> 4. <i>Felege-Hiwot Specialized Hospital Microbiology laboratory</i> 5. <i>Hawassa University Referral Hospital Microbiology laboratory</i> 6. <i>Bahir Dar Regional Veterinary General Laboratory</i> <p>IDDS provided technical support to four sites in the revision of standard operating procedures (SOPs) and templates during the supportive supervision and mentorship visits (see activity 1.2). These SOPs and templates will be finalized in FY 2022 Q4.</p>
NTW-I.2. Provide technical assistance, training, and mentorship on AMR detection at five HH sites based on existing standardized modules	In progress	<p>IDDS conducted supportive supervision visits at three HH sites and one AH site. The purpose of the visits was to discuss the gaps identified from the rapid baseline assessment conducted in April. Follow-up actions were identified and discussed with the hospital management as well as the laboratory staff. These visits took place from June 13 to 15 at the: University of Gondar Referral Hospital Microbiology Laboratory; Felege-Hiwot Specialized Hospital Microbiology Laboratory, and Bahir Dar Regional Veterinary General Laboratory, and on June 29 for the Hawassa University Referral Hospital Microbiology Laboratory.</p> <p>The Hawassa University Referral Hospital Microbiology Laboratory visit also included mentorship for five laboratory staff (four female) on microbiology testing techniques.</p> <p>In FY 2022 Q4, IDDS will conduct supportive supervision of the remaining sites.</p>

Ethiopia GHS		
Activity	Status	Activity implementation updates
NTW-1.3. Conduct minor infrastructure improvements at three AMR surveillance sites to improve workflow, biosafety, and biosecurity	In-progress	IDDS held discussions with supported AMR sites regarding their infrastructure improvement needs and started prioritizing the critical needs identified during the baseline assessments. In FY 2022 Q4, IDDS will conduct some minor renovation work.
NTW-1.4. Enhance the implementation of laboratory quality management systems by supporting Internal Quality Control (IQC) and External Quality Assurance (EQA) testing at the five Phase II AMR HH surveillance sites and the Amhara Regional Veterinary Laboratory	In progress	IDDS revised a laboratory quality management training module to include quality aspects pertinent to microbiology and antimicrobial susceptibility testing (AST). In FY 2022 Q4, IDDS will conduct a five-day training on laboratory quality management using the revised module for staff from IDDS-supported sites.
NTW-1.5. Operationalize a plan for integrating AMR surveillance at five human and one animal health pilot sites	In progress	At the national level, IDDS discussed approaches for the integration of AH and HH for AMR surveillance with the Food and Agriculture Organization of the United Nations (FAO)'s Ethiopia office, the Animal Health Institute of Ethiopia, and Bahir Dar Regional Veterinary General Laboratory.
NTW-1.6. Support operationalization of standardized SOPs and guidelines for detection of priority AMR pathogens in one animal health (AH) surveillance site (Amhara Regional Veterinary Laboratory)	In progress	IDDS provided technical support to Bahir Dar Regional Veterinary General Laboratory to revise SOPs and job aids. This work will continue in FY 2022 Q4.
ETH-GHS-NTW-2 Support the diagnostics supply chain management system to ensure uninterrupted AMR detection	Postponed to FY 2023	Activity postponed pending revised workplan approval

Ethiopia GHS		
Activity	Status	Activity implementation updates
NTW-2.1. Facilitate training and/or mentoring on inventory management and diagnostics supply forecasting at five Phase 2 HH AMR surveillance sites and the Amhara Regional Veterinary Laboratory.	Postponed to FY 2023	
NTW-2.2. Supply basic AMR reagents and commodities to five Phase 2 HH AMR surveillance sites	Postponed to FY 2023	IDDS finalized AMR reagents and commodities specification, quantity needed, and price estimates for all five HH AMR surveillance sites. However, the procurement process of most of the commodities and reagents is postponed to FY 2023.
NTW-2.3. Supply basic microbiology/AMR reagents and commodities to two AH AMR sentinel surveillance sites	Postponed to FY 2023	AMR reagents and commodities specification, quantity needed, and price estimates have been finalized for the two AH AMR sites. However, the procurement process of most of the commodities and reagents is postponed to FY 2023.
ETH-GHS-NTW-3 Strengthen equipment procurement, operations, and preventive maintenance systems	Not started	
NTW-3.1. Conduct one workshop on basic bioengineering training for bioengineers in three regions and EPHI that supports the five Phase 2 AMR surveillance sites	Not started	
NTW-3.2. Facilitate the trained biomedical engineers to support maintenance of laboratory equipment in the	Postponed to FY 2023	

Ethiopia GHS		
Activity	Status	Activity implementation updates
six IDDS-supported surveillance sites		
NTW-3.3. Supply a limited range of critical auxiliary microbiology/AMR equipment for five Phase 2 HH AMR surveillance sites and the Amhara Regional Veterinary Laboratory	In progress	IDDS will procure some minor AMR equipment during FY 2022 Q4 pending budget approval.
ETH-GHS-SURV-1 Improve the efficiency of AMR surveillance data management	In progress	
SURV-1.1. Provide WHONET training and data entry at the five Phase 2 HH AMR surveillance sites	Completed	In collaboration with the Ethiopian Public Health Institute (EPHI), IDDS conducted the WHONET data management training from June 3 to 5. A total of 26 microbiologists and laboratory technologists were trained (9 female) of which 5 were from the 5 IDDS-supported HH sites. The IDDS Diagnostic Specialist and the Senior Diagnostic Specialist were among the two trainers and facilitators.
SURV-1.2. Support quarterly AMR surveillance review meetings to review progress and share best practices and lessons learned	Not started	This activity will be implemented in FY 2022 Q4.
SURV-1.3. Provide technical assistance to prepare HH AMR surveillance quarterly newsletters and biannual and annual reports	Postponed to FY 2023	
SURV-1.4. Provide technical assistance to EPHI to prepare the joint annual AMR surveillance report using human and animal health data	Postponed to FY 2023	

Guinea GHS		
Activity	Status	Activity implementation updates
GIN-GHS-NTW-I: 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	In Progress	<p>IDDS provided continuous remote technical support through virtual meetings to the three IDDS-supported laboratories to collect and report AMR data to the national-level database. IDDS reviewed the weekly bacteriology and antimicrobial susceptibility testing (AST) reports submitted by the laboratories, worked with the laboratories to address any issues, analyzed the data, and shared them with the National Institute of Public Health (INSP).</p> <p>The sites experienced stockouts of reagents for bacteriology culture and AST and were only able to collect data related to microscopy and gram staining. IDDS initiated discussion with the MoH and the hospital administration to assist with the procurement of reagents for these recently introduced tests. Discussion is ongoing.</p> <p>In June, IDDS was able to allocate a portion of the reagents that were purchased for External Quality Assessment (EQA) with the IDDS-supported laboratories to resume bacteriology culture and AST. In FY 2022 Q4, IDDS will review the AST data generated by the laboratories.</p>
NTW-I.1: Provide technical assistance to the National Institute of Public Health (<i>Institut National de la Santé, INSP</i>) to develop a centralized AMR data management system for future reporting into GLASS	In Progress	IDDS worked with the National Directorate of Laboratories to identify an AMR focal point for the reporting of bacteriological data into Global Antimicrobial Resistance and Use Surveillance System (GLASS), and to have this appointment formally validated by an act of appointment signed by the Minister of Health.
NTW-I.2: Continue to provide technical support	In Progress	The reagents procured to support the second round of External Quality Assessment (EQA) for the AMR surveillance network, planned for FY 2022 Q3 were delivered in June.

Guinea GHS		
Activity	Status	Activity implementation updates
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)		IDDS provided 14,287 units of reagents and additional supplies (pipettes, petri dishes, slides, etc.) to support the EQA for the AMR surveillance network. These were shared with INSP for EQA, and a portion was shared with the IDDS supported sites to resume microbiology and AST.
GIN-GHS-NTW-3: Consolidate and finalize the IDDS pilot integrated national specimen referral and transport system	In Progress	IDDS developed the costed report for a national specimen referral and transport system (SRS) based on the pilot conducted by IDDS in previous quarters. The report included key findings from the pilot as well as guidance for implementation of the SRS. The SRS put in place during the pilot study reduced the time from collection to delivery at the testing site from 7–10 days (baseline) to 24 hours. All specimens were received at the proper temperature. Only one sample was rejected at the reference laboratory for insufficient volume, and the total rejection rate was 0.4 percent (1 of 246). In FY 2022 Q4, IDDS will share the results of the pilot with the MoH and the specimen management technical working group (TWG).
NTW-3.1: Develop a costed report and recommendations for the national specimen referral and transport pilot conducted at the three regional laboratories	In Progress	

Indonesia GHS		
Activity	Status	Activity implementation updates
IDN-GHS-NTW-1: Support the One Health Laboratory Network (OHLN) Sub-Working Group (SWG)	In progress	
NTW-1.1: Support and facilitate regular OHLN SWG meetings	Completed	IDDS conducted a national webinar on Foot and Mouth Disease (FMD) in collaboration with OHLN SWG members including the Coordinating Ministry for Human Development and Cultural Affairs (Kemenko PMK) and technical ministries such as the Ministry of Health (MoH), Ministry of Agriculture (MoA), and Ministry of Environment and Forestry (MoEF). The Government of Indonesia (GoI) requested the webinar because of urgent conditions in Indonesia since cases were found in Aceh and East Java. The public webinar aimed to increase awareness about FMD among health officers from the human, animal, and wildlife sectors, as well as the broader public, particularly during Muslim Eid Adha. The webinar aired on May 28, with a total of 1,112 participants (752

Indonesia GHS		
Activity	Status	Activity implementation updates
		female) joining on Zoom and YouTube. ¹ IDDS and the Kemenko PMK technical team disseminated flyers and the webinar link. After the webinar, IDDS drafted digital participant certificates, which were signed by Kemenko PMK and distributed to participants. The relevant ministries plan to have a joint coordination meeting to control the outbreak, referring to the policy and guidelines that were explained in the webinar. While the meeting will be limited to the high-level cross-sectoral ministries and will not involve the implementing partners, IDDS will monitor the progress in FY 2022 Q4.
NTW-I.3: Provide technical assistance (TA) for the development of outputs from the OHLN	Not started	This sub-activity relates to the policy brief development. The policy brief initially was going to be developed after the legalization of three documents (<i>Sistem Informasi Zoonoses Dan Emerging Infectious Diseases</i> [SIZE] Roadmap, Integrated Surveillance Guidelines, and Four-way Linking [4WL] Guidelines), planned for February 2022. However, the legalization process was postponed until the 4WL and Integrated Surveillance pilot implementations are completed at the prioritized district level, as per Gol agreement. Therefore, the policy brief development was delayed and is now planned to be completed in September 2022.
NTW-I.4: Support and facilitate Predict Laboratory Protocol training	Complete	IDDS processed the certificate for the facilitators and participants of the PREDICT Protocol Laboratory Training that took place in Q2. The certificate will be issued by the Center for Human Resource Training at the MoH in FY 2022 Q4. As a follow-up action to the PREDICT Protocol Laboratory Training, IDDS facilitated an online meeting to assess the self-exercise video presentations that were recorded by the PREDICT training participants. The meeting took place on April 22, 26, and 27, and attended by staff of Manado: 14 participants, Batam: 11 participants, Makassar: 10 participants, and Ambon: 13 participants.
IDN-GHS-SURV-I: Integrate Laboratory and Surveillance Systems and Revitalize 4-Way Linking (4WL)	In progress	

¹ https://www.youtube.com/watch?v=2jAifUOQ_0E

Indonesia GHS		
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SURV-1.3: Develop 4-Way Linking Guideline revitalization review document based on the workshop result with GOI stakeholders	Not started	This sub-activity will be the policy brief development. The policy brief initially was going to be developed after the legalization of three documents (SIZE Roadmap, Integrated Surveillance Guidelines, and 4WL Guidelines), planned for February 2022. However, the legalization process was postponed until the 4WL and Integrated Surveillance pilot implementations are completed at the prioritized district level, as per Gol agreement. Therefore, the policy brief development was delayed and is now planned to be completed in September 2022.
SURV-1.5: Develop/revise 4WL document to revitalize 4WL implementation for various diseases	In progress	IDDS submitted the 4WL Revitalization Guideline to HQ; the document is currently under review before being submitted to USAID. In Indonesia, this guideline will be processed as a legal formal document by Kemenko PMK. IDDS will organize a meeting to finalize this document on July 20–22, 2022.
SURV-1.7: Implementation Pilot of Revitalized 4WL document for various diseases at the cross-sectoral levels	In progress	IDDS prepared the draft of the technical guidance (in Bahasa: <i>Petunjuk Teknis</i>) for Leptospirosis that will be used for field technical staff in the 4WL pilot implementation. To finalize the technical guidance, it is necessary to conduct a meeting with relevant ministries. IDDS has been requested by the Gol to hold an on-site meeting to speed up the process rather than an online meeting. The meeting will be integrated in the activity from SURV-2.1 in FY 2022 Q4.
IDN-GHS-SURV-2: Advance National Surveillance Integration in Indonesia	In progress	
SURV-2.1: Support and facilitate regular Integrated Surveillance SWG	In progress	IDDS, in collaboration with the Directorate General of Disease Prevention and Control and the G20 Committee, conducted the second webinar of the G20 One Health Side Event: “One Health Approach for Prevention, Preparedness, and Response Strategy and Capacity.” The webinar took place on May 13 at the Gran Melia Hotel in Jakarta with 25 participants in person and 61 participants online from the MoH’s Directorate General of Disease Prevention and Control, G20 Committee, related ministries/institutions, Global Health Security Agenda Secretariat, and international partners (World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO),

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		<p>and Australia Indonesia Health Security Partnership (AIHSP)). IDDS participated in the One Health Side Event and Exhibition at Lombok, from June 6–8. This event was attended by the G20 country member representatives. As Indonesia was the host country for G20 this year, IDDS, in collaboration with other GHS partners, supported the MoH to prepare and implement exhibition materials, posters, and video presentations particularly related to SIZE. A total of 366 people joined on-site and hundreds more did so via YouTube.</p> <p>Because of the success at the G20 Lombok, MoH requested that IDDS join the G20 Health Ministerial Meeting preparation meeting to provide exhibition presentations (posters and videos) for the “Road to One Health” Side Event, which was held in Yogyakarta on June 20, 2022.</p> <p>Based on these achievements, Kemenko PMK requested that IDDS attend the coordination meeting to discuss further policy and legal aspects of integrated surveillance and the concept of the One Health Digital Platform. The meeting was held at the Kemenko PMK office on June 30, and attended by 15 participants from Kemenko PMK, IDDS, FAO, and WHO. IDDS proposed the timeline of activities for sustaining the implementation of integrated surveillance that will be conducted in coordination with relevant ministries and institutions and other GHS partners.</p> <p>As mentioned under SURV-1.7, IDDS initially will conduct the meeting to finalize the guidance of Leptospirosis that will be used for technical field staff in the pilot implementation of 4WL and integrated surveillance. The meeting was planned for June 2022, but due to the occurrence of the FMD outbreak in Indonesia, it will now take place in FY 2022 Q4.</p>
SURV-2.8: Support and facilitate the development of cross-sectoral integration surveillance system on	In progress	The Integrated Surveillance Guideline was developed in Q1. In Indonesia, this guideline will be processed as a formal legal document by the Kemenko PMK. IDDS will organize a meeting to finalize this document July 20 to 22, 2022.

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zoonosis IED's and AMR/AMU guideline		
SURV-2.1.1: Implementation Pilot of Integrated Surveillance Guidelines document for various diseases at the cross-sectoral levels	In progress	<p>IDDS, in collaboration with the Directorate of Health Surveillance and Quarantine, MoH, held a preparation meeting for the implementation of Integrated Surveillance Technical Guidance. This meeting aimed to provide input on the "Cross-sectoral Integrated Zoonosis/EIDs Surveillance Guideline" and to formulate an activity plan for the implementation in the pilot area in 2022. The meeting took place on April 1 at Aston Simatupang Hotel, Jakarta and attended by 12 in-person and 5 online participants, including representatives from the Kemenko PMK, MoH, MoA, MoEF, Ministry of Home Affairs, FAO, and WHO. In FY 2022 Q4, the pilot implementation will be conducted in Demak (Central Java) and West Bandung District (West Java).</p> <p>Requested by the GoI, IDDS, in collaboration with the Directorate General of Disease Prevention and Control and WHO Indonesia, conducted a virtual workshop on Leptospira Surveillance and Control using the One Health approach. The webinar took place April 19–21 and was attended by 83 participants (day 1), 75 participants (day 2), and 73 participants (day 3). In this webinar, the ministries involved were Kemenko PMK, MoH, MoA, MoEF, National and Innovation and Research Agency, Global Leptospirosis Environmental Action Network (GLEAN), FAO, and WHO.</p>
IDN-GHS-SURV-3: Support the Development and Operationalization of Sistem Informasi Zoonoses Dan Emerging Infectious Diseases (SIZE) 2.0	In progress	
SURV-3.3: Support the facilitation and reporting of the SIZE CG regular meeting	In progress	IDDS conducted the workshop on SIZE Evaluation for Improving the Capacity of Zoonosis/Emerging Infectious Diseases Detection in collaboration with Kemenko PMK,. The workshop was held online and was divided into three sessions: the first session was for field SIZE users; the second session was for SIZE users at the district and provincial levels; and the third session was for ministries/institutions. The first and second sessions

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		took place on June 28 and the third session on July 4. The workshop was attended by 110 participants in the first session, 53 participants in the second session, and 105 participants in the third session. The evaluation results will be used to create the National SIZE Technology team, which the GoI plans to discuss further at the Ministry of Communication and Information's Data (Recovery) Center with cross-sectoral ministries on July 11, 2022, and another separate meeting in FY 2022 Q4.
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	In progress	The SIZE Roadmap was developed in Q1. In Indonesia, this roadmap will be processed as a formal legal document by Kemenko PMK. IDDS will organize a meeting to finalize this document on July 20 to 22, 2022.
SURV-3.6: Support the development of a regulatory strategy on the operationalization of the SIZE	In progress	IDDS pushed this activity to FY 2022 Q4, which is when the coordination meeting and visit to the Ministry of Communication and Informatics will occur (as explained above, on July 11, 2022).
SURV-3.9: Conduct a training for the team managing SIZE 2.0 (Rabies) on data analytics, data visualization, and reporting	In progress	IDDS, in collaboration with Kemenko PMK, conducted an online workshop to determine the location for One Health/SIZE training. The workshop was conducted online on May 10 and attended by 87 participants including Kemenko PMK, MoH, MoA, MoEF, provincial human health offices (4 priority provinces), provincial animal health offices (4 priority provinces), provincial wildlife health offices (4 priority provinces), AIHSP, FAO, and WHO. In this workshop, each province determined two districts/cities that will

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		<p>serve as pilot locations for the One Health/SIZE training. The determination follows the indicators that have been agreed upon. The selected priority districts are: North Tapanuli and Deli Serdang (North Sumatera), Limapuluh Kota and West Pasaman (West Sumatera), West Sumbawa and Dompu (West Nusa Tenggara), Serang and Tangerang District (Banten).</p> <p>To follow up on the workshop, GoI asked IDDS to organize district training, which will be held in the beginning of August 2022, hosted by MoH Health Training Center of Ciloto in Karawang District. IDDS joined the ToT (Training of Trainers) at Kulonprogo on July 13 to 15. This will serve as preparation for the field training that IDDS and DHO Karawang will conduct, assisted by MoH and Ciloto.</p>
SURV-3.10: Conduct training for OH concept and SIZE 2.0 for technical staff at a district level	Not started	<p>Since SIZE will be upgraded based on the National SIZE Evaluation Meeting on June 28 and July 4, 2022 (explained above), IDDS and FAO with the technology team (including IT and information systems) are focusing on upgrading SIZE 2.0 to SIZE 2.1 and speeding up the training after it is completed in late September 2022.</p>

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KEN-GHS-NTW-I: Enhance national-level multi-sectoral antimicrobial resistance (AMR) detection and surveillance leadership and coordination	In progress	
NTW-I.I: 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	<p>IDDS continued to work with the United States Agency for International Development (USAID)-funded Health IT project to promote and improve the AMR surveillance training course hosted on the MoH virtual academy. Specifically, the project finalized an e-flier, developed jointly with the Health IT project, to publicize the course. This e-flier will be distributed via online social media platforms, National Antimicrobial Stewardship Inter-Agency Committee (NASIC) mailing lists, and other digital platforms and stakeholder meetings.</p> <p>Additionally, the project capitalized on each activity it implemented or participated in to promote the uptake of the course, for example when engaging with the supported countries, or when delivering webinars.</p>

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		IDDS continued to monitor uptake of the course on the virtual academy. A total of 106 learners enrolled to the course in Q3, up from 564 at the end of Q2, bringing total enrollments to 670. As of the end of June 2022, 180 learners (27 percent) had successfully completed the course.
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	Completed	IDDS consulted with the MoH AMR surveillance focal person to determine who should be the signatories for the AMR surveillance course certificates and encouraged the focal person to follow up with the designated signatories to finalize the course certificate. The certificates are now awarded to learners upon satisfactory completion of required modules. The Public Health Officers and Technicians Council accredited the course, becoming the sixth regulatory body to do so. Participants of the course can claim CPD points by submitting the certificate of completion to their respective regulatory body.
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 friendly and interactive, based on feedback received from learners and course managers. The project will also collaborate with Health IT to	In progress	Due to competing priorities, IDDS was unable to record video and audio clips for the course this quarter as was anticipated. However, the project will work with Health IT to record the materials during FY 2022 Q4. Additionally, IDDS will work with Health IT to improve the course by providing refresher training for course managers who are expected to respond to questions from the learners in the interactive online platform, provide additional technical resources to the learners as required, and help learners navigate through the course. The refresher training will enable course managers to provide efficient support to participants and improve the user experience.

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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	IDDS participated in the Murang'a County Antimicrobial Stewardship Interagency Committee (CASIC) workplan implementation progress review. The project highlighted technical assistance to the county under the AMR surveillance strategic objective of the CASIC AMR action plan and areas that required additional investments by the county to fill gaps and ensure sustainability of gains. The technical leads of each of the five CASIC action plan thematic areas highlighted the progress made and challenges from the time the action plan was launched in 2021.
KEN-GHS-NTW-2: Strengthen detection of priority AMR surveillance pathogens at the five IDDS-supported surveillance sites	In progress	
NTW-2.1: Conduct field mentorship visits and provide onsite bench training to the five IDDS-supported counties to reinforce skills and competency on quality assurance, biosafety and biosecurity, organism identification (ID), and antimicrobial susceptibility testing (AST)	In progress	Between May 23 and June 17, IDDS mentored 14 clinical microbiology technologists (6 female) in four IDDS-supported surveillance sites (Bungoma, Kitale, Murang'a, and Nyeri County Hospital Laboratories) on technical skills and laboratory quality management systems (QMSs). These laboratory mentorships entail on-site visits for a minimum of five days per site and involve use of a standardized checklist to monitor progress on quality assurance (QA) of procedures including: internal quality controls, equipment management, inventory control, and adherence to standard practices in pathogen identification and AST. Mentorships provide laboratory technologists with individualized guidance required to strengthen quality improvement efforts for reliable surveillance data. In FY 2022 Q4, IDDS will provide on-site mentorship at Malindi Sub-county Hospital Laboratory.
NTW-2.2: Place surveillance site laboratory technologists in busy laboratories for a week to enhance skills on ID, AST, and quality standards	Completed	This activity was completed in Q2. Throughout Q3, in harmony with other planned activities, IDDS has continued to monitor and mentor the laboratory technologists at their workstations, to ensure continued application and further development of the skills acquired.

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NTW-2.3: Support preventive maintenance of microbiology equipment (i.e., servicing of automated equipment and calibration of select auxiliary equipment) in the five IDDS-supported AMR surveillance sites	In progress	Between April 1 and 5, IDDS provided resources and logistical assistance to the National Public Health Laboratories (NPHL) biomedical engineers to do preventive maintenance and calibration of ancillary microbiology equipment at Murang'a County Referral Hospital Laboratory. The biomedical engineers serviced and calibrated incubators, centrifuges, autoclaves, micropipettes, thermometers, timers, and water baths—all vital in delivering bacteriology testing services. Annual preventive maintenance and calibration guarantees the equipment will continue to operate to specification, while minimizing the risk of unexpected failures. This support also enables the laboratory to remain compliant to requirements of ISO 15189 accreditation for bacteriology tests achieved in June 2021. IDDS issued a purchase order to BioMérieux to service the VITEK 2 compact automated identification and AST instrument at Kitale County Referral Hospital and Malindi Sub-County Hospital laboratories. IDDS anticipates that BioMérieux will service the instruments in FY 2022 Q4.
NTW-2.4: Procure microbiology commodities to supplement county capacity based on the comprehensive list developed during fiscal year 20	In progress	As part of its support to ensure uninterrupted bacteriology diagnostics services, IDDS has identified vendors and awarded purchase orders for bacteriology reagents and consumables for the five supported surveillance sites (Bungoma, Malindi, Kitale, Murang'a, and Nyeri County laboratories). These supplies include dehydrated culture media, AST disks, consumables for specimen collection, culture media plates, biochemical reagents, manual blood cultures, culture vials for automation, and reagents for automated identification and AST. IDDS has received part of these supplies and reagents and distributed them to Nyeri and Murang'a County Referral Hospital laboratories, which had the most pressing needs. Items distributed to Nyeri and Murang'a counties include 3 tins of 500 grams of dehydrated culture media, 500 pieces of culture media plates, 36 cartridges of antibiotics panels each containing 50 disks, specimen collection and packaging material, and biochemical reagents. The remaining items will be received and dispatched in FY 2022 Q4. In addition, IDDS provided logistical assistance to the National Microbiology Reference Laboratory (NMRL) to redistribute antibiotic disks for AST to the five IDDS-supported surveillance sites, to fill gaps where needed, and to minimize wastage through expiries at NMRL.

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NTW-2.5: Provide technical and logistical support to IDDS-supported AMR surveillance sites to acquire automated bacteriology equipment through placement	Completed	With technical advice and logistics assistance from IDDS, Kilifi County entered an agreement with BioMérieux for the placement of automated blood culture equipment at Malindi Sub-County Hospital Laboratory. The Bact/ALERT blood culture equipment was installed between June 20 and 24. On July 5, BioMerieux trained three laboratory staff (one female) to use the automated equipment. This brings the total number of automated bacteriology equipment placed with IDDS support to four instruments (two ID/AST and two blood culture) in four sites.
NTW-2.6: Conduct two webinars in collaboration with other stakeholders on selected aspects of AMR detection and surveillance	In progress	No update: One webinar was held in Q2, and the second webinar is planned for FY 2022 Q4.
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	Dropped	While IDDS has provided support for forecasting and inventory management through procurement and on-site virtual mentorship, IDDS does not have the resources to support the development of formal supply chain management systems and procedures this fiscal year.
KEN-GHS-NTW-3: Provide technical assistance to strengthen utilization of bacteriology testing capacity established at the five IDDS-supported AMR surveillance sites	In progress	
NTW-3.3: Hold a one-day workshop in each IDDS-supported county to train/sensitize specimen	Completed	IDDS provided technical and logistical assistance to sensitize specimen transporters on the handling of bacteriology specimens as part of its efforts to strengthen bacteriology specimen referral. IDDS assisted County Medical Laboratory Coordinators to develop sensitization presentations which they used to train specimen transporters during

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transporters on handling of bacteriology specimens, among other infectious substances		<p>workshops on May 27 in Murang'a and June 16 in Bungoma. A total of 32 transporters (1 female) (Murang'a-12, Bungoma-10) were sensitized.</p> <p>The workshops covered documentation requirements (chain of custody), and the importance of timely pick-up and transportation to ensure viability of the specimen,</p> <p>Some of the specimen transporters are also engaged by the counties as community health volunteers. These individuals were sensitized on the rising threat of AMR in the local setting through these workshops.</p>
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	Completed	<p>On April 26, IDDS collaborated with MTaPS to conduct a sensitization and laboratory-clinical interphase workshop for 30 healthcare workers (16 female) from Malindi Sub-county and Kilifi County Hospitals to promote diagnostic and antimicrobial stewardship across the 2 hospitals. IDDS engaged a clinical pathologist who gave a case-based presentation on proper specimen collection for microbiological testing and diagnostic stewardship opportunities in management of surgical sites and respiratory tract infections. The target audience for this workshop were antibiotics prescribers, pharmacists, and laboratory technologists, all key persons in driving diagnostics stewardship and antimicrobial stewardship at health service delivery points. IDDS conducted similar workshops in Murang'a (June 2), Bungoma (June 17) and Trans-Nzoia (June 8) counties, with a total of 153 health care workers (97 female) from both the bacteriology testing hub health facilities and high-volume sub-county hospitals. In Bungoma, IDDS collaborated with Aga Khan University Hospital. Peripheral health facilities represented included Cherangany and Sabaoti (Trans-Nzoia County), Kimilili, Webuye, Kibabii University, Canon Medical Hospital and St Damiano Mission Hospital (Bungoma County), and Maragua Sub-county Hospital (Murang'a County).</p> <p>IDDS will collaborate with Nyeri County to hold a similar workshop in FY 2022 Q4. A stronger clinical-laboratory interphase has been shown to promote use of diagnostics in other disease programs. The project will continue to advocate for elevation of the diagnostic stewardship agenda as a core component of AMS in the supported counties.</p>

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		<p>On April 28, IDDS participated in a training for the Malindi Sub-county Hospital's Medicines and Therapeutic Committee and Antimicrobial Stewardship Committee which were newly reconstituted. The training was organized by MTaPS targeting members appointed to these committees. IDDS staff participated as technical experts to help guide discussions. Additionally, IDDS helped the laboratory prepare a presentation on AMR surveillance data generated by the Malindi Sub-county Hospital Laboratory in 2020-2021 which was shared for discussion during the meeting. Resistance profiles presented elicited discussions on the need for the clinicians to avoid empirical treatment and embrace evidence-based antibiotics prescription through bacteriology culture requests.</p>
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	In progress	<p>IDDS provided financial resources for transportation to support Bungoma and Murang'a counties to refer bacteriology specimens from high-volume peripheral health facilities to county testing hubs on a pilot basis. This support complemented support from the counties and other implementing partners.</p> <p>In Murang'a County, after consultations with the county, IDDS, the Center for Health Solutions, and AIDS Health Foundation are jointly financing fuel for motorbikes used for specimen transport in the county as a temporary measure while the county identifies reliable funding for the specimen transport system. This gap was prioritized following a stakeholders meeting held on April 5. The county convened the forum to deliberate on the fueling challenge it was facing due to delayed funds disbursement by the national government. Additional measures to mitigate the challenge considered included restructuring of operations to minimize fuel wastage and reduced specimen pick-up frequency. These mitigation activities have started yielding effect, albeit at a small scale.</p> <p>In Bungoma county, IDDS provided financial support for the occasional, ad hoc collection and transport when specimens need to be transferred outside of the existing referral mechanisms.</p> <p>Between March and June 2022, a total of 108 bacteriology specimens were referred to Bungoma County Referral Hospital Laboratory from 4 peripheral health facilities, and 43</p>

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		bacteriology specimens were referred to Murang'a County Referral Hospital Laboratory from 3 peripheral facilities.
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	<p>AMR surveillance sites have routinely been referring bacterial isolates to the NMRL since July 2021 for retesting as an EQA strategy to guarantee the quality of AMR surveillance data. From May 6 to 10, IDDS provided technical assistance to the NMRL to manage bacterial isolates retesting data. This included compiling and reviewing bacterial isolates retesting reports for dispatch to AMR surveillance sites.</p> <p>Isolates are typically referred through established specimen referral mechanisms such as TB and HIV programs. However, IDDS provides transportation support on an as-needed basis.</p> <p>Between January and June 2022, a total of 262 isolates were submitted by 8 of the 12 national AMR surveillance sites. Sixty-one percent of them were submitted by the 5 IDDS-supported sites. This quarter, following a refresher training supported by IDDS in Q2, IDDS observed improvements in supported sites' ability to refer isolates in accordance with the national referral guide and their ability to isolate, identify, and refer uncommon or fastidious isolates such as <i>Streptococcus pneumoniae</i>, <i>Salmonella typhi</i>, <i>Shigella</i> spp. and <i>Acinetobacter baumannii</i>.</p> <p>In FY 2022 Q4, IDDS will provide technical assistance to NMRL to establish a biorepository of the isolates submitted by surveillance sites for further characterization in the future.</p>
KEN-GHS-NTW-4: Strengthen national- and county-level laboratory quality systems, including EQA and internal quality control processes		
NTW-4.1: Provide technical assistance to NASIC to conduct quarterly virtual EQA sessions	In progress	Following a training supported by IDDS in Q2, IDDS continued to monitor EQA and proficiency testing performance for specific pathogens and general bacteriology including antimicrobial-resistant organisms in the five IDDS-supported surveillance sites (Bungoma, Malindi, Kitale, Murang'a, and Nyeri county laboratories). In sites with unsatisfactory

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targeting all AMR surveillance sites in the country		results, IDDS provided technical assistance for proper root cause analysis and corrective and preventive action to avoid recurrence. In FY 2022 Q4, IDDS will provide technical assistance to NASIC to conduct a virtual EQA session targeting all AMR surveillance sites in the country.
NTW-4.2: Provide technical assistance to Nyeri County Hospital Laboratory and Malindi Sub-County Hospital Laboratory to include bacteriology tests (gram stain, culture, and antimicrobial susceptibility tests) in the scope of accreditation by Kenya Accreditation Service (KENAS)	Completed	From May 30 to June 3, IDDS mentored and trained two Nyeri County Referral Hospital laboratory technologists (both female) on aspects of QMS and general QA to prepare the bacteriology laboratory to meet the requirements of ISO 15189:2012 laboratory standards, in readiness for accreditation assessment by the Kenya National Accreditation Services (KENAS). The laboratory was assessed between June 27–29, 2022, to determine its fulfilment of the requirements of the ISO 15189:2012 laboratory standard. KENAS recommended that bacteriology tests be included in the scope of accreditation upon successful closure of the identified non-conformities.
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	IDDS continued to monitor bacteriology testing in the five supported sites. A total of 1,909 bacteriology culture tests were conducted in the five sites this quarter (Bungoma-794, Kitale-484, Malindi-141, Murang'a-267, Nyeri-223), yielding a total of 331 isolates. This brings the total number of tests done since January 2022 to 3,808 with 639 isolates. The commonly tested specimen were blood, urine, pus/wound swabs, and CSF across the five sites. The commonly isolated AMR surveillance priority pathogens for Kenya this quarter were <i>Escherichia coli</i> (71) and <i>Staphylococcus aureus</i> (67). Other priority AMR surveillance pathogens isolated included <i>Klebsiella</i> spp. (27), <i>Pseudomonas aeruginosa</i> (26), and <i>Acinetobacter baumannii</i> (13). At all sites, the identified isolates were subjected to AST, in accordance with the Kenya AMR surveillance strategy and Clinical and Laboratory Standards Institute guidelines on selection of antibiotics for testing.
KEN-GHS-SURV-I: Enhance national- and subnational-level capacity to analyze, interpret, report, and use AMR surveillance data	In progress	

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SURV-1.2: Conduct a two-day visit to each IDDS-supported AMR surveillance site to support site-specific implementation of WHONET by ensuring appropriate installation, data entry, and analysis	Completed	Although this activity was completed with visits to each site in Q2, IDDS continued to provide follow-on virtual support to the five IDDS-supported sites for the use of WHONET for AMR data management and analysis in Q3.
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	In progress	No update: IDDS held the first AMR surveillance stakeholder data review meeting in Q2 and has planned the second semi-annual meeting for FY 2022 Q4.
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	The informatics assistance consultant hired by IDDS and placed at the NPHL continued to review data submitted to the AMR surveillance CDW on an ongoing basis to identify gaps and provide support to fill gaps. Some of the gaps identified included delay or failure to submit data from the county level to the national level due to system downtime in Kitale, server failure in Malindi, and system configuration issues in Nyeri. In all instances, the informatics assistance consultant communicated with the county focal person and the NPHL informatics team to address the identified gaps. Additionally, Malindi County has been manually submitting data due to the server breakdown. Through the informatics assistant, IDDS provided assistance to NPHL to manually enter Malindi's data to CDW.
SURV-1.5: Organize quarterly virtual AMR surveillance data review meetings for AMR surveillance sites, NASIC, and other stakeholders to discuss	In progress	IDDS continued to provide TA through a data clerk to Bungoma Hospital to enter AMR surveillance data on the WHONET statistical software and submit the data to NASIC at the national level. So far, Bungoma has entered all data from 2019 to June 2022 and submitted the data to the national level.

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submitted data and address any quality gaps		
SURV-1.6: Conduct semi-annual AMR surveillance supportive supervision to the sites jointly with NASIC and other stakeholders	In progress	In FY 2022 Q4, IDDS and NASIC representatives will visit the five IDDS-supported sites to review progress in the implementation of AMR surveillance, offer strategic and technical guidance, and hold discussions with the respective counties and hospitals' leadership on AMR prevention and control.
KEN-GHS-SURV-2: Enhance AMR surveillance data quality, sharing, and use within and across sectors and partners	In progress	
SURV-2.2: Support NASIC to develop a quarterly AMR bulletin for the country with a focus on the AMR surveillance content	Not started	This sub-activity must be led and directed by NASIC, which has had competing priorities preventing the development of a quarterly AMR bulletin to date. IDDS is hopeful that NASIC will lead the development of an annual bulletin in FY 2022 Q4, which IDDS will support by drafting articles on AMR surveillance and provide editorial review.
SURV-2.3: Support the development or generation of antibiograms for the five IDDS-supported sentinel surveillance sites	Not started	This sub-activity was planned for FY 2022 Q4. Next quarter, IDDS will work with supported sites to refresh their skills on management of AMR surveillance data using WHONET statistical software. This will be part of the support to the country to clean and analyze data for reporting to the Global Antimicrobial Resistance and Use Surveillance System (GLASS) as well as for use to develop antibiograms at the facility level.
SURV-2.4: Support NASIC to collate, clean, prepare, and submit data to GLASS during the 2022 data call	In progress	In preparation to review data and submit to GLASS, IDDS' informatics assistance consultant has been supporting data reporting from the five IDDS-supported sites to the NPHL as reported under SURV-1.4. In FY 2022 Q4, IDDS will assist representatives of each of the five IDDS-supported sites to prepare and present data at a national AMR forum to be convened by the NASIC in Nairobi. IDDS and the NASIC representatives will visit all the IDDS-supported sites to review implementation progress and hold discussions with respective counties and hospitals' leadership.

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KEN-GHS-SURV-3: Strengthen national- and county-level integration and use of information systems to manage AMR surveillance data	In progress	
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	IDDS continued to provide IT technical support to NPHL and NASIC to manage AMR information systems through an informatics assistance at the NPHL. IDDS continued to work with NPHL to configure CDW for compatibility with WHONET data files. The informatics assistance helped to develop a conversion table to help upload WHONET data from Murang'a and Bungoma to CDW. In FY 2022 Q4, IDDS will continue to provide this support to NPHL.
SURV-3.2: Provide technical assistance to finalize the linkage of the Bungoma County laboratory information system to the CDW to share data in real time	In progress	As reported last quarter, IDDS reconfigured this activity to provide technical assistance to Bungoma County to review the effectiveness and user-friendliness of the current laboratory information system, or LIS (Basic LIS) and explore options for alternative LISs that would have better interoperability with the CDW and for which the NPHL has extensive knowledge and could troubleshoot if linking issues arise. This quarter, IDDS continued to encourage Bungoma County to submit data using WHONET until alternative solutions can be identified.

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LBR-GHS-NTW-I Provide technical assistance (TA) to the National Diagnostic Division (NDD) to support its diagnostic system leadership role.	In progress	
NTW-I.I: 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	<p>IDDS convened a meeting on June 6 with the NDD technical team to discuss the specimen referral system (SRS). IDDS advised the team to review the current specimen referral guidelines and ensure they include an integrated approach for the transportation of all specimen types, which is a more sustainable approach compared to the disease-specific SRSs currently in use in the country. The NDD team welcomed the suggestion and is currently reviewing the guidelines in preparation for a stakeholders' meeting to be held in FY 2022 Q4.</p> <p>At the county level, IDDS provided mentorship to the county diagnostic officers (CDOs) in planning for laboratory activities and assisted in preparation of presentations for the quarterly county health sector coordination meetings. IDDS also provided mentorship to laboratory supervisors in the testing and reporting of results. The mentorship is aimed at ensuring the laboratory diagnostic role in the county is made a priority in both the county health team and hospital management planning by ensuring that clinicians use the laboratory and become confident with the quality of results generated.</p> <p>IDDS conducted a one-day support visit on June 9 to the National Public Health Reference Laboratory (NPHRL) to provide technical assistance on quality management system (QMS) and inventory management. The IDDS operations</p>

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Activity	Status	Activity implementation updates
		<p>manager worked with the NPHRL logistics officer to review the tools used in inventory management and the challenges they encounter in tracking consumption of commodities.</p> <p>There are challenges in QMS implementation at the NPHRL, and IDDS is currently working with the NPHRL Quality Officer to identify areas where they need assistance. In FY 2022 Q4 IDDS is planning to assist in the review of documents and address action items identified in their previous audits.</p>
NTW-1.2: Provide support for the NDD to conduct biannual laboratory review meetings with counties and stakeholders.	In progress	<p>IDDS collaborated with <i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i> and USAID Strategic Technical Assistance for Improved Health System Performance and Health Outcomes to conduct the biannual NDD laboratory review meeting in Monrovia on May 10–11. The three partners collaborated in the two-day review meeting by bringing together diagnostic system technical staff from 14 counties in Liberia, with each partner providing financial support to staff from the counties they support. During the meeting, the laboratories reported on the progress made in activity implementation and shared lessons and best practices with each other. The CDOs and the laboratory supervisors of the participating laboratories were given the opportunity to present on the work they are doing with IDDS. This approach encourages country ownership as they share their progress with their peers. A total of 58 participants (8 female) attended. IDDS provided financial support for 13 participants (1 female). In FY 2022 Q4 IDDS will assist the CDOs in collecting and analyzing testing data for their counties.</p>
NTW-1.3: Provide TA on tracking the implementation of the laboratory strategic plan and policy.	In progress	<p>IDDS convened a meeting with the NDD technical team to review the planned data collection trips and finalize the teams and budgets. The NDD intends to approach partners for financial support to conduct the activity across the 15 counties. IDDS will assist NDD in ensuring data is collected if they get funding from other partners.</p>
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).		

Liberia GHS		
Activity	Status	Activity implementation updates
NTW-3.1: Support the development of county-specific operational frameworks for implementation of Integrated Specimen Transport in the supported counties.	Dropped	The planned specimen transportation pilot for Lofa was cancelled following consultations with the MoH/NDD and the NPHRL as they are considering approaches to better integrate specimen referrals and transport systems across disease areas. As a result, activities NTW-3.1, NTW-3.2, and NTW-3.3 were cancelled and funds were reprogrammed for other activities (NTW-7) in the work plan.
NTW-3.2: Support the procurement of biosafe specimen courier boxes for transportation of bacteriology specimens to Tellewoyan laboratory in Lofa and provide funds to support the transportation of specimens using motorbikes.	Dropped	
NTW-3.3: Support transportation of bacteriology specimens to decentralized bacteriology testing laboratories in Lofa county.	Dropped	
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	In progress	IDDS provided mentorship to the laboratory supervisors and their teams (in the three bacteriology laboratories) on specimen collection with emphasis on collection of bacteriology specimens for isolation of priority pathogens and antimicrobial resistance (AMR).

Liberia GHS		
Activity	Status	Activity implementation updates
Bong, Lofa, and Nimba counties.		
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.	In progress	
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	IDDS mentors—embedded in three county laboratories for six weeks per quarter—have made steady progress to implement QMS. The five district laboratories received on-site QMS mentorship for one week and were left to implement for eight weeks before another one-week on-site mentorship visit during the quarter. The objective of the mentorship visits was to help laboratory staff in addressing the gaps identified during the SLIPTA audits. Ganta United Methodist Hospital Laboratory received on-site mentorship from May 30–June 4, C.B Dunbar May 30–June 3, Foya Boma May 30–June 4, Curran June 6–11, and Bong Mines June 6–11.
NTW-4.2: Develop a SLMTA-based mentorship model for Liberia based on the mentorship being provided in the three counties.	In progress	IDDS developed a draft document of the Strengthening Laboratory Management Toward Accreditation (SLMTA)-based mentorship model, which is currently being reviewed by the NDD. Other implementing partners will review the document in July 2022.
NTW-4.3: Conduct biannual Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) audits to monitor SLMTA implementation in	In progress	IDDS provided financial support to conduct bi-annual SLIPTA audits from April 4–May 4, 2022. Two MoH auditors certified by the African Society for Laboratory Medicine (ASLM) audited seven facilities enrolled in QMS (Phebe, C.B. Dunbar, G.W. Harley, Ganta United Methodist, Tellewoyan, Curran, and Foya Boma hospital laboratories); two of the facilities (Bong mines and Kolahun) did not participate in the audit due to administrative challenges that needed to be addressed by the MoH. The

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Activity	Status	Activity implementation updates
the IDDS-supported laboratories in the three counties.		<p>laboratories have made commendable progress in QMS implementation, increasing their average SLIPTA audit score from a baseline of 52 (19 percent) in March 2021 to 126 (47 percent) in May 2022. Phebe hospital attained a three-star rating (80 percent) in the September 2021 audit but did not complete the audit in May 2022. Tellewoyan maintained the one-star rating (57 percent) attained in September 2021 while G.W. Harley achieved a two-star rating (68 percent) in May 2022 after attaining a one-star rating (64 percent) in September 2021. The five district hospital laboratories did not attain any stars (which requires a score of 150) but there is steady progress in QMS implementation as they continue to address the ISO 15189 requirements. Kolahun Hospital Laboratory still has no laboratory technician.</p> <p>Following the aborted SLIPTA audit in Phebe Hospital, due to disagreements between the laboratory team and the auditors regarding the implementation of risk management and safety activities, the audit team recommended corrective actions, including a QMS refresher training. IDDS provided financial support for a three-day training from June 20–22. This was a facility-based training that emphasized development of sustainable and effective systems where laboratory staff are involved and take ownership of the quality of work produced. The NDD ASLM-certified auditor and the IDDS diagnostic specialist facilitated the training. A total of 18 technicians were trained (3 female). The training focused on translating knowledge of the technical requirements of the SLIPTA checklist into actionable activities.</p>
NTW-4.4: Provide on-line QMS auditor training to five laboratory professionals.	Completed	<p>From June 13–17, IDDS provided technical and logistic support to train five internal SLIPTA auditors from the human health sector while the Food and Agriculture Organization of the United Nations (FAO) collaborated with IDDS and supported training of two central veterinary laboratory staff. A total of seven internal auditors (one female) were trained in Ganta, Nimba. The training was conducted at Ganta United Methodist Hospital and it involved classroom-based teaching and practical sessions where the trainees had to conduct mock audits at two laboratories, Ganta United Methodist Hospital and E and J hospital, both in Ganta. The trainees were taken through the ISO 15189 (medical laboratories), ISO 17025 (animal health laboratories), and the WHO AFRO SLIPTA checklist. The training materials were obtained from the ASLM Training Package for Auditors. Participants were not given training certificates, as they are required to conduct at least two SLIPTA audits</p>

Liberia GHS		
Activity	Status	Activity implementation updates
		together with a certified auditor who will be evaluating them in the field. In FY 2022 Q4, IDDS will support these audits and subsequent certifications by pairing a certified auditor and the trainee in their supported laboratories. Once they successfully conduct the audits and are deemed competent, they will be awarded certificates as internal SLIPTA auditors for Liberia.
NTW-4.5: Enroll facilities conducting bacteriology in an External Quality Assurance (EQA) proficiency testing scheme.	In progress	IDDS advised the NDD and NPHRL to enroll the three IDDS-supported facilities in the WHO AFRO National Institute of Communicable Diseases EQA scheme. In the interim, discussions are ongoing to have the laboratories participate in an interlaboratory comparison program where they exchange specimens and compare results. The interlaboratory comparison will involve four government laboratories: Tellewoyan, Phebe, GW. Harley, and J.J. Dosen Laboratory in Maryland. IDDS is currently developing a protocol that will be used for the interlaboratory comparison process. In FY 2022 Q4, IDDS will support the preparation of EQA specimens for the interlaboratory comparison and send the specimens to the four laboratories.
LBR-GHS-NTW-7 Strengthen capacity to perform and report quality-assured microbiology, including antimicrobial resistance (AMR) detection in the three supported counties.	In progress	IDDS is providing ongoing mentorship to the three bacteriology laboratories on the use of WHONET. Phebe Hospital is consistently reporting to the national level while Tellewoyan and G.W. Harley laboratories will require additional mentorship sessions in FY 2022 Q4.
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	IDDS provided mentorship to four bacteriology laboratory technicians at Phebe and G.W. Harley on the importance of identifying bacterial pathogens and setting up appropriate antimicrobial susceptibility breakpoints, which are critical for patient treatment and policy guidance. IDDS emphasized the importance of fostering a sustainable culture of QA in bacteriology. In FY 2022 Q4 IDDS will support the NDD to provide EQA specimens prepared by the national bacteriology trainer while waiting for the registration of the laboratories into the WHO EQA scheme.

Liberia GHS		
Activity	Status	Activity implementation updates
NTW-7.2: Provide TA on microbiology diagnostic stewardship.	In Progress	<p>IDDS continues to assist laboratory teams in the three supported counties to carry out bacteriology awareness messages to clinicians during the regular grand rounds and to emphasize the importance of collecting specimens before initiating any empiric treatment.</p> <p>To address the challenges of low flow of bacteriology specimens to the laboratories, IDDS convened a meeting on June 22 with the Health Promotions Department in the MoH with the aim of developing awareness materials for bacteriology diagnostic services in their facilities. In FY 2022 Q4, IDDS will support the printing of awareness messages developed together with the Health Promotions Department and NDD.</p>
NTW-7.3: Support procurement of bacteriology reagents and provide contracts for equipment service and calibration.	In progress	A procurement process is ongoing for bacteriology reagents and consumables. IDDS sent out requests for quotes to vendors, who have been responding with their bids.
NTW-7.4: Strengthen bacteriology data reporting to the central level.	In progress	Phebe Hospital has been consistently submitting monthly bacteriology statistics to the AMR Unit while Tellewoyan and G.W. Harley still require further coaching on data quality. A total of 42 bacteriology specimens were processed in the three bacteriology laboratories (Phebe: 21, G.W. Harley: 13, and Tellewoyan: 8) during this quarter. In FY 2022 Q4, the national trainer will mentor G.W. Harley and Tellewoyan on reporting data to the central level.
NTW-7.5: Provide support for electricity for bacteriology work at Tellewoyan and G.W. Harley Hospital laboratories.	In progress	IDDS has been supporting G.W. Harley Laboratory with payment of their laboratory electricity bill and the last payment was made in May 2022. The hospital management have been informed that they need to plan to take over the payment of the laboratory electricity bill.

Madagascar GHS		
Activity	Status	Activity implementation updates
MDG-GHS-NTW-1: Build the capacity of the RESAMAD network personnel at all levels (physicians, biologists, and technicians) on microbiology, sample collection and transport, and quality management.	In progress	
MDG-GHS-NTW-1.1 Support the organization of a 5-day continuous training workshop on medical biology testing with a focus on infectious diseases and priority pathogens.	Completed	<p>IDDS supported the organization of a five-day workshop (May 30 to June 3) on laboratory capacity building with participation of 45 biologists and laboratory technicians (25 female) from the provinces and the capital. The workshop included three days of continuous training on key components of medical biology (hematology, biochemistry, and microbiology).</p> <p>This training also included a quality management component focused on the audit of the RESAMAD (<i>Reseau des laboratoires a Madagascar</i>) laboratory network. The expert in laboratory quality from the Fondation Merieux in Lyon, France led this component of the training.</p>
MDG-GHS-NTW-1.2 Facilitate two 1-day training videoconferences and one in-person workshop on laboratory audits with a view to attaining the Quality Management ISO15189 standard with Fondation Merieux.	Completed	<p>IDDS organized two online training sessions on quality management before the five-day workshop on medical biology, which covered the methods of laboratory quality audits. Participants learned how they could implement this activity in the RESAMAD network.</p> <p>See activity NTW 1.1 for an update of the in-person quality management training.</p>
MDG-GHS-NTW-1.3 Mentor and train senior biologists at five selected sites (Antsirabe, Ambatondrazaka, Fort	In progress	IDDS started discussions about the implementation of site monitoring with five senior biologists (one from each of the selected sites: Antsirabe, Ambatondrazaka, Fort Dauphin, Anosiala, and Fenoarivo). In FY 2022 Q4, IDDS plans to conduct visits to each of the sites for mentoring and training purposes.

Madagascar GHS		
Activity	Status	Activity implementation updates
Dauphin, Anosiala, and Fenoarivo).		
MDG-GHS-NTW-2: Continue to support diagnostic capacity building of laboratories in the Mahajanga Region for bacteriology testing to identify priority pathogens.	In progress	
MDG-GHS-NTW-2.1 Conduct a supportive supervision visit and workshop to continue to strengthen the pre-analytical phases--specimen referral, packaging, transport--in the Boeny Region.	In progress	In June 2022, IDDS organized a meeting with the senior biologists of the RESAMAD network to plan the supervision of laboratories within the network. Supervisory visits will start in FY 2022 Q4.
MDG-GHS-NTW-2.2 Provide basic equipment and reagents to strengthen laboratory capacity (PZaGa and CHUMA labs).	In progress	IDDS discussed the needs of the Boeny region with the head of the Mahajanga laboratory in order to plan the activities that will be carried out during FY 2022 Q4.
MDG-GHS-NTW-3: Support the implementation of the National Laboratory Strategic Plan (NLSP).	In progress	
MDG-GHS-NTW-3.1 Duplicate the NLSP (100 copies) and distribute to stakeholders.	In progress	IDDS obtained three quotes for the selection of the printer to duplicate the national Laboratory Strategic Plan (LSP). A selection of the printer, duplication of the plan, and workshops to disseminate the LSP will take place in FY 2022 Q4.
MDG-GHS-NTW-3.2 Organize one-day monthly meetings and two 1/2 to 1-day workshops to follow up on NLSP implementation.	In progress	IDDS held one-day monthly meetings and will continue to hold this monthly meeting in FY 2022 Q4.

Madagascar GHS		
Activity	Status	Activity implementation updates
MDG-GHS-SURV-1 Provide technical and logistical support to DVSSER to coordinate and harmonize data across vertical programs maintaining diagnostic and surveillance activities.	In progress	
MDG-GHS-SURV-1.1 Support the establishment of a disease surveillance and response steering committee.	In progress	IDDS provided technical and financial support for the establishment of a disease surveillance and response steering committee. This activity started by organizing consultative meetings with stakeholders to develop a national-level AMR surveillance protocol.
MDG-GHS-SURV-1.2 Support quarterly meetings of the steering committee.	Not started	The first meeting of the steering committee is scheduled for the first week of September 2022.
MDG-GHS-SURV-1.3 Organize consultative meetings with stakeholders to develop national-level surveillance protocol, including antimicrobial resistance (AMR).	Completed	The first stakeholder consultative meeting to develop the national AMR surveillance protocol using a One Health Approach was held April 13 and a second meeting took place April 19. A draft of the protocol was produced based on the inputs obtained during these meetings. Participating stakeholders included the Ministry of Health, Ministry of the Environment and Durable Development; Ministry of Fisheries; Ministry of Water, Hygiene and Sanitation; Ministry of Agriculture and Livestock; WHO; FAO; the National Order of Doctors; the National Order of Pharmacists, among others.
MDG-GHS-SURV-1.4 Organize a two-day validation meeting to review the draft AMR surveillance protocol.	Completed	IDDS organized a workshop from June 28 to 30 to review the draft AMR surveillance protocol. The protocol is under review by the MoH.
MDG-GHS-SURV-2: Improve coordination of IDSR by supporting review and dissemination of the monthly integrated disease surveillance and response (IDSR) bulletin.	In progress	
MDG-GHS-SURV-2.1 Support the organization of a two-day	In progress	IDDS organized two workshops, on April 6–7 and on May 19–20 for the review and dissemination of the monthly IDSR surveillance bulletins, thus improving the IDSR coordination.

Madagascar GHS		
Activity	Status	Activity implementation updates
workshop to review IDSR bulletin once a month.		The aim of this bulletin is to communicate the results of the weekly monitoring of health events and diseases to the various actors, so that they can visualize trends, make informed decisions based on the evidence provided, and carry out public health actions. This activity will continue in FY 2022 Q4.

Mali GHS		
Activity	Status	Activity implementation updates
MLI-GHS-NTW-1: Map national diagnostic facilities and their capacities	In progress	
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)	In progress	<p>IDDS worked with the <i>Direction de la Pharmacie et du Médicament</i> (Directorate of Pharmacy and Medication, or DPM) to finalize the terms of reference and budget, and for the mapping of laboratories in the regions not included in the prior mapping exercise. IDDS and DPM also finalized the list of diagnostic facilities that will be mapped by region. As a result, a list of diagnostic structures for all regions is available, and 55 laboratories will be mapped.</p> <p>In FY 2022 Q4, IDDS will work with the DPM to conduct the data collection, organize the data validation, and hold a workshop in Mopti to upload data to the Ona data management software. This activity was pushed to FY 2022 Q4 due to some contractual challenges.</p> <p>Also, IDDS will work with other countries conducting laboratory mapping to organize a regional training for government staff on data analysis using the Ona software. Some delays have occurred due to bottlenecks with budget discussions, mobilization of technical assistance, and delays in strategic discussions with stakeholders, all of which are being actively addressed so that the related sub-activities can start.</p>
MLI-GHSA- NTW-1.2: Hold a data verification and validation session (in Mopti) with data collectors before uploading on to the African Society for Laboratory Medicine (ASLM) platform (continuation of activities started in FY21)	Not started	This activity will start once data collection has been completed.
MLI-GHS-NTW-1.3: Support attendance cost of 1 or 2 government staffs (2 DPM and 1 INSP) to the regional training	Not started	This is a new activity funded with reprogrammed EVD funds. This activity will begin in FY 2022 Q4.

Mali GHS		
Activity	Status	Activity implementation updates
workshop for lab capacity mapping data analysis through ONA platform (country TBD) (new activity)		
MLI-GHS-NTW-2: Strengthen diagnostic equipment systems (procurement, availability, operating status, and preventive maintenance)	In progress	
MLI-GHS- NTW-2.1: Work with the equipment committee to support the development or revision of national equipment policies, guidelines, and standard operating procedures through one meeting every other month (continuation of activities started in FY20)	In progress	IDDS provided technical and financial support to the <i>Institut National de Sante Publique</i> (National Institute of Public Health, or INSP) to hold three meetings (in April, May, and June) of the Multisectoral Committee for Laboratory System Strengthening. The meeting participants were the 15 committee members from the key ministries of the One Health platform. The objectives of the meetings were to: (1) share the activities accomplished by the committee in FY 2021 with the laboratory sub-group of the One Health platform; (2) update a mapping of partners supporting laboratory activities in Mali; (3) share the laboratory mapping report (supported by IDDS) with the committee members; 4) get committee members' inputs regarding the commodities to purchase for the INSP and Segou Regional Hospital Laboratory to fill the gap of commodities for priority diseases detection; and (5) discuss activities that will be accomplished to create the Directory of Laboratories for improved laboratory system coordination. In FY 2022 Q4, IDDS will continue to support the monthly meetings of the multisectoral committee for laboratory system strengthening.
MLI-GHS-NTW-2.2: Provide a limited quantity of testing reagents for priority pathogens for the two IDDS-supported facilities: INSP and the Segou Regional Hospital Laboratory	In progress	IDDS worked with the multisectoral committee to identify the list of the limited quantity of testing reagents for priority pathogens for the two IDDS-supported facilities: INSP and the Segou Regional Hospital Laboratory. IDDS will deliver these testing reagents in FY 2022 Q4. IDDS purchased commodities for COVID-19 gene sequencing which were delivered to INSP in June. IDDS will participate in the official handover ceremony of these commodities in July.

Mali GHS		
Activity	Status	Activity implementation updates
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)	In progress	IDDS provided financial and technical support to the Multisectoral Committee for Laboratory System Strengthening to conduct the first round of biannual equipment maintenance follow-up visits to the regional hospital laboratories (Segou, Mopti, and Sikasso), which received equipment maintenance training with support from IDDS in FY 2019. The purpose of the visit was to evaluate activities accomplished since the training and provide coaching if necessary to laboratories staff. In FY 2022 Q4, IDDS will provide financial and technical support to the Multisectoral Committee for Laboratory System Strengthening to conduct the second round of biannual equipment maintenance follow-up visits to these same laboratories
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	This will be implemented once the laboratory mapping is completed. (See explanation for delays above)
MLI-GHS-NTW-3. Strengthen support for the accreditation process for the serology section at the INSP and the Segou Regional Hospital Laboratory	In progress	
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)	In progress	IDDS met with the quality assurance (QA) department at INSP in May to discuss shifting from the South African National Accreditation System to the West African Accreditation System (<i>Système Ouest Africain d'Accréditation</i> , or SOAC) to align with the West African countries' guideline. At the meeting, it was agreed to make this change, and that moving forward the QMS consultant who has been supporting the IDDS sites will use the SOAC tools. IDDS drafted the terms of reference for the assessment and coaching visits to the two laboratories and the scope of work for the consultant.

Mali GHS		
Activity	Status	Activity implementation updates
		In FY 2022 Q4, IDDS will work with INSP to finalize the terms of reference and organize an assessment and coaching visit for the QMS consultant to INSP and Ségou Hospital.
MLI-GHS-NTW-3.2: Conduct quarterly visits to INSP and the Segou Regional Hospital Laboratory to follow up the implementation of the international QMS expert assessment recommendations (continuation of activities started in FY20)	Not started	This activity will take place after the QMS consultant has undertaken the assessment and coaching visits.
MLI-GHS-SURV-I: 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	In progress	
MLI-GHS-SURV-I.1: Support the communication costs (short message service (SMS) and internet fees) of CBS actors in the health districts of Kadiolo, Kati, and Kangaba (continuation of activities started in FY21)	In progress	IDDS financed the communication costs (SMS and Internet fees) for CBS actors in the health districts of Kadiolo, Kati, and Kangaba to facilitate reporting and follow-up. In Kangaba, community health workers sent nearly 80 percent of the expected SMS reports. However, in Kati and Kadiolo, community health workers sent only half of the expected SMS reports. IDDS is working with the districts to address the low rate of reporting.

Mali GHS		
Activity	Status	Activity implementation updates
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)	In progress	<p>IDDS continued monitoring the quality of the data collected from the health districts of Kadiolo, Kati, and Kangaba.</p> <p>IDDS and the General Directorate of Health and Public Hygiene (<i>Direction General de la Sante et de l'Hygiene Publique</i>, or DGSHP) conducted the first round of supportive supervision and data review visits for CBS in the Kadiolo, Kati, and Kangaba health districts. During these visits, 165 community health workers and 56 community health center directors received supervision and coaching. Additionally, 36 phones were replaced for data reporting. The supervisory visits took place between May 9 and 22. In FY 2022 Q4, IDDS will continue data monitoring and provide technical and financial support to the DGSHP to conduct the second round of supportive supervision visits and data review in the Kadiolo, Kati, Kangaba, Sikasso, and Kolondieba health districts.</p>
MLI-GHS-SURV-1.4: Expand CBS (introduction visit, trainings, and equipment) to two health districts of the Sikasso region (Sikasso, Kolondieba)	In progress	<p>IDDS provided technical and financial support to DGSHP to expand CBS to the Sikasso health district through tool printing, equipment purchasing, and training for 125 staff (87 community health workers, 34 community health center directors, and 4 referral health center staff). The training, held from June 29 to July 7, focused on CBS activity implementation and data reporting.</p> <p>In FY 2022 Q4, IDDS will support DGSHP to expand the CBS to Kolondieba through trainings in that district planned for July.</p>
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	In progress	
MLI-GHS-SURV-2.1: Support health districts in Ségou region to organize two rounds of quarterly IDSR supportive supervision visits to underperforming community	In progress	<p>IDDS provided technical and financial support to Segou region to conduct the first round of biannual IDSR supportive supervision visits to underperforming community health centers. A total of 80 health centers were visited between April 25 and May 20 in Baroueli, Bla, Macina, Markala, Niono, San, Segou, and Tominian. These supervisions aim to improve the quality of health and disease surveillance data reported into the District Health Information System 2 (DHIS2) by verifying the effectiveness of the</p>

Mali GHS		
Activity	Status	Activity implementation updates
health centers (continuation of activities started in FY20)		implementation of IDSR activities, coaching staff, identifying, and correcting deficiencies. For each facility visited, a plan to resolve detected problems was produced. In FY 2022 Q4, IDDS will conduct the second round of biannual IDSR supportive supervision visits to underperforming community health centers.
MLI-GHS-SURV-3: Improve sharing of real-time monitoring information	In progress	
MLI-GHS-SURV-3.1: Provide technical assistance to the DGSHIP 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	IDDS provided financial, technical, and coordination support to the DGSHIP to produce four IDSR bulletins (for February, March, April, and May 2022). All the bulletins were uploaded and shared through to the IDDS-developed surveillance website. In FY 2022 Q4, IDDS will produce and disseminate three bulletins (for June, July, and August 2022).
MLI-GHS-SURV-3.2: Support the DGSHIP internet connection for surveillance document storage and data monitoring through the developed web-based online platform (continuation of activities started in FY21)	Completed	

Mali GHS		
Activity	Status	Activity implementation updates
MLI-GHS-SURV-3.3: Support the DGSHP to hold two online training sessions for surveillance officers in the different regional health directorates (DRS: Direction Regionale de la Santé) on the use of the web-based platform	Not started	In FY 2022 Q4, during July and August, IDDS will support the DGSHP to hold the first online training session for surveillance officers in the different regional health directorates on the use of the web-based platform developed with IDDS support for surveillance information and document sharing. This training that was planned for Q3 was delayed due to DGSHP staff having competing priorities.

MENA DNA		
Activity	Status	Activity implementation updates
MENA-NTW-1: Development of DNA assessment tool that incorporates key components of the IDDS TB-DNA, ASLM Survey on Laboratory Capacity and other assessment tools	Completed	
NTW-1.2: Assemble DNA tool working group to develop framework for new DNA tool	Completed	The subject matter expert working group that IDDS assembled in Q2 developed a second draft of the Middle East and North Africa (MENA) diagnostic network assessment (DNA) tool, including eight core capacities, to better align with the scope of work objectives for the activity and incorporate feedback received from USAID. This was accomplished by adapting key questions from international assessment tools, including the IDDS TB-DNA and the World Health Organization (WHO) Laboratory Assessment Tool. The revised MENA DNA tool includes a score card system like that used by the IDDS TB-DNA tool for determining the diagnostic network ability to respond to emerging disease threats. After final review and approvals are received from USAID, IDDS will translate the MENA assessment tool into Arabic, input it into an electronic format (e.g., Airtable), and prepare an assessor's manual, training materials, and assessment scope of work documents.
MENA-NTW-2: Finalize the IDDS MENA DNA tool	Not started	
NTW-2.1: Pilot assessment to validate the IDDS developed MENA DNA tool in one selected MENA country	Not started	After the draft DNA tool is approved, IDDS will plan pilot DNA assessments in two of the MENA countries chosen in collaboration with USAID in 2022. Due to a condensed timeline, assessor training, data collection, and self-assessments will be carried out simultaneously, followed by verification visits to both MENA countries. Lessons learned and best practices from the pilots will be incorporated into the final MENA DNA tool.
MENA-NTW-3: Perform MENA DNA assessment using finalized tool in selected USAID priority countries	Not started	

MENA DNA		
Activity	Status	Activity implementation updates
NTW-3.1: Conduct MENA DNA assessments in selected countries	Not started	IDDS will implement the planned MENA DNA under this work plan as part of the piloting of the MENA DNA tool. After the pilot DNA assessments are finalized, IDDS will deliver a final version of the MENA DNA tool, assessor manual, and training materials that can be used for future assessments in selected countries at the direction of USAID.
NTW-3.2: Provide detailed MENA assessment report	Not started	The final DNA reports, including evidence-based recommendations for the two MENA assessments, will be delivered by the end of 2022. At the conclusion of the program, IDDS will transfer the MENA DNA tool, assessor manual, and all training materials to USAID.

Senegal GHS		
Activity	Status	Activity implementation updates
SEN-GHS-NTW-I: Strengthen capacity of IDDS-supported laboratories for implementation of the National Standard Operating Procedures (SoPs) for AMR Surveillance	In progress	
NTW-I.1: Provide equipment, microbiology reagents, and consumables to two new diagnostic facilities in order to have adequate commodities for AST	In progress	IDDS completed the assessment report of capacities and needs of two new laboratories, Polyclinique Medina and Mbour, and sent the report to the Directorate of Laboratories for review/validation, and subsequently to IDDS HQ for technical review. Based on the assessment findings, IDDS developed a procurement plan to support the two new laboratories to start performing bacteriology tests, including antimicrobial susceptibility testing (AST). IDDS completed the selection of vendors, and three local vendors were selected as finalists: MN Distribution, SSM, Sotelmed. Quotes have been received, evaluated, and validated from the three vendors. The purchase orders were sent to each vendor based on the specific items they will procure. Delivery is anticipated between late July and early August 2022.
NTW-I.2: Provide technical assistance to two newly supported diagnostic facilities to adapt and implement the National SOPs for AMR	Completed	A workshop was organized at the National Public Health Laboratory (NPHL) in Thies from June 22 to 24 to review and adapt the national AMR SOPs to each of the two new laboratories. It was attended by six staff from Mbour and Medina laboratories (three from each). The workshop was facilitated by Pr Roughy Ka, microbiologist from the Directorate of Laboratories, Dr. Sakho, head of Tivaoune laboratory, and Dr. Faye, Head of Linguere laboratory. These facilitators were part of the team that worked on the development of the national SOPs for AMR detection and surveillance in FY 2021. At the end of the workshop,

Senegal GHS		
Activity	Status	Activity implementation updates
		each laboratory completely adapted the 54 national SOPs for AMR detection and surveillance to its specific context and now has their own SOPs available for printing.
NTW-I.3: Support the Directorate of Laboratories to conduct hands-on training of lab personnel on AMR detection and surveillance in two new facilities	Completed	The training of laboratory personnel on AMR detection and surveillance was organized at the NPHL in Thies from June 27 to July 1. The training was attended by staff from the two new laboratories (Medina and Mbour) as well as staff from the seven laboratories IDDS has been regularly working with (Kaffrine, Linguere, Richard Toll, Roi Baudouin Guediawaye, Tivaouane, and Touba Ndamatou). Two staff were trained from each laboratory; there were 18 participants (9 female) in total. Staff from seven previously supported laboratories were trained this year because of the high turnover noticed in the facilities. The trainers from the national level (public and private sectors) and other partners (i.e., Pasteur Institute) participated. The first three days of the training were done in a plenary session. The two last days were dedicated to the practical exercises in the bacteriology laboratory of the NPHL.
SEN-GHS-SURV-I: Increase the capacity of IDDS-supported sites to report high quality AMR data electronically, completely, and on time	In progress	
SURV-I.1: Provide TA and training to the designated facilities for AMR surveillance to begin reporting AMR data electronically	In progress	Training of the nine IDDS-supported facilities, including the two new facilities, on DHIS2 software and AMR reporting is planned for July.
SURV-I.2: Conduct supportive supervision of IDDS-supported laboratories on DHIS2 reporting of AMR data	In progress	Supportive supervisions of the laboratories were postponed to first organize the workshops for the adaptation of national SOPs for AMR detection and surveillance by the two new laboratories and the hands-on training on AMR detection and surveillance. The supportive supervisions will be organized in FY 2022 Q4.

Senegal GHS		
Activity	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	In progress	
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	IDDS organized a training of medical officers, surveillance officers, and data managers of the seven health districts of the Tambacounda Medical Region (Bakel, Dianke Makhani, Goudiry, Kidira, Koumpentoum, Maka Colibantang, Tambacounda) held in Tambacounda from June 28 to July 2. It was attended by 39 staff (17 female). This activity was resumed after a two and a half month-long strike in the health sector. The Kolda and St Louis regional training sessions will take place in FY 2022 Q4.
SURV-2.2: Support quarterly data review meetings at the regional level	Not started	A data review meeting will be organized in Kedougou region in FY 2022 Q4.
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	In progress	<p>A joint (IDDS and MoH) supportive supervision of the three health districts of Kédougou Medical Region was conducted from April 19 to 23. This follows a training that IDDS organized in March for all the surveillance officers in three districts.</p> <p>This kind of activity had not previously been organized by the MoH—IDDS provided them with technical assistance and logistical support to organize the training, which is very impactful for the surveillance system. Previously, surveillance officers would collect information and send to the MoH; they did not have the capability to check the data and assess the quality of the data they were reporting to the MoH.</p> <p>The surveillance officers started applying the lessons learned by cleaning the weekly data that are reported by nurses before submission to the MoH. The Regional Surveillance Officer who was part of the supervision team will continue supporting the surveillance officers. Supportive supervision visits are planned for Tambacounda, Saint Louis, and Kolda regions in FY 2022 Q4.</p>

Tanzania GHS		
Activity	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.	In progress	
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	Completed	In April and May, IDDS procured standard organisms to support quality control and assurance for culture and antimicrobial susceptibility testing (AST) at four IDDS-supported sites: Benjamin Mkapa Hospital, and Maweni, Morogoro, and Temeke Regional referral hospitals. Additionally, IDDS ordered microbiology laboratory commodities including gram stain kits, agar, rabbit plasma, antibiotic sensitivity discs, and blood/universal culture bottles to support uninterrupted culture and AST for priority pathogens at the four supported sites. IDDS provided logistics support to deliver the commodities to the four supported sites.
NTW-1.2: Conduct bi-annual onsite mentorship programs with integrated supportive supervision on supply chain and inventory	Completed	IDDS enabled (through financial support) the National Public Health Laboratory (NPHL) to conduct on-site supportive supervision on supply chain and inventory management from June 6–10 at the 4 IDDS-supported sites to reinforce and sustain the best practices introduced by IDDS in past quarters. The supportive supervision visits occurred at Maweni Regional Referral Hospital in the Kigoma region, Morogoro Regional Referral Hospital in the

Tanzania GHS		
Activity	Status	Activity implementation updates
management for laboratory supplies required for AMR testing.		Morogoro region, Temeke Regional Referral Hospital in the Dar es Salaam region, and Benjamin Mkapa Hospital in the Dodoma region. IDDS staff participated in these visits to provide technical assistance to the NPHL and mentorship to laboratory staff. The laboratory technicians working in the microbiology unit and quality and biosafety/biosecurity officers in each of the hospitals received the supportive supervision IDDS also used these Q3 site visits to follow up on the corrective action plans developed after a round of supportive supervisions was carried out in previous quarters.
NTW-I.4: Support annual microbiology commodity forecasting and quantification meeting. (IDDS will incorporate input from the national quantification team and laboratory experts from AMR surveillance sites during the quantification exercise.)	In progress	This activity is planned for in July 2022. This quarter IDDS started preparations for this meeting by seeking authorization from the MoH.
NTW-I.5: Support annual preventive maintenance, minor repairs (as needed), and calibration of main equipment in the microbiology laboratory at the IDDS-supported sites.	In progress	In April 2022, IDDS engaged the Tanzania Bureau of Standards to conduct visits to calibrate laboratory equipment at Benjamin Mkapa Hospital in Dodoma Region and Maweni Regional Referral Hospital in Kigoma Region. At Benjamin Mkapa Hospital, the Tanzania Bureau of Standards serviced two autoclaves and one incubator. At Maweni Regional Referral Hospital, the Tanzania Bureau of Standards serviced one autoclave and one incubator. IDDS anticipates that the Tanzania Bureau of Standards will complete this activity by providing calibration services for Temeke Regional Referral Hospital Laboratory in Dar es Salaam in July.
NTW-I.6: Assist the NPHL to provide proficiency testing and external quality assessment (EQA) materials to participating	Completed	Completed in Q2. Enrollment of IDDS-supported sites into the NPHL's EQA program is expected to provide evidence to demonstrate impact of the work that IDDS has supported in these sites (such as conducting laboratory capacity assessments, capacity building through trainings, developing SOPs, conducting mentorships, procuring laboratory supplies, and supporting reporting of

Tanzania GHS		
Activity	Status	Activity implementation updates
laboratories including IDDS-supported sentinel sites.		AMR data to national level). Additionally, EQA of site performance ensures that data from the sites can be trusted and used for policy and clinical decisions.
TZA-GHS-SURV-1: Enhance AST performance, AMR data collection, analysis and reporting on urine, blood and wound specimens at IDDS-supported sites	In progress	
SURV-1.1: Conduct bi-annual onsite mentorship programs with integrated supportive supervision on clinical sample collection, handling, culture, AST, result reporting, and archiving	Completed	IDDS provided financial, technical, and logistic support to the NPHL to conduct on-site supportive supervision on laboratory testing and reporting procedures for AMR from June 6–10, at the four IDDS-supported sites. The NPHL used the supportive supervision checklist, developed by IDDS in FY 2021, and addressed both diagnostic and surveillance topics during the visit. The supportive supervision visits were followed by mentorship provided at the four sites by mentors from the NPHL (3) and Catholic University of Health and Allied Sciences (1) on laboratory procedures from AMR specimen collection to results reporting. Mentorships took place from June 13–22, with a total of 8 mentees (5 female), including laboratory technicians working in the microbiology unit and quality and biosafety and biosecurity officers from each of the hospitals.
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 definition for culture and AST in urine, blood, and wound-site specimens	In progress	Based on the outputs from the workshop held in Q2, IDDS further refined and edited the standards, case definitions, and patient eligibility criteria for culture and AST of blood, wound site (pus), and urine specimens. The report is undergoing technical review by IDDS, and submission to USAID is anticipated in August 2022.

Tanzania GHS		
Activity	Status	Activity implementation updates
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	Completed	<p>IDDS participated in technical group meeting April 12–14, to discuss the progress toward implementation of international health regulations and achievements toward global health core capacities at the country level. The meeting took place in Arusha and was organized by the Global Health Security Partnership and the MoH.</p> <p>IDDS also participated in a high-level global health partnership meeting on capacity building of experts and implementation of activities to improve disease surveillance and laboratory systems that took place in Arusha from May 25–27.</p> <p>These meetings are important to highlight and contextualize the contributions the project is making in strengthening the country's GHS capacities and aligning future work plans to national strategic priorities.</p>
TZA-GHS-SURV-2: Pilot AMR surveillance at the community level	In progress	
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	In progress	<p>IDDS appraised the referral mechanisms for sending specimens from peripheral facilities to the supported regional referral hospitals for bacteriology testing and found that the mechanisms were not well established, which hindered efforts to increase the volume of bacteriology and AMR testing.</p> <p>In FY 2022 Q4, IDDS will continue to collaborate with the AMR surveillance sites and the MoH to explore ways to strengthen referral mechanisms to improve access to testing and ensure the volume and quality of the AMR data from the community is adequate to provide meaningful analyses.</p>
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)	In progress	<p>On June 24, IDDS participated in the quarterly meeting of the Multisectoral Coordination Committee to discuss implementation of the National Action Plan (NAP) for AMR. During the meeting, held in Dar es Salaam, IDDS presented on project achievements and progress toward the implementation of the FY 2022 work plan. Additionally, the Multisectoral Coordination Committee presented and led a discussion on AMR data from all AMR surveillance sites in the country, including the four IDDS-supported sites.</p> <p>AMR data from IDDS-supported sites will contribute to the national AMR data to be reported to the Global Antimicrobial Resistance and Use Surveillance System (GLASS) between June and October 2022. In FY 2022 Q4 IDDS will coordinate with the coordination committee to prepare the data for submission.</p>

Tanzania GHS		
Activity	Status	Activity implementation updates
TZA-GHS-SURV-3: Enhance AMR data quality for reporting and use at subnational, national, and global levels	In progress	
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	No updates for this quarter. The next data review meeting is planned for FY 2022 Q4.
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	In progress	IDDS modified this activity to be biannual instead of quarterly to better align with the support provisioned under SURV-3.1. IDDS completed the first data review meeting and report in Q2. IDDS plans to conduct the second review meeting in July 2022. A data quality report will be drafted shortly after the review meeting.
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	IDDS planned to harmonize this activity with SURV-3.1: Data quality assessment reviews. The first review was held in Q2, and the second review is planned for July. IDDS will use the high-quality data resulting from the FY 2022 Q4 review session to develop site-specific antibiograms.

Tanzania GHS		
Activity	Status	Activity implementation updates
SURV-3.4: Conduct quarterly data collection to track progress of AMR activities and facilitate quarterly reporting	In progress	IDDS provided financial and technical assistance for collecting data to track progress of AMR activities in the four IDDS-supported sites. IDDS collected data in accordance with the indicators stipulated in the USAID IDDS monitoring and evaluation plan. Data from this collection exercise will be captured and reporting in the Q3 report.
TZA-GHS-SURV-4: Support implementation of National AMR Surveillance Framework in animal health surveillance sites	In progress	
SURV-4.1: Review veterinary AMR surveillance sites listed in the NASF and identify one site for IDDS to support	Completed	Completed in Q2.
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	In progress	IDDS completed the assessment report on selected veterinary AMR surveillance sites (Dodoma and Iringa veterinary laboratories). The assessment reviewed established laboratory and surveillance capacity, equipment and supply needs, current personnel capacity, and training needs. The report is under review at IDDS headquarters, and its submission is anticipated in August 2022.

Uganda GHS		
Activity	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)	In progress	
NTW-4.4: Hold a training on auditing management systems based on ISO 19011:2018 for national laboratory staff	In progress	IDDS completed logistic and technical planning for this training. The training is scheduled to take place in July 2022.
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	Completed	IDDS conducted on-site mentorship visits from April 24 to May 7 focusing on process requirements for laboratories. As part of the effort to implement quality management systems (QMSs) based on the ISO 17025:2017 standard, one of the pertinent pillars is controlling laboratory processes to ensure the validity of the results. Using the model specified in the mentorship toolkit, 4 teams of 2 QMS experts each were stationed at each of the 4 RADDECs for 10 days to support the laboratories in implementing requirements for clause 7, which focuses on process requirements during QMS implementation. The QMS experts were also tasked with verifying progress made by the RADDECs to implement improvement projects and activities toward meeting the requirements established in clauses 4 (General Requirements), 5 (Structural Requirements), and 6 (Resource Requirements). A total of 18 people (4 female) received mentorship from this activity. This activity builds on the process requirements, while also ensuring that all other requirements of the standard implemented in the previous mentorships are aligned,

Uganda GHS		
Activity	Status	Activity implementation updates
and follow up on the process improvement plans from the third cycle of mentorship (conducted under NTW-4.1)		and evidence is available to satisfy the ISO 17025:2017 clauses. In FY 2022 Q4, an internal audit will be conducted at the four RADDECS to evaluate the implementation of all the mentorship cycles based on ISO 17025:2017.
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	Completed	<p>IDDS, working together with the quality department of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), the National Livestock Resources Research Institute, and the Uganda Wildlife Authority, conducted a statistical process control training of quality managers on April 4–14 to fulfill some of the ISO 17025:2017 requirements. The training addressed uncertainty of measurement and method and equipment verification and validation.</p> <p>A total of 11 participants (3 female) were trained from the regional animal health laboratories of Gulu (1), Moroto (1), Mbale (1), Mbarara (1), national animal health laboratory NADDEC (3), the Uganda Wildlife Authority's Queen Elizabeth National Park Veterinary Laboratory (1) and a research laboratory of the National Livestock Resources Research Institute (3).</p>
NTW-4.8: Hold a training on annual management review for the four IDDS-supported RADDEC	In progress	This activity is scheduled to be completed in August 2022. IDDS initiated the Initial planning process with MAAIF and district leadership.
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	This activity is scheduled to be completed in FY 2022 Q4. This is the key deliverable that will be implemented once all the mandatory trainings have been completed. This sub-activity is scheduled to take place in the last two weeks of August 2022.

Uganda GHS		
Activity	Status	Activity implementation updates
UGA-GHS-SURV-6: Improve surveillance and data analysis of priority zoonotic diseases in the animal health sector at four selected district sites	In progress	
SURV-6.2: Pilot new data entry and analysis database tool in four selected districts	Completed	The pilot of the electronic data entry and analysis tool, which took place in Gulu, Mbale, Mbarara, and Moroto, was completed in March, and in Q3 IDDS gathered users' feedback on the tool (completed June 2022). The feedback will be used to update the tool before it is adopted as a national tool for indicator-based surveillance in FY 2022 Q4.
SURV-6.3: Review and update the electronic system based on feedback and observations from pilot	In progress	IDDS hired a consultant to review the pilot data gathered in Q2 on the use of the new data and analysis entry tool. A meeting was held on April 21 to review the feedback gathered from the pilot with district veterinary staff and key senior veterinary epidemiologists, data managers, and animal production staff from MAAIF participating in the meeting. The meeting highlighted key areas that were critical and needed to be included in the upgraded system. Although the meeting didn't resolve all the suggestions, this process continued through the end of June 2022. With the suggestions provided, the activity will be completed and disseminated to key stakeholders in FY 2022 Q4.
SURV-6.4: Support Trainer of Trainers (TOT) on data analysis and use at the national level	Completed	An IDDS consultant supported the training of trainers (ToT) in data analysis of animal health surveillance data, held in Jinja from May 23 to 27. Nine staff (two female) from the Department of Animal Health within MAAIF were trained. The ToT built national-level capacity to analyze data and established a team of national trainers that will cascade the skills in data analysis to other ministry and district staff.
SURV-6.5: Support the training of veterinary staff from the four selected districts on data analysis, routine data quality assessment, and use	Completed	The training of district veterinary staff was conducted in Jinja by the national trainers who cascaded the knowledge acquired during the ToT data analysis activity above. A total of 15 participants (5 female) were trained in data analysis and routine data quality assessment from June 13 to 17. The trainees were veterinary staff from the districts of Gulu, Mbale, Mbarara, Moroto, and staff of the One Health Coordination Office.
SURV-6.6: Conduct geo-spatial mapping of GHS	In progress	The activity will be completed in July 2022 and disseminated to key stakeholders in FY 2022 Q4.

Uganda GHS		
Activity	Status	Activity implementation updates
partner support in IDDS-supported regions		
SURV-6.7: Hold first data review meetings at national level	In progress	This activity is scheduled to be completed in FY 2022 Q4. IDDS initiated discussions with MAAIF through a planning meeting and the key stakeholders have been contacted. The national review meeting is scheduled for the second week of August 2022.
SURV-6.8: Hold data review meetings at four districts	In progress	This activity is scheduled to be completed in FY 2022 Q4. The planning process with MAAIF and the district animal health staff for the data review meeting is underway and the meeting is scheduled for the last week of August 2022.

Vietnam GHS		
Activity	Status	Activity implementation updates
VNM-GHS-NTW-1. Strengthen the Human Specimen Referral System (SRS)	In progress	
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	<p>To enhance the operation quality of the specimen referral system (SRS) in all three project provinces, IDDS negotiated and finalized the contract with a professional courier company with a nationwide delivery network (Nhat Tin Logistics company, or NTL) to establish a specialized service for specimen referral with customized transport conditions, routes, and procedures. IDDS organized training for the courier company's drivers, warehouse staff, and other relevant personnel on specimen packaging, transport requirements, and incident handling during transportation. A total of 89 courier staff (46 female) were trained between June 2 and 26 across the three provinces (Binh Dinh, Dong Thap, and Thai Nguyen) and in Can Tho and Ho Chi Minh City.</p> <p>In Binh Dinh province, IDDS provided refresher training on specimen packaging and incident handling on April 6 for 30 participants (11 female) including Provincial Center for Disease Control (PCDC) staff (8), district health center (DHC) staff (19), Binh Dinh General Hospital staff (2), and courier company delivery staff (1).</p> <p>IDDS conducted supportive supervision visits to the three SRS pilot provinces (Binh Dinh, Dong Thap, and Thai Nguyen) to facilitate the initiation of the SRS.</p> <ul style="list-style-type: none"> • IDDS visited Dong Thap province on April 28. IDDS team monitored and provided technical support to Dong Thap PCDC and two DHCs (Thanh Binh DHC and Hong Ngu DHC) during the visit. • IDDS visited Binh Dinh province on June 29 to provide mentorship to Binh Dinh PCDC and Tuy Phuoc DHC. • IDDS visited Thai Nguyen province on June 16 and provided technical support to Thai Nguyen PCDC and two DHCs (Dong Hy DHC and Vo Nhai DHC).

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Activity	Status	Activity implementation updates
		<p>The areas of technical support that IDDS provided included specimen packaging, SOPs, and the use of the specimen data management software.</p> <p>IDDS organized meetings with each of the PCDCs and NTL on June 22 in Dong Thap, on June 29 in Binh Dinh, and on June 16 in Thai Nguyen to introduce the newly established service and discuss optimal operation procedures and requirements of relevant parties.</p> <p>In FY 2022 Q4, IDDS will continue to provide support on implementing proper specimen packaging and transport in all three pilot provinces and work with NTL to further discuss terms on the development of specimen referral service to enhance the performance of SRS. IDDS will also continue to provide SRS materials (e.g., packaging materials and spill kits) to relevant parties as needed.</p>
NTW-I.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	In progress	<p>IDDS held a preliminary introductory meeting with the Medical Services Administration and Department of Health Insurance of Vietnam within the Ministry of Health (MoH) to discuss key SRS issues, the processes needed to integrate SRS into Social Health Insurance (SHI), timing, and next steps for SRS advocacy workshops.</p> <p>IDDS liaised with the Department of Health Insurance to serve as the focal point for SHI advocacy.</p> <p>IDDS organized meetings with provincial health departments of Thai Nguyen and Binh Dinh provinces to engage them in SHI advocacy efforts.</p> <p>In FY 2022 Q4, IDDS will continue engaging with provincial health departments in IDDS-supported provinces and organize a workshop with MoH departments and the Vietnam Social Security Agency that governs the SHI budget to discuss issues related to SHI and the need for a roadmap toward SHI coverage of specimen referral costs.</p>
NTW-I.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	Sub-activity NTW-I.10 is pending completion of NTW-I.8 and planned to start in FY 2022 Q4.

Vietnam GHS		
Activity	Status	Activity implementation updates
NTW-1.11. Refine the human SRS based on results from the pilot and make recommendations for scale-up/application of the system to additional provinces/sites	Not started	Sub-activity is pending completion of NTW-1.8 and NTW-1.11 is planned to start in FY 2022 Q4.
VNM-GHS-NTW-2. Strengthen the Animal SRS	In progress	
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	<p>The updates on this activity are analogous to those on NTW-1.8, because the SRS pilots in the human health and animal health sectors are conducted in parallel; in other words, similar activities are done in each sector, but a separate SRS is being set up for each sector independently because the stakeholders/overseeing agencies are different.</p> <p>In Binh Dinh province, IDDS provided specimen packaging and incident handling refresher training on April 5 to 27 participants (16 female) including staff from the Sub-Department of Animal Health (SDAH) (13), district agricultural services centers (ASCs) (11), and the courier company (3).</p> <p>IDDS conducted supportive supervision visits in three pilot provinces (Dong Thap, Binh Dinh, and Thai Nguyen) to evaluate the current performance of the animal health SRS .</p> <ul style="list-style-type: none"> • IDDS visited Dong Thap province on April 27 and provided technical support to SDAH and two district animal health centers (Lai Vung ASC and Chau Thanh ASC) during the visit. • The visit to Binh Dinh province was conducted on June 28, and IDDS provided technical support for SDAH and Phu Cat ASC. • IDDS visited Thai Nguyen province on June 17 and provided technical support to SDAH and two district animal health centers (Phu Binh ASC and Song Cong ASC). <p>The areas of technical support IDDS provided to the three provinces include specimen packaging, SOPs, and the use of the specimen data management software.</p> <p>IDDS organized meetings with SDAHs in each province and NTL to introduce the newly established service and discuss optimal operation procedures and requirements from relevant parties.</p>

Vietnam GHS		
Activity	Status	Activity implementation updates
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	Sub-activity NTW-2.8 is pending completion of NTW-2.7 and is planned to start in FY 2022 Q4.
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	Sub-activity NTW-2.9 is pending completion of NTW-2.7 and planned to start in FY 2022 Q4.
VNM-GHS-SURV-1. Increase use of Vietnam Animal Health Information System (VAHIS)	In progress	
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	<p>IDDS provided technical support to the five pilot provinces in completing assessments on the needs to extend VAHIS to the district level. Four provinces have completed the assessment. In a province where the district agencies agreed to extend VAHIS use to the district level, the agencies assigned focal points to the reporting tasks. Khanh Hoa Province completed the assessment and assigned VAHIS focal points in all nine districts of the province. Binh Dinh Province decided to extend VAHIS use to all districts in this period and assigned 11 focal points at district level. Thai Nguyen province also decided to extend VAHIS use to three districts and assigned focal points for these areas. Can Tho city decided to extend VAHIS use to all districts of the city and assigned eight focal points. Dong Thap SDAH organized a consultation meeting with district agencies related to animal disease reporting and has not yet decided on which agency will take charge of reporting disease data on VAHIS.</p> <p>IDDS provided technical support to the epidemiologists at provincial and regional levels to review animal disease reporting forms and prepared a draft of outbreak investigation forms for</p>

Vietnam GHS		
Activity	Status	Activity implementation updates
		<p>district and commune animal health staff. The Animal Health staff will continue discussions to finalize these forms.</p> <p>In FY 2022 Q4, IDDS will continue to provide technical support for the operationalization of the pilot VAHIS use enhancement plan and support provincial and regional animal health agencies to improve VAHIS reporting timelines, completeness, and accuracy. As part of this plan, IDDS will coordinate with the Department of Animal Health (DAH), RAHOs, and selected SDAHs to develop tools to support commune and district staff reporting animal disease data and training for district staff on data collection and using VAHIS.</p>
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	<p>IDDS worked with DAH and Regional Animal Health Offices (RAHOs) to organize five regular bi-monthly meetings to review the situation on the use of VAHIS in the five project provinces (Thai Nguyen, Binh Dinh, Khanh Hoa, Can Tho and Dong Thap). The meetings were organized from June 3 to 7. In the meetings, the surveillance staff at provincial, regional, and national levels reviewed the VAHIS with focus on issues related to data entry and data exportation and possible solutions to improve animal disease data collection. Epidemiologists at national and regional levels helped identify some data entry errors of provincial SDAH staff. Participants also discussed the plan to extend VAHIS use to district level.</p> <p>IDDS collaborated with DAH and RAHOs to organize three regular virtual quarterly meetings on June 29 and 30 to review animal disease data reported in VAHIS.</p>
SURV-1.9. Evaluate and refine the model for strengthening VAHIS use at regional, provincial, and lower levels	Not started	Sub-activity SURV-1.9 is pending on the completion of Surv-1.7 and 1.8 sub-activities and planned to start in FY 2022 Q4.
VNM-GHS-SURV 3. Support event-based surveillance (EBS) using One-Health approaches	In progress	
SURV-3.6. Monitor and provide technical assistance to the two	In progress	IDDS continued to provide virtual support to provincial and district surveillance staff on recording and classifying event-based surveillance (EBS) signals/events to improve accuracy and coverage in Dong Thap and Thai Nguyen provinces. After the supportive supervision visit to the

Vietnam GHS		
Activity	Status	Activity implementation updates
existing pilot provinces (Dong Thap and Thai Nguyen), including online support/coaching and on-site supportive supervision		two provinces in March, the number of reported EBS events of public health concern has increased significantly in Dong Thap province, but decreased in Thai Nguyen province, compared to the respective numbers for Q2. In Q3, 190 EBS events were reported from all 12 districts of Dong Thap province, and 29 EBS events were reported from 4 out of 9 districts of Thai Nguyen province (Note: in Q2, 107 EBS events were reported from all 12 districts of Dong Thap province, and 100 EBS events were reported from 4 out of 9 districts of Thai Nguyen province). All EBS monthly reports submitted by the two provinces in Q3 were on time, which is a significant improvement compared to the reporting timeliness in Q2. In FY 2022 Q4, IDDS will continue to monitor and provide technical assistance to the two pilot provinces.
SURV-3.7. Coordinate with relevant human and animal health agencies to conduct quarterly data reviews	In progress	No quarterly data review meeting happened in Q3 because it was not in the original work plan. In May, IDDS submitted to USAID a revised work plan which include the extension of EBS support to the two provinces through the end of September 2022. If approved, additional supervision visits and data review meetings will be held in the two provinces in FY 2022 Q4.
SURV-3.8. Evaluate and refine the approach and materials and develop a transition plan to phase out this activity	Not started	This activity is pending on the completion of Surv-3.6 and 3.7 activities and will start in FY 2022 Q4.

Tuberculosis Activity Implementation Progress

Bangladesh TB		
Activity	Status	Activity implementation updates
BGD-TB-NTW-I: A comprehensive TB diagnostic network with strong underlying health systems	In progress	
NTW-I.I: 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	In progress	IDDS submitted the final version of the costing of the national TB Laboratory Strategic Plan (LSP) to the National Tuberculosis Control Program (NTP), after incorporating feedback and comments received through the workshop with the NTP and other stakeholders held in the previous quarter. Dissemination of the costed TB LSP through a workshop is pending until the NTP approves the document. IDDS will submit the costed LSP to USAID as a key deliverable in FY 2022 Q4.

Bangladesh TB		
Activity	Status	Activity implementation updates
to the developed Terms of Reference (TORs)		
NTW-1.3: Enable functional TB diagnostic equipment	In progress	IDDS organized a preventive maintenance training on TB equipment for the Chattogram Regional Tuberculosis Reference Laboratory (RTRL) on April 5 and 6. A total of nine (six female) microbiologists and medical technologists (MTs) who operate the TB diagnostic equipment at the Chattogram RTRL were trained. In FY 2022 Q4, IDDS will organize the same training for the Khulna RTRL.
BGD-TB-NTW-2: Strengthened capacity of the national, regional, and peripheral GeneXpert (GX) TB laboratories	In progress	
NTW-2.1: Enhance NTRL capacity to serve as the lead institution of the TB diagnostic network	In progress	IDDS developed quality management system (QMS) training materials, which are under internal review at headquarters. The goal of the QMS training is to develop the capacity of laboratory staff to follow standard procedures and practices that are critical for ensuring the quality of diagnostic tests performed for TB. IDDS has been supporting a diagnostic specialist at the National Tuberculosis Reference Laboratory (NTRL) by providing diagnostic support and coordination of laboratory capacity building activities. As part of this effort, IDDS is developing a QMS that prioritizes areas of focus that will directly impact TB diagnostic services and ensure their quality. In FY 2022 Q4, IDDS will organize a workshop to validate the QMS training materials and hold training sessions for laboratory staff on QMS and monitoring and supervision of RTRLs and GeneXpert (GX) sites.
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 and NTP staff completed assessments of the existing old Chattogram RTRL and a laboratory that performs reverse transcription polymerase chain reaction (RT-PCR) located at the newly built office of the Chattogram Divisional Director of Health. The NTP is interested in installing the liquid culture facility (BD Bactec MGIT 960) at the RT-PCR laboratory site. This RT-PCR site will require a power supply sub-station to ensure operation of the heating, ventilation, and air conditioning (HVAC) system that will be installed at the laboratory. IDDS will support necessary refurbishment work, including

Bangladesh TB		
Activity	Status	Activity implementation updates
		<p>installation of the HVAC system, after the NTP confirms that it will set up the power sub-station.</p> <p>IDDS, in collaboration with NTP, organized a training on phenotypic culture and drug susceptibility testing at the NTRL, on May 22 to 25. A total of 15 (7 female) laboratory microbiologists from the NTRL and all 5 RTRLs (Chattogram, Khulna, Shyamoli, Sylhet, and Rajshahi) attended and successfully completed the training.</p> <p>IDDS has placed an order with the Global Drug Facility for procurement of TB equipment and consumables, which will be installed and used mainly at the two IDDS-supported Shyamoli and Rajshahi RTRLs for performing TB diagnostics.</p> <p>IDDS is internally reviewing the line probe assay (LPA) report for the Sylhet RTRL prior to submission as a key deliverable to USAID. LPA reports for Shyamoli and Rajshahi RTRLs are in the process of initial review.</p> <p>IDDS completed procurement and delivered 13,000 falcon tubes to the NTP to meet emergency needs at the NTRL and RTRLs.</p> <p>IDDS completed refurbishment of the training room and microscopy external quality assessment (EQA) room at the Sylhet RTRL.</p> <p>The NTP procured two autoclaves with Global Fund support for the Rajshahi RTRL but was unable to install them for technical reasons, which shut down the operation of the RTRL. With a request from the NTP, IDDS successfully installed the new autoclaves, making the RTRL fully functional. Additional refurbishment work to improve the RTRL facility condition is in progress and expected to be completed by July 2022.</p> <p>IDDS contracted a vendor to provide additional refurbishment work of the Shyamoli RTRL. The work is expected to be completed by July 2022.</p> <p>IDDS is finalizing the contract with Air Filter Maintenance Services, a company based in South Africa, for annual servicing and certification of the Biological Safety Level 3 laboratory in Sylhet.</p> <p>In FY 2022 Q4, IDDS will organize workshops to finalize the standard operating procedures (SOPs) for LPA and culture and drug susceptibility testing. IDDS will also</p>

Bangladesh TB		
Activity	Status	Activity implementation updates
		organize a workshop to design a Laboratory Management Information System and complete refurbishment work of the Shyamoli, Rajshahi, and Khulna RTRLs.
NTW-2.3: Propose and get buy-in to transition the NTRL testing activities to a more suitable space.	In progress	IDDS costed the relocation of selected NTRL routine testing activities, which has been included in the costed TB LSP (NTW-1.1).
NTW-2.4: Develop an e-learning platform for TB laboratory capacity building	In progress	IDDS contracted a local IT firm to design and launch an e-learning platform to offer an online training course on biosafety and biosecurity for the TB laboratory staff. The platform is expected to launch by September 2022. In FY 2022 Q4, IDDS will organize a workshop to finalize biosafety and biosecurity training materials for e-learning.
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	<p>IDDS finalized the list of staff to be trained in EPTB testing and processing (non-key deliverable).</p> <p>IDDS organized a training on EPTB and childhood TB specimen processing and testing on June 26 and 27 at the Khulna RTRL. A total of 10 (1 female) microbiologists and MTs from the RTRL who are responsible for specimen testing were trained.</p> <p>IDDS also organized a workshop on June 28 to promote referral of EPTB and childhood TB specimens to the Khulna RTRL for testing. A total of 24 (4 female) clinicians and health professionals from public and private hospitals and non-governmental organizations in Khulna city participated in the workshop.</p> <p>In FY 2022 Q4, IDDS will organize training on EPTB specimen testing and a workshop with clinicians to promote EPTB specimen referral to the Rajshahi and Sylhet RTRLs. IDDS will also organize a workshop to finalize SOPs for EPTB testing.</p>
NTW-2.6: Strengthen and expand the specimen referral network for increased access to culture/DST and LPA	In progress	<p>IDDS participated in and provided feedback for a World Health Organization-organized workshop to update the specimen referral SOPs. IDDS also participated in an NTP-organized workshop and provided feedback to update the infection control guidelines.</p> <p>Finally, IDDS participated in NTP-organized workshops and provided technical feedback to update the LED fluorescent microscopy training manual, programmatic management of the drug-resistant TB manual, and the community manual for multidrug-resistant (MDR)-TB.</p>

Bangladesh TB		
Activity	Status	Activity implementation updates
		In FY 2022 Q4, IDDS will organize training on specimen collection and transportation for laboratory staff.
BGD-TB-NTW-3: Functional network of TB laboratories using molecular techniques is established	In progress	
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	IDDS had planned to recruit and place MTs through the Bangladesh Rural Advancement Committee (BRAC) and the Damien Foundation (DF) to increase the use of GX in selected sub-districts. However, because the NTP has recruited and placed an adequate number of MTs to fill the human resource gap, and after discussion with the two nongovernmental organization partners, IDDS decided not to support any MTs for GX operation. IDDS is working with the partners to revise their budget accordingly. IDDS finalized the GX utilization report for FY 2021 Q3 and Q4.
NTW-3.2: Continue to support improving access and utilization of GX	In progress	IDDS has not received an official response from the NTP on the GX SOPs and monitoring checklist, which IDDS developed in Q2 to align with the current national policies and guidelines. IDDS will continue to follow up with the NTP in FY 2022 Q4.
NTW-3.3: Develop an External Quality Assurance (EQA) program for rapid diagnostic tests	In progress	IDDS shared the final list of 80 GX sites for EQA with the Vietnam NTRL, which is providing EQA technical support to the Bangladesh NTRL. IDDS completed translation of all EQA-related materials into Bangla. IDDS completed training for 15 (7 female) microbiologists from NTRL and RTRLs on the GX EQA process, including testing and reporting results, on May 26 at the NTRL in Dhaka. These trained microbiologists will orient the GX operators in their respective divisions on the EQA process. The Vietnam NTRL shipped the GX EQA panels to Bangladesh on May 9. GX The EQA panels are now at the airport for customs clearance. The NTP has not been able to complete the customs clearance for the panels due to a discrepancy in consignee information. IDDS is working with the NTP to address the problem. In FY 2022 Q4, IDDS will organize GX EQA training at the NTRL and five RTRLs for MTs (GX operators) from selected GX sites.

Bangladesh TB		
Activity	Status	Activity implementation updates
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 has not started the implementation of this sub-activity because it is pending the NTP's decision on site selection of GX Xpress installation and procurement of instruments for bidirectional testing of TB and COVID-19.
BGD-TB-NTW-4: Piloting of new technologies and tools to improve TB diagnosis	In progress	
NTW-4.1 Pilot Truenat, a new diagnostic tool, to improve access for rapid detection of TB and rifampicin-resistant TB	In progress	<p>IDDS subcontractors, BRAC and DF, completed recruitment of most of the staff for implementation of Truenat and other activities as planned.</p> <p>IDDS organized a training of trainers for Truenat on April 25 to 27 at NTRL, Dhaka. A total of 12 (5 female) microbiologists and doctors from the NTP, BRAC, DF, the NTRL, and the Shyamoli RTRL were trained as trainers. These trainers will be responsible for conducting the basic training for MTs who will perform the Truenat testing and associated activities at the field level.</p> <p>IDDS, in collaboration with BioTrade (the local supplier of Truenat manufacturer Molbio), completed the pre-installation assessment of Truenat sites. Following approval from the NTP, BRAC and DF started site preparation, which is expected to be completed by July 2022.</p> <p>In FY 2022 Q4, IDDS will organize the training for MTs on Truenat testing, recording and reporting, and stock management, as well as the training for subcontractor staff on Truenat monitoring and supervision.</p>
NTW-4.2: Pilot of Xpert/MTB/XDR to assess its operation and efficiency for detection of 1 st and 2 nd line resistance	In progress	IDDS initiated the procurement process of four Xpert/XDR equipment and 12,500 GX cartridges from Cepheid. In FY 2022 Q4, IDDS will facilitate the installation of equipment and organize training on operation and maintenance of the instruments for staff at the pilot sites.

Burma TB		
Activity	Status	Activity implementation updates
BMA-TB-NTW-1: Strengthen the TB diagnostic network framework and systems	In progress	
NTW-1.2: Conduct a comprehensive TB diagnostic network assessment (DNA) and spatial analysis on the distribution and functionality of TB diagnostic	In progress	<p>IDDS organized a stakeholder meeting to share the results of the TB diagnostic network spatial analysis on April 8. Participants were representatives from donor agencies (such as the United States Agency for International Development [USAID], the Global Fund, and the Access to Health Fund), TB implementing partners, private-public mix partners (such as the Myanmar Medical Association and Population Services International), and the World Health Organization (WHO). IDDS presented the analysis results, and participants discussed meaningful recommendations for priority diagnostic network expansion, both in the public and private sectors.</p> <p>In FY 2022 Q4, the diagnostic network spatial analysis report will be disseminated after it is approved by USAID.</p>
NTW-1.3: Introduce a simplified laboratory information management system (LIMS) to strengthen the electronic results reporting	In progress	<p>IDDS held meetings with officials from the National TB Program (NTP) and the National TB Reference Laboratory (NTRL) on May 4 and May 24, to explain the draft LIMS costing plan. Despite interest from the NTP and NTRL in adapting the proposed LIMS, IDDS was requested to postpone this technical assistance until the political situation in Burma improves.</p> <p>In FY 2022 Q4, IDDS will approach NTRL to further discuss the feasibility and timeline of LIMS integration at the NTRL or at a Biosafety Level 3 laboratory.</p>
BMA-TB-NTW-2: Increase access to quality TB diagnostic services	In progress	
NTW-2.1: Support implementation of updated TB diagnostic algorithms	In progress	<p>Even though the NTP resumed its programmatic management of drug-resistant TB sites during this quarter, the political situation in Burma limited IDDS's ability to conduct the dissemination workshop for the new diagnostic algorithm.</p> <p>In FY 2022 Q4, IDDS will keep exploring opportunities to organize and support the workshop.</p>

Burma TB		
Activity	Status	Activity implementation updates
NTW-2.2: Strengthen the TB specimen referral and transport system in the private and the public sector	In progress	<p>IDDS conducted the vendor selection process among software developer companies for the development of the Sputum Transport System (STS) application (a web-based TB specimen referral system), and proceeded with the contracting process. IDDS identified the pilot areas based on recommendations made by implementing partners during the following advocacy meetings: on May 10 with the USAID-funded HIV/TB Agency, Information and Services (AIS) project; on May 17 with Sun Community Health; and on June 29 with Medical Action Myanmar, Population Services International, and the Myanmar Anti-Tuberculosis Association (MATA). Due to unexpected challenges with TB control activities in Burma, measures to introduce the STS application will require further consideration from partner organizations. Progress in application development was delayed due to challenges in operation arrangements.</p> <p>In FY 2022 Q4, IDDS will finalize the development of the STS web application and launch it in pilot townships. IDDS proposed to push back the timeline of STS web application development to Q4 in the revised work plan, which is currently under the USAID review.</p>
NTW-2.3: Increase access to quality CXR	In progress	<p>During December 2021, IDDS conducted trainings on TB chest X-ray (CXR) procedures for a total of 39 participants from 10 organizations and 5 private hospitals. On April 4, IDDS conducted a follow-up meeting on the TB CXR procedures training in Yangon. This meeting included 21 (12 female) TB experts, radiographers, and X-ray technicians from WHO, Save the Children, Myanmar Health Assistant Association, Population Services International, Asia Harm Reduction Network, MATA, the International Organization for Migration, and Medical Action Myanmar. To ensure the technically sound and feasible introduction of Computer-Aided Diagnosis (CAD AI), IDDS conducted two technical sessions in April to review lessons learned from a CAD AI pilot project in 2020 and adapt the implementing strategies. On May 4 and 13, Save the Children International invited IDDS to share CAD AI experiences and strategies. IDDS also shared CAD AI-related procurement and technical matters with International Organization for Migration on May 16. On May 26, IDDS and in-country implementing partners participated in a technical orientation session conducted by Lunit Company to demonstrate its CAD AI software, Lunit INSIGHT CXR. In June, IDDS identified pilot sites for the installation of procured ultraportable X-ray machines and CAD AI implementation. After an operational discussion with MATA on June 14, IDDS conducted assessment visits to the two field sites, where IDDS will deploy ultraportable X-ray machines and CAD AI.</p> <p>In FY 2022 Q4, the ultraportable x-ray machines and CAD AI will be deployed. In the revised work plan, which is pending approval from USAID, IDDS proposed to delay the timeline of procurement</p>

Burma TB		
Activity	Status	Activity implementation updates
		from Q3 to Q4 due to the new Central Bank of Myanmar's policy to control the foreign currency flow.
NTW-2.4: Strengthen the access to GeneXpert (GX) as an initial diagnostic test for TB	In progress	To establish a private-sector GeneXpert (GX) network, IDDS presented the diagnostic network spatial analysis results, including recommendations for private-sector GX deployment, to the Myanmar Private Hospital Association on May 12. At the meeting, IDDS also discussed efforts to set up a private sector referral network and training needs. IDDS met with several private delivery services, such as BeeXpress, Tee Delivery, and Wepozt, to explore opportunities to set up a private sector STS. Because of the unexpected delays in the procurement process of GX machines, the arrival date was postponed. In FY 2022 Q4, IDDS will deploy the procured GX machines to the designated facilities.
NTW-2.6: Pilot use of stool specimens for TB diagnosis in children using GX Ultra	In progress	On May 4, IDDS presented to the NTP the approved plan for piloting the use of stool specimens for TB diagnosis in children using GX and discussed progress on this activity. IDDS held discussions with the NTP and the Yangon Children Hospital to resume implementation of this activity (which had been put on hold following the coup in February 2021). However, on May 24, the NTP asked IDDS to hold technical assistance efforts until the political situation in Burma improves. In FY 2022 Q4, IDDS will engage with the NTP to determine what types of technical assistance IDDS may provide.
NTW-2.7: Pilot Truenat to expand access to rapid TB diagnostics	In progress	IDDS held several meetings with technical and implementing organizations to finalize the plan for the initial implementation of Truenat, including the development of a feasible strategy while ensuring compliance with international guidance. IDDS held four technical discussion sessions on April 27, April 28, May 5, and June 3 with the USAID-funded AIS project, because IDDS and AIS were the first two projects to officially introduce Truenat technology in Burma. On June 14, IDDS held a meeting with Truenat implementing partner MATA, to introduce a draft implementation plan and discuss operational considerations. As an output of the meeting, IDDS conducted assessment visits to two implementing sites on June 15 and 17. The sites requested to proceed with human resource support and equipment procurement. In FY 2022 Q4, IDDS will install the procured Truenat machines at targeted sites and begin initial implementation of Truenat.
NTW-2.8: Increase continuous medical	In progress	IDDS consulted with WHO and in-country technical partners to discuss the planned e-learning platform. Considering the challenges of working with the current government, and the uncertainty of

Burma TB		
Activity	Status	Activity implementation updates
education opportunities for TB diagnostic professionals		issuing continuing medical education credits or obtaining approvals to upload the documents on an e-learning platform, IDDS proposes drop the plan to establish an e-learning platform. Instead, IDDS proposes to develop a learning package for TB laboratories, including IDDS training materials, training aids, modules, and standard operating procedures. This change was outlined in the revised work plan, which is under review by USAID. In FY 2022 Q4, IDDS will provide the learning package to technical groups, such as the Joint Diagnosis Support Group, and professional organizations, such as MATA.
BMA-TB-NTW-3: Improve TB and multidrug-resistant tuberculosis (MDR-TB) case detection at TB diagnostic facilities	In progress	
NTW-3.1: Build diagnostic capacity of technical staff to perform quality-assured culture, genotypic and phenotypic drug-susceptibility testing, including line probe assay	In progress	IDDS provided technical assistance to support data management of GX <i>Mycobacterium TB</i> (MTB)/extensively drug-resistant (XDR) testing as part of IDDS's support for XDR cartridge introduction. IDDS conducted a public-sector engagement meeting on May 4 to obtain NTP and NTRL endorsement on approved standard operation procedures (SOPs), results recording, and reporting format. During this quarter, there were limitations to providing technical assistance. In FY 2022 Q4, IDDS will continue to provide technical assistance to support data management of GX MTB/XDR at the NTP and NTRL.
NTW-3.2: Strengthen TB laboratory infection control at national and sub-national levels in public and private sectors	In progress	During two public sector engagement meetings, IDDS advocated for the NTP and NTRL to endorse IDDS's TB laboratory biosafety and biosecurity technical products. Even though the public sector has yet to adopt these materials, private-sector TB laboratories have been complying with the infection control standards since they were trained in Q2. In FY 2022 Q4, IDDS will conduct joint visits to selected private TB laboratories to assess laboratory biosafety measures using the developed tools.

Cambodia TB		
Activity	Status	Activity implementation updates
KHM-TB-NTW-I: Implementation of diagnostic connectivity solution in COMMIT and Global Fund-supported sites	In progress	
NTW-I.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	<p>IDDS contracted a local company, MekongNet, to roll out DataToCare (DTC) Short Message Service (SMS) notification to be sent to respective prescribers and patients to shorten the result notification turnaround time (TAT) and facilitate early treatment or other further evaluation. IDDS is waiting for the IP address from Savics to enable MekongNet to run the SMS notification alert system. This SMS feature is expected to be functioning in FY 2022 Q4.</p> <p>IDDS discussed with the National Center for Tuberculosis and Leprosy Control (CENAT) the possibility to scale up data connectivity to the 20 Global Fund-supported sites. However, CENAT has not finalized the site selection for expansion because they would like to first evaluate the results of the DTC pilot at the 10 sites that are operational districts (ODs) supported by USAID's Community Mobilization Initiatives to End Tuberculosis (COMMIT). The pilot runs through the end of June.</p> <p>In FY 2022 Q4, IDDS will disseminate the final report of the DTC pilot in the 10 COMMIT ODs and provide technical support to CENAT staff for the DTC data extraction, analysis, and use for decision making. In addition, IDDS will develop an assessment report outlining recommendations for the expansion of GeneXpert (GX) connectivity in the 20 Global Fund sites.</p>
NTW-I.2: Build the capacity of CENAT and local OD staff to implement and manage the connectivity	In progress	IDDS conducted DTC training for data managers on April 6 and 7. The aim of the training was to ensure that the data managers understand the DTC connectivity solution and use its data for monitoring and analysis of routine results and standard performance quality indicators. The training was conducted in Kampong Cham province, with a total of 47 participants (5 female)

Cambodia TB		
Activity	Status	Activity implementation updates
solution, analyze data, and recommend corrective actions		<p>from CENAT, the National Tuberculosis Reference Laboratory (NTRL), COMMIT, and IDDS, as well as provincial and OD TB supervisors, laboratory managers, and technicians.</p> <p>IDDS provided technical support for DTC super-users, so they continue to provide remote technical support to staff at all 10 pilot sites. As a result, laboratory staff can perform their tasks effectively. IDDS also organized and accompanied USAID mission staff to field visits to DTC and Truenat sites at the Lvea Em Reference Hospital, Rokar Konrg Reference Hospital, Prek Russey Health Center, and Prek Anchanh Health Center on May 24 and 25.</p> <p>In FY 2022 Q4, IDDS will organize training for end-users and laboratory technicians on the use of DTC in the 20 OD expansion sites.</p>
NTW-1.3: Expand data connectivity to Truenat instruments and TB-MIS	In progress	IDDS had a series of discussions with CENAT, COMMIT, and Savics to add data connectivity to 5 of the 15 pilot Truenat instruments. This connectivity synchronizes DTC and the Tuberculosis Management Information System (TB-MIS). As recommended by the mission, the Savics team will travel to Cambodia to learn about the TB-MIS workflow and how the two systems can be synchronized, and plan the interconnectivity of DTC with the TB-MIS. Savics staff are planning to travel in early August.
KHM-TB-NTW-2: Pilot Truenat and 10 color GX to expand access to rapid TB and DR-TB diagnostics	In progress	
NTW-2.1: Pilot Truenat in selected sites and assess the feasibility of testing for TB and rifampicin resistance at peripheral point-of-care health centers	In progress	IDDS conducted three joint supportive supervision visits with CENAT and COMMIT to 14 health center operational research sites and ensured that the operational research implementation is being conducted smoothly and appropriately, using the developed checklist and tool. The three visits took place May 23 to 28, June 6 to 11, and June 20 to 25. The IDDS team monitored the external quality assessment (EQA) testing and observed and reviewed completed operational research forms to ensure completeness, accuracy, and consistency of the data. Moreover, the team discussed with health center staff at the sites to confirm that the implementation is following the protocol. The supervisory team addressed questions and issues during the visits and submitted the follow-up actions.

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Activity	Status	Activity implementation updates
		In FY 2022 Q4, in collaboration with CENAT, IDDS will monitor the implementation of the Truenat pilot operational research to ensure data quality and compliance and to support data analysis.
NTW-2.2: CENAT and OD staff capable of conducting Truenat testing and pilot completed	In progress	<p>IDDS organized a training on Truenat operational research and refresher training for end-users, which took place on May 5 and 6 at the Neang Kong Hing Hotel in Kampong Cham province. The training focused on how to screen and enroll patients, how to obtain informed consent, operational research procedures, and how to fill in the operational research forms. A total of 55 participants (10 female) attended from CENAT, NTRL, COMMIT, and IDDS, as well as provincial and OD TB supervisors, and health center staff. Following the training, 14 health centers started Truenat pilot operational research implementation on May 9. A chat group on the messaging application Telegram was created to exchange information on Truenat operational research and get technical support.</p> <p>IDDS organized the Truenat super-users training, from June 27 to July 1 at the Phnom Pros Hotel in Kampong Cham province. The aim was to train a pool of super-users who will be able to provide troubleshooting expertise, technical support, and mentorship, with the aim of supporting Truenat implementation sites. These super-users will ensure that laboratory staff at the implementation sites are demonstrating competency and confidence in the use of the Truenat® MTB Plus and Truenat® MTB/RIF Dx assays. A total of 21 participants (2 female) attended from CENAT, IDDS, and COMMIT. Two representatives from Tekmax, a Vietnam-based agent of the Truenat manufacturer Molbio, facilitated the training in person. IDDS facilitated a session on biosafety, and SmartSpot conducted a session on EQA for Truenat remotely.</p> <p>In FY 2022 Q4, IDDS will finalize the reformatting of the Truenat training materials, including job aids, and distribute them to Truenat sites. IDDS will also document best practices and user feedback and prepare the final report of the Truenat pilot.</p>
NTW-2.3: Introduce GX with I0 color system	In progress	CENAT approved the three sites selected by IDDS for GX I0-color system implementation: NTRL, Siem Reap, and the Battambang provincial referral hospital laboratories. IDDS initiated

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Activity	Status	Activity implementation updates
		<p>the procurement process for GX I0-color instruments and their cartridges, which are expected to arrive in FY 2022 Q4.</p> <p>In FY 2022 Q4, IDDS will provide technical assistance to CENAT and laboratory staff at the three sites to implement the GX I0-color system and collect and analyze data to evaluate the impact on drug-resistant (DR)-TB case finding.</p>
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	In progress	IDDS had a discussion with the mission and was informed that the spatial analysis will be combined with the diagnostic network assessment (DNA) that will be led by USAID's Sustaining Technical and Analytical Resources project. IDDS was requested to provide technical and financial support to this activity and is waiting for detailed guidance from the mission.
KHM-TB-NTW-3: Improve the CXR reading and Telegram platform for interpretation of CXR	In progress	
NTW-3.1: Improve a platform (Telegram) for interpretation of CXR	In progress	<p>IDDS developed standardized reporting formats for experts to advise on chest X-ray (CXR) and assisted in the decision making on CXR reading and interpretation. Users of the CXR Telegram platform developed by IDDS can share CXR images that are challenging to interpret and receive advice from CXR experts and the members of CXR interpretation working group.</p> <p>In FY 2022 Q4, IDDS will provide technical assistance to CENAT to monitor the activities in the CXR Telegram platform, collect and analyze the data on routine intervals, develop reports, and provide feedback to the users for quality improvements.</p>

Cambodia TB		
Activity	Status	Activity implementation updates
NTW-3.2: Develop and disseminate training materials for the use of the platform for CXR interpretation	Not started	<p>IDDS is in the process of hiring a consultant to lead this sub-activity.</p> <p>In FY 2022 Q4, IDDS will develop or adapt training materials and job aids for the Telegram CXR platform and translate them to Khmer, which IDDS will disseminate to CENAT and users. IDDS will also provide training to CENAT, COMMIT, and local program staff on the use of the platform for CXR reading. In addition, IDDS will upload these materials to the Telegram platform and establish a system to update and curate the materials based on the observed quality of CXR reading and feedback.</p>
NTW-3.3: Develop an online training module and provide training on the correct reading and interpretation of CXR	Not started	<p>The same consultant for NTW-3.2 will lead this sub-activity.</p> <p>In FY 2022 Q4, IDDS will hold consultative meetings with CENAT and stakeholders to: (1) develop online CXR reading and interpretation guidance and a manual, (2) adapt or develop an online training module on CXR reading and interpretation, (3) finalize the online training module in collaboration with partners and translate it into Khmer, and (4) upload the online module to the CENAT website for health care professionals to access.</p>
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	In progress	<p>IDDS initiated the procurement process for an artificial intelligence (AI)-enabled CXR software and reached an agreement with CENAT to select two sites for the AI-enabled CXR reading pilot. The software will be rolled out at CENAT and the Battambang provincial referral hospital. IDDS is also in the process of hiring a consultant to lead this sub-activity.</p> <p>In FY 2022 Q4, IDDS will develop a feasibility study and EQA protocol, create a detailed implementation plan, and collate existing training materials, curricula, user manuals, and job aids that have been successfully used for AI (including the Stop TB Partnership's "Practical Considerations for Implementation of AI" and additional materials developed by the Stop TB Partnership and IDDS Core TB activities).</p>
KHM-TB-NTW-4: Provide technical support to improve bi-directional screening for TB-Diabetes Mellitus (DM) comorbidity	In progress	

Cambodia TB		
Activity	Status	Activity implementation updates
NTW-4.1: Review COMMIT's approach to bi-directional TB-DM screening and develop recommendations to enhance and expand; disseminate the TB-DM situational analysis report	In progress	<p>IDDS finalized the TB-diabetes mellitus (TB-DM) situational analysis report, which outlined recommendations to enhance implementation of the bidirectional screening.</p> <p>In FY 2022 Q4, IDDS will organize a workshop to disseminate the TB-DM situational analysis report. IDDS will also develop a manuscript using the TB-DM report and publish the results in an international journal.</p>
KHM-TB-NTW-5: Implementation of stool GX testing for improving pediatric TB diagnosis in COMMIT supported ODs	In progress	
NTW-5.1: Implement stool specimen testing with GX ultra for pediatric TB diagnosis	Not started	<p>IDDS recruited the consultant to lead the proposed activities. The consultant onboarded in mid-June.</p> <p>IDDS discussed with CENAT and COMMIT the site selection for implementation of stool specimen testing with GX Ultra. Four sites (Saang OD in Kandal province, Stung Trang OD in Kampong Cham province, and Battambang and Moung Russey ODs in Battambang province) were selected and accepted by CENAT.</p> <p>IDDS developed a detailed plan for implementation of stool specimen testing for pediatric TB diagnosis, which is under internal review.</p> <p>In FY 2022 Q4, IDDS will provide training to health care workers, including pediatricians and laboratory technicians, on preparing and testing stool specimens. IDDS will also provide technical support for the pilot implementation, regularly monitor, and supervise the progress, and collect the data for analysis. In addition, IDDS will hold a stakeholder workshop to disseminate the initial implementation results.</p>

Cambodia DR TB (Core Funds)		
Activity	Status	Activity implementation updates
Cambodia- NTW 5.1 & 5.2/ Objective 1: Increased number of patients with drug susceptibility testing for INH and FQL	In progress	In FY 2022 Q3, IDDS received final approval from USAID for the Cambodia DR-TB country action plan (CAP). The country team is meeting biweekly to move activities forward.
Activity 1.1 Enhance the capacity of detecting resistance against INH and FQ	In progress	IDDS identified potential sites for GX I0-color system installation. IDDS also developed a procurement plan following discussions with Cepheid, which was approved by the procurement officer. The NTP procurement officer advertised the tender for the GX I0-color instruments. IDDS is exploring options to expedite the procurement, in consultation with Cepheid. In FY 2022 Q4, IDDS will begin translation of the GX XDR training materials into Khmer.
Activity 1.2 Provide technical assistance to CENAT to revise TB data collection and reporting systems and diagnostic algorithms to include DST	Not started	
Cambodia- NTW 5.3/ Objective 2 Support capacity building for susceptibility testing of new and re-purposed drugs	In progress	
Activity 2.1 Build diagnostic capacity of the NTRL staff to conduct quality-assured phenotypic DST for new and repurposed drugs	In progress	IDDS collated training materials on phenotypic DST using MGIT 960 for Bedaquiline and Delamanid from the Global Laboratory Initiative and a protocol developed by the IDDS Burma and Bangladesh teams to support implementation of DST in Cambodia. IDDS began recruitment for a diagnostic specialist in Cambodia.

Cambodia DR TB (Core Funds)		
Activity	Status	Activity implementation updates
		IDDS finalized needed specifications of TB identification tests to confirm MTB complex in culture-positive tubes and ready-to-use McFarland's standards for DST. In FY 2022 Q4, IDDS will procure the needed consumables.

Core TB		
Activity	Status	Activity implementation updates
CTB-NTW-1: TB-NET tool Revisions and Translation	In progress	
NTW-1.2: Develop quality control component for Remote TB DNA	Not started	Implementation will begin in FY 2022 Q4.
NTW-1.6: Addendum to assessors' manual on selection of priorities in a limited scope DNA	Not started	Implementation will begin in FY 2022 Q4.
CTB-NTW-2: Conduct the TB DNA	In progress	
NTW-2.1: Conduct laboratory diagnostic network analyses in USAID Priority Countries	In progress	<p>IDDS continued working on the data analysis for the Ethiopia and Tanzania TB laboratory network spatial analyses (LNSAs) and prepared preliminary reports and presentations. In FY 2022 Q4, IDDS will present the Ethiopia and Tanzania findings to the respective USAID missions.</p> <p>IDDS drafted the Burma report and will submit to USAID for review in FY 2022 Q4. For the Philippines LNSA report, IDDS incorporated feedback received from USAID and will finalize in FY 2022 Q4.</p> <p>IDDS began planning for LNSAs in Uganda and Zimbabwe and finalized briefing presentation and data collection Standard Operating Procedures (SOPs) for both. Data collection is expected to start in FY 2022 Q4.</p>
NTW-2.2: Expand the LNA process to incorporate second-line DST	In progress	IDDS expanded its LNSA analysis in Ethiopia to consider the placement of advanced TB diagnostics for second-line drug susceptibility testing (DST). The purpose is to plan for the placement of 125 10-color GeneXpert (GX) machines and determine whether original 6-color machines should be moved to new locations to optimize access to rapid molecular testing (GX). The analysis also considers facility location, referral network analysis, and existing advanced diagnostic capabilities for line probe assay (LPA), loop-mediated isothermal

Core TB		
Activity	Status	Activity implementation updates
		amplification, and culture and DST (C-DST) at the facility level. IDDS collected and analyzed national-level public sector data. In FY 2022 Q4, IDDS will collect and analyze regional-level data and will incorporate private-sector facilities per recommendation of the USAID mission.
NTW-2.3: Expand, update, and verify the roster of consultants able to implement DNAs	In progress	IDDS started recruiting francophone consultants to support the planned TB DNA in DRC. Consultants will be contracted in FY 2022 Q4.
NTW-2.4: Conduct DNAs	In progress	IDDS drafted the Ethiopia TB DNA report which is being reviewed by the assessment team. IDDS began preparations for a TB DNA in DRC by completing the translation of the TB DNA Assessors Manual into French and identifying an in-country focal point for the activity.
NTW-2.5: Track status of laboratory network analyses and DNAs for all USAID priority countries	In progress	IDDS continues to track the status of the TB DNA and spatial analyses supported by the project.
CTB-NTW-3: TB Diagnostic New Tools Implementation	In progress	
NTW-3.2: Introduce Truenat in iNTP and non-iNTP countries	In progress	<p>In DRC, IDDS financed a fourth regional Truenat training for 13 participants (2 female) in Kolwezi on April 4–6. (The first three regional training sessions were held in FY 2022 Q2).</p> <p>In Vietnam, IDDS provided financial support and training materials for five Truenat training sessions which were facilitated by the IDDS country team with staff from the National TB Program and the National TB Reference Laboratory (NTRL):</p> <ul style="list-style-type: none"> • One national-level training in Ha Noi on May 24–26 with 25 participants (17 female) • Four provincial-level trainings (in Ha Noi, Da Nang, Ho Chi Minh City, and Can Tho) between May 31 and June 21 with a total of 143 participants (61 female)

Core TB		
Activity	Status	Activity implementation updates
		In Kenya, IDDS provided financial support and training materials for a Truenat centralized training for program managers in Nakuru on June 8–9 with 46 participants (17 female). The training was facilitated by the National Tuberculosis Leprosy and Lung Disease Program.
NTW-3.3: Introduce / Scale-up diagnostic connectivity solutions	In progress	IDDS engaged SystemOne to provide connectivity for the Truenat instruments in the USAID introducing New Tools Project (iNTP) countries, and a purchase order agreement for connectivity services is in progress. IDDS is also working with Molbio to install a software upgrade on the Truenat instruments, which is necessary to connect them to Aspect Laboratory Information Management System (LIMS).
NTW-3.4: Implementation support for Truenat (superusers)	In progress	<p>IDDS developed a Truenat superuser training package in FY 2022 Q2 to support Truenat implementation sites. IDDS updated the training package taking into consideration lessons learned from the pilot super-user training workshop in Zimbabwe held in March 2022 and has subsequently used it to train super-users in Cambodia, DRC, Kenya, and Uganda.</p> <p>These five-day Truenat superuser trainings include two days of theoretical and three days of practical hands-on training with the Truenat instrument.</p> <p>IDDS provided training materials, and financial and technical support to all four countries and additionally helped facilitate the superuser trainings in Uganda and Kenya. In Uganda, the training took place May 16–20 in Jinja City with 11 participants (2 female).</p> <p>Two training sessions were held in Kenya on June 13–17 and June 20–24 in Nakuru with 40 participants total (12 female). Kenyan participants' pre and post test scores improved from 43 to 74 percent for the first group and from 44 to 84 percent for the second group of trainees.</p>

Core TB		
Activity	Status	Activity implementation updates
		<p>In DRC, 11 participants (3 female) were trained between May 30–June 3 in Kinshasa. Participant scores increased from 45 to 68 percent in pre- and post-training testing respectively.</p> <p>In Cambodia, the super-user training took place June 27–July 1 in Kampong Cham province with 21 participants (3 female).</p> <p>In FY 2022 Q4, IDDS plans to support super-user trainings in Vietnam, Nigeria, and the Philippines.</p>
NTW-3.5: External quality assessment (EQA) support for molecular diagnostic tools	In progress	<p>Zimbabwe was the first country to pilot the Truenat EQA program throughout Q2 and Q3, and only 70 percent of laboratories reported results with 64 percent achieving a perfect or passing scores. Using challenges and lessons learned from the Zimbabwe experience, IDDS worked with SmartSpot to develop additional EQA training materials, including a short video training clip that can be shared with end users via social media applications, such as WhatsApp. In Cambodia and DRC, IDDS provided EQA training to superusers (seven in Cambodia and four in DRC, all men), so they can help support EQA testing and reporting processes. These IDDS-supported trainings helped improve EQA performance.</p> <p>In DRC, 38 sites received the first cycle of EQA in May 2022 with 37 of 38 sites (97 percent) successfully reporting EQA results within the cycle deadline. Performance reports are pending for DRC.</p> <p>In addition, all 20 Cambodia Truenat sites reported EQA results by the submission deadline with 73 percent of sites achieving a perfect score and 27 percent received a passing score. Due to Truenat implementation delays, EQA panel distribution and testing is still pending in Uganda. Bangladesh, Kenya, Philippines, and Vietnam will receive EQA panels in FY 2022 Q4.</p>
CTB-NTW-4: Introduce Stool-Based Diagnosis Using WRDs for Children	In progress	

Core TB		
Activity	Status	Activity implementation updates
NTW-4.1: Build IDDS capacity to support pediatric TB detection	In progress	IDDS worked to create an online data capture tool for countries to use when implementing the simple one-step (SOS) method for pediatric TB detection. IDDS is creating the tool using the DHIS2 and will provide training to countries starting with DRC in FY 2022 Q4.
NTW-4.2: Expand access and use of simple-one step specimen processing protocol	In progress	<p>In DRC, IDDS in partnership with KNCV TB Foundation trained 11 laboratory technicians (5 female) on the SOS stool processing method. The training was facilitated virtually with participants gathered in Kinshasa on June 10–11. IDDS supports ongoing technical assistance and monitors data collection. IDDS started planning a similar training for Malawi to be held in FY 2022 Q4.</p> <p>In Malawi, the SOS protocol was approved by the ethics committee. An in-person training on the SOS method is planned for August 2022.</p> <p>IDDS submitted the stool specimen testing electronic brief to USAID for review. The brief is intended to guide USAID priority countries to include stool specimen testing for TB diagnosis.</p> <p>IDDS held discussions with counterparts in Bangladesh, Burma, Cambodia, Mozambique, and the Philippines, on implementing the SOS stool processing method.</p>
NTW-4.3: Expand use of community and home-based stool specimen collection	Not started	Implementation will begin in FY 2022 Q4.
NTW-4.4: Regional capacity building for stool-based Xpert testing	In progress	IDDS continued discussions with KNCV TB Foundation about providing a master training package (training and mentorship) on the SOS stool processing method to consultants identified by the Uganda Supranational TB Reference Laboratory (SRL) so that they can later lead subsequent training under KNCV's mentorship. A training will occur in FY 2022 Q4 in Uganda.

Core TB		
Activity	Status	Activity implementation updates
CTB-NTW-5: Mono-Isoniazid and Second-line Drug Resistance Testing Strengthened in USAID Priority Countries	In progress	<p>IDDS received USAID approval for country action plans (CAPs) for Pakistan and contingent approval for Mozambique this quarter, adding to the approvals previously received for Cambodia and Malawi. IDDS developed a draft of the Uganda CAP following discussions with USAID and the NTRL with finalization expected in July 2022.</p> <p>Activity implementation has started in Cambodia, Malawi, and Pakistan. In Cambodia, the team identified sites for GX installation, collated training materials, and initiated procurement for GX instruments and drug powders. In FY 2022 Q4, the team will hire a diagnostic specialist and continue implementation of activities as laid out in the CAP.</p> <p>IDDS' Africa regional DR-TB advisor conducted a tour of duty to Lilongwe, Malawi June 12–23. During the visit, three high-volume laboratories with existing USAID funding mechanisms (Bwaila District Hospital, Mangochi District Hospital, and Chikwava District Hospital) were selected for GX I0-color installation following a readiness assessment. IDDS also organized and facilitated a diagnostic algorithm revision workshop on June 20–21 with 17 participants (2 female) from the USAID Mission, NTRL, NTP, and TB Local Organization Network partners. During the workshop, IDDS also requested inputs on the availability of data to monitor DR-TB diagnostic testing and IDDS performance indicators. In FY 2022 Q4, IDDS will finalize the revised diagnostic algorithm, develop a training package for selected sites on use of the new algorithm, and initiate procurement of GX I0-color instruments.</p> <p>For Pakistan, an initial kick-off call was held on June 24 with participants from USAID, the mission, the NTP, IDDS, and the Milan SRL. In FY 2022 Q4, implementation of activities will begin.</p> <p>IDDS also provided financial support in Nigeria for a workshop held on June 19–21 to plan for a DR-TB laboratory assessment. In FY 2022 Q4, IDDS will provide financial support for the assessment.</p>

Core TB		
Activity	Status	Activity implementation updates
NTW-5.0: Preparation and Management of DST	In progress	Updates provided above.
NTW-5.1 and 5.2: Increased number of patients with confirmed rifampicin resistance receiving fluoroquinolone resistance testing	In progress	Updates provided above.
NTW-5.3: Increased capacity for susceptibility testing for new and repurposed drugs	In progress	Updates provided above.
NTW-5.4: Health care providers follow DST algorithms reflective of WHO guidance	Not started	This activity will start in FY 2022 Q4, following the installation of GX machines and training of health care providers.
NTW-5.5: DST quality and timeliness improved	Not started	This activity will start in FY 2022 Q4, mostly in Pakistan.
NTW-5.6: Evaluations and Recommendations	Not started	The evaluations and recommendations for each of the DR-TB countries will be provided following the completion of implementation phase, which will likely be around March 2023.
CTB-NTW-6: Share Relevant Information to a Wide-ranging Audience	In progress	IDDS submitted thirteen (13) abstracts to the 2022 Union Conference on Lung Health and one (1) abstract to the International Conference on Emerging Infectious Diseases to disseminate IDDS project achievements, activities, best practices, and lessons learned. Of these abstracts, 12 were accepted (86 percent) for presentations. These include abstracts from Zimbabwe (5),

Core TB		
Activity	Status	Activity implementation updates
		<p>Vietnam (3), Bangladesh (2), Cambodia (1), and Tanzania (1), The list of accepted abstracts is as follows:</p> <ol style="list-style-type: none"> 1. Early implementation of Truenat™ MTB and MTB-RIF Dx assays at the peripheral level: Challenges and lessons learned (IDDS-HQ & IDDS-Zimbabwe) 2. Incorporating sustainability in tuberculosis programming (IDDS-Zimbabwe) 3. Introduction of external quality assessment (EQA) for Truenat™ MTB-RIF at peripheral level laboratories in Zimbabwe: Lessons learned (IDDS-HQ & IDDS-Zimbabwe) 4. Support package for Truenat™ MTB & RIF Dx assay implementation at the peripheral level (IDDS-HQ and IDDS-Zimbabwe) 5. Utility of a social media platform to aid the interpretation of Chest X-Ray (CXR) in Cambodia (IDDS-Cambodia and IDDS-HQ) 6. Outcome of culture and DST on Xpert® MTB/RIF Ultra MTB trace rifampicin indeterminate at National Tuberculosis Reference Laboratory (NTBRL) Zimbabwe (January 2019 to December 2021) (IDDS-Zimbabwe and IDDS-Kenya) 7. Bidirectional screening improved TB case detection rate during COVID-19: Experience from National Tuberculosis Reference Laboratory (NTRL), Bangladesh (IDDS-Bangladesh) 8. Impact of gaps in accessing second line-line probe assay (SL-LPA) testing on enrolment in drug-resistant (DRTB) treatment for rifampicin resistance (RR TB) confirmed cases (IDDS-Bangladesh) 9. TB Diagnostic Network Assessment: a critical input to achieve TB goals and targets in Tanzania (IDDS-Tanzania and IDDS-HQ) 10. Artificial intelligence to support reading of chest X-ray to triage pulmonary tuberculosis at health facilities in Vietnam: initial results (IDDS-Vietnam and IDDS-HQ) 11. Role of repeat GeneXpert ultra test after trace results- An experience from Vietnam (IDDS-Vietnam and IDDS-HQ) 12. Strategic planning to expand access to GeneXpert diagnosis network using laboratory spatial analysis in Vietnam (IDDS-Vietnam and IDDS-HQ)

Core TB		
Activity	Status	Activity implementation updates
		IDDS and the Stop TB Partnership submitted a symposium session proposal entitled, “Tackling barriers in access to rapid molecular TB testing in remote areas: the Truenat experience,” which was accepted for presentation at the 2022 Union World Conference on Lung Health . IDDS is also collaborating with the Stop TB Partnership to develop an e-brief on Truenat MTB and RIF implementation and early lessons learned.
NTW-6.1: Document best practices, guidance, and models	In progress	<p>As of June 2022, IDDS has seven operational research studies at different implementation stages in six TB countries, including Zimbabwe (Ultra trace calls results, clinically diagnosed TB patients using CXR and other TB clinical signs, and smear microscopy hub strategy studies); India (Truenat indeterminate/invalid results, Trueprep DNA extraction studies); and Cambodia (feasibility of Truenat implementation pilot study). Data collection has started or completed for some of these studies while the ethical or administrative approval of others are pending. Details on the status of respective studies are available in country specific progress reports.</p> <p>In addition, the research protocol of the bacteriologically confirmed TB (Bacc-TB) study designed by IDDS to investigate the causes of the stagnation of Bacc-TB and RIF resistance detection has received the ethical and administrative approvals in DRC. In FY 2022 Q4, IDDS will begin implementation of this study in DRC and in other targeted countries (Zimbabwe, Tanzania, and Vietnam) if the necessary approvals are secured during that period.</p> <p>IDDS designed an evaluation protocol to assess the outcomes of the LNSA activity. Zimbabwe was earmarked as a pilot country for this evaluation. This protocol has already been approved in this country, and data collection could start in FY 2022 Q4.</p> <p>IDDS started developing a manuscript to document the process and findings of the LNSA and plans to submit it to a peer-reviewed journal in FY 2022 Q4.</p>
NTW-6.2: Convene a TB technical working group across the project and the consortium	In progress	IDDS initiated program reviews for the seven countries that have received TB field support for at least one year (Bangladesh, Burma, Cambodia, India, Tanzania, Vietnam, and Zimbabwe) examine implementation status, achievements to date, and how activities are being transitioned to partners.

Core TB		
Activity	Status	Activity implementation updates
		<p>IDDS Core TB team completed desk reviews for each of the seven countries and worked with country teams to develop presentations summarizing the findings.</p> <p>In FY 2022 Q4, IDDS will convene a TWG across the consortium to exchange the findings of the program reviews and advise on future implementation priorities for each country program.</p>
CTB-NTW-7: Rapid TB Diagnostic Testing Expansion	In progress	
NTW-7.1: Address TB diagnostic shortages due to COVID-19 in Nigeria	In progress	IDDS issued the purchase order to McPage Investments for the procurement of TB reagents for loop-mediated isothermal amplification and is awaiting confirmation of delivery to KNCV Nigeria.
CTB-NTW-8: Strengthening TB Diagnostics and Surveillance in Pakistan	Not started	IDDS received USAID approval for the Pakistan work plan this quarter. A kickoff call was held on June 24 with USAID Washington, USAID Nigeria, the NTP, and the Milan SRL to discuss implementation of activities and respective roles and responsibilities. Implementation will begin in FY 2022Q4.
NTW-8.1: Conduct a remote laboratory spatial analysis	Not started	Implementation will begin in FY 2022 Q4.
NTW-8.2: Conduct a limited scope TB Diagnostic Network Analysis	Not started	Implementation will begin in FY 2022 Q4.

Core TB		
Activity	Status	Activity implementation updates
NTW-8.3: Develop a TB Laboratory Network Strengthening Roadmap	Not started	Implementation will begin in FY 2022 Q4.
NTW-8.4: Strengthening laboratory management toward accreditation	Not started	Implementation will begin in FY 2022 Q4.

DRC TB		
Activity	Status	Activity implementation updates
DRC-TB-NTW-1: Upgrade DRC National TB Reference Laboratory	In progress	
NTW-1.1: Support the development of the National TB Reference Laboratory Strategic Plan 2021-2025	In progress	<p>IDDS hired an international and a local consultant to support the development of the National Tuberculosis Reference Laboratory Strategic Plan in collaboration with the key TB stakeholders.</p> <p>The international consultant started remote support on June 6. This support included a literature review, outlining a proposed methodology and work plan, assessing the former strategic plan, preparing an online questionnaire for TB partners, and conducting interviews with key TB partners.</p> <p>In FY 2022 Q4 IDDS will help organize a workshop with other technical partners and national stakeholders to finalize the NTRL Strategic Plan.</p>
DRC-TB-NTW-2: Improve Service Delivery in Three TB Reference Laboratories	In progress	

DRC TB		
Activity	Status	Activity implementation updates
NTW-2.1: Reinforce diagnostic service capacities in Kinshasa TB laboratory	In progress	<p>IDDS provided technical and financial support to organize the training of two NTRL staff in P2 and P3 units on equipment maintenance. The training took place in Kinshasa, from June 10–17.</p> <p>IDDS staff provided technical inputs to update the DRC TB diagnostic network guidelines to include new diagnostic tools and new WHO guidelines. IDDS also helped (technically and logistically) organize a workshop to review and confirm the guidelines. The workshop took place in Matadi, from June 19–25. In FY 2022 Q4, IDDS will prepare the final guidelines for publication.</p> <p>IDDS supports the National TB Reference Laboratory (NTRL) of Kinshasa, which has begun its accreditation process but has many difficulties in operation due to the instability of the electric system. In 2021, IDDS provided its financial support for the operation of a backup generator at the NTRL in the event of power outages, but this has not resolved the issue. Now, IDDS hired a consultant engineer to assess the power distribution at the NTRL and identify the reasons behind the inefficiency of the current generator system (the assessment is in progress). In FY 2022 Q4, the consultant will develop a report with recommendations to help guide IDDS support to the NTRL.</p> <p>IDDS is strengthening the NTRL's capacity to handle waste management and initiated a process to replace the incinerator, which has had some malfunction issues. The procurement of PPE materials and secured trash bins and supplies for waste management is ongoing; IDDS selected the vendor and placed the order.</p> <p>IDDS developed draft terms of reference for waste management training and standard operating procedures (SOPs) for waste management which will guide a training on the topic scheduled for July 2022.</p> <p>IDDS provided two computers to support the introduction and the implementation of an LMIS. The software installation process is complete, and IDDS is working with partners to ensure that continued technical support is provided.</p>
NTW-2.2: Reinforce Diagnostic Service Capacities in Lubumbashi TB Laboratory	In progress	<p>IDDS produced a tool for assessing the Lubumbashi TB Laboratory and prepared the terms of reference for the assessment. In FY 2022 Q4, IDDS and the NTRL will conduct a joint mission to undertake the assessment.</p>

DRC TB		
Activity	Status	Activity implementation updates
NTW-2.3: Reinforce Diagnostic Service Capacities in Kisangani TB Laboratory	In progress	IDDS, with NTP and NTRL staff, have started preparing for the comprehensive assessment of the Kisangani Provincial Laboratory, planned for July 2022.

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	
NTW-1.1: Update and upgrade the existing	In progress	IDDS revised the supervisory checklists and monitoring and evaluation package. In close collaboration with the Central TB Division (CTD) and National Reference Laboratories

India TB		
Activity	Status	Activity implementation updates
supervision, monitoring, and evaluation (SME) framework into an integrated and comprehensive framework		<p>(NRLs), IDDS organized an experience sharing meeting on April 20 to receive feedback on and finalize the checklists and reporting formats. The updated supervisory package was shared with all Intermediate Reference Laboratories (IRLs) and Tuberculosis (TB) Culture and Drug Susceptibility Testing (C-DST) laboratories for implementation by CTD in May.</p> <p>IDDS, in consultation with CTD laboratory unit, initiated data collection for ranking of all NRLs based on the nine strategic thematic areas covered in the scoring and ranking tool. IDDS completed the collection of key information from NRLs by visiting the NRL-Bhopal Memorial Hospital & Research Center in Bhopal on April 11–12, the Regional Medical Research Center (RMRC) in Bhubaneswar on May 30–31, and the National Tuberculosis Institute in Bangalore on June 2–3. After discussing the NRLs' scores with CTD, the NRLs will be oriented to collect information from all IRLs, with IDDS facilitating and coordinating this activity in FY 2022 Q4.</p> <p>IDDS completed a desk review of existing literature for the development of the National TB Laboratory Biosafety Manual to support CTD. Draft chapters for technical review will be ready by the second week of July in FY 2022 Q4.</p>
NTW-1.2: Reinforce management capacity of all NRLs and 12 IRLs to lead the laboratory diagnostic network in assigned institutions and geographies and strengthen NRLs and IRLs for supportive supervision, monitoring, mentoring, and troubleshooting	In progress	<p>The CTD communicated to NRLs and IRLs to use the SME package during supportive supervision visits to linked institutions. Subsequently, IDDS, in collaboration with designated NRLs, oriented the 15 IRLs identified by CTD for IDDS support and an additional 12 IRLs on the implementation of the revised SME package. These orientations were conducted through virtual meetings in May and June. The introductory sessions were attended by more than 68 participants, including IRL supervisors and microbiologists, who discussed the challenges faced by IRLs and the support required for completion of on-site evaluation visits. IDDS will provide the necessary on-site support to the NRLs and IRLs for the on-site evaluation visits in FY 2022 Q4.</p>
NTW-1.3: Develop a forecasting tool to assist NRLs, IRLs and TB C&DST	Not started	<p>Sub-activity NTW-1.3 has not started due to IDDS' engagement in other parallel priorities. The sub-activity will start in FY 2022 Q4 based on CTD's needs for support.</p>

India TB		
Activity	Status	Activity implementation updates
laboratories to estimate the requirement of laboratory consumables		
IND-TB-NTW-2: Private sector laboratory engagement for the TB/DR-TB diagnostic care cascade	In progress	

India TB		
Activity	Status	Activity implementation updates
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	<p>IDDS launched the "One-stop TB/DR-TB Diagnostic Model" under the National Tuberculosis Elimination Program (NTEP).</p> <p>IDDS identified the vendor Thyrocare as the partner laboratory agency and on April 18 briefed the state TB officer of Haryana about Thyrocare and implementation of the model.</p> <p>IDDS conducted a joint visit with USAID to the Hisar district of Haryana from May 3 to 5 to overview the pre-launch of the model. Nearly 30 stakeholders from various agencies including state representatives of the NTEP, Hisar district, USAID, WHO, the U.S. Centers for Disease Control, Solidarity and Action Against the HIV Infection in India, Joint Effort for Elimination of Tuberculosis, the William J. Clinton Foundation, and World Vision India joined. IDDS also visited the Barwala, Adampur, and Hansi II (Mangali) sites to review the model's scope and procedures before launch.</p> <p>On May 14, IDDS organized the launch of the "One-stop TB/DR-TB Diagnostic Model" in Hisar district inaugurated by the Director General of Health Services of Haryana, with more than 150 stakeholders from the state and district attending the event.</p> <p>On June 1, IDDS organized an orientation meeting about the project for private doctors in Hisar district, with about 45 private providers attending the meeting along with representatives of the Indian Medical Association, state and district NTEP, and the National Health Mission, as well as the WHO consultant in Haryana and partner organizations.</p> <p>About 2,000 samples for TB diagnosis were collected from April 22–June 30 and transported to Thyrocare for testing. Cartridge-based nucleic amplification test (CBNAAT) test results are updated in the Nikshay portal within 24 hours, line probe assay (LPA) results in two days, and culture results with average time of 30 days. IDDS is responsible for overall monitoring to ensure smooth implementation of the model.</p>
NTW-2.2: Review of "One-stop TB diagnostic solution"	Not started	This sub-activity will start in FY 2022 Q4, after the model has been implemented for three months.

India TB		
Activity	Status	Activity implementation updates
model for private sector laboratory engagement for TB/DR-TB diagnostic care cascade		
NTW-2.3: Explore other possible options for engagement of private sector laboratories for TB diagnostic care cascade	In progress	Exploring through activity 2.1
IND-TB-NTW-3: Support the Central TB Division and USAID in design and conduct of research on new TB and DR-TB diagnostics	In progress	
NTW-3.1: Comprehensive assessment of Truenat invalid and indeterminate results for <i>Mycobacterium tuberculosis</i> and Rifampicin resistance testing at NTEP's sites and possible solutions to address the same	In Progress	In FY 2022 Q2 IDDS conducted site visits to collect information for a root cause analysis, examining the reasons for high invalid and indeterminate rates of Truenat results at diagnostic facilities in the NTEP. This quarter, IDDS presented the observations identified during those visits substantiating possible reasons of high and low <i>Mycobacterium tuberculosis</i> (MTB) invalid and Rifampicin (RIF) indeterminate rates to CTD on April 20. In FY 2022 Q4, IDDS will include the findings in a report, which will be disseminated to the Truenat sites, IRLs, and NRLs in an experience sharing workshop.
NTW-3.2: Feasibility of using Trueprep extracted DNA for line probe assay testing in NTEP	In Progress	IDDS received approval by the Health Ministry Screening Committee (HMSC) for the Trueprep Diagnostic Network Assessment feasibility study on June 24. IDDS then initiated phase I of the study at the National Institute for Research in Tuberculosis (NIRT)-Chennai. In FY 2022 Q4, IDDS will conduct phase 2 to assess the feasibility of the Trueprep-extracted DNA in field settings in three more sites (Regional Medical Research Center

India TB		
Activity	Status	Activity implementation updates
		Bhubaneshwar, IRL Ahmedabad, and IRL New Delhi TB Center) in addition to the NIRT-Chennai, after establishing the proof of concept and analyzing the data.
NTW-3.3: Situational analysis, desk review and deliberation with CTD to assess the potential of new technologies, tools and approaches and research questions to be evaluated in NTEP	In Progress	IDDS conducted a desk review on newer TB/DR-TB diagnostic technologies and assessed their potential relevance in the current program settings. The ensuing presentation on "Newer TB molecular diagnostics" is ready for dissemination with CTD and key stakeholders for consensus. IDDS developed a draft report discuss findings with NIRT-Chennai and further submission to CTD. IDDS will prioritize and complete this activity in FY 2022 Q4, based on CTD's availability.
NTW-3.4: Support, mentor and monitor relevant USAID-funded programs and partners for development and evaluation of new diagnostic tools	Not started	This sub-activity is based on USAID's request. In FY 2022, no such request has been received.
IND-TB-NTW-4: Support NCDC and identified laboratory(ies)/ laboratory networks for AMR containment and surveillance	In progress	

India TB		
Activity	Status	Activity implementation updates
NTW-4.1: Technical and managerial support for development of new NAP-AMR with the leadership of NCDC	In progress	<p>IDDS provided technical and managerial support in organizing the National Experts Consultation for Human Health component of the National Action Plan on Antimicrobial Resistance (NAP AMR) 2.0 (2022–2026) in collaboration with WHO India under the leadership of the National Center for Disease Control (NCDC) under Director General of Health Services in Ministry of Health and Family Welfare (MoHFW), on June 22 and 23. More than 70 experts from across the nation attended the meeting in New Delhi. Intensive group work was done by experts involving identification of gaps and challenges for the implementation of the NAP AMR (2017–2021), collating strategic inputs for development of NAP-AMR 2.0, and designing a draft operational plan and a monitoring and evaluation framework for the human health sector.</p> <p>Following the consultation, IDDS is providing technical support to NCDC in drafting a report of the human health component. In FY 2022 Q4, the report will be disseminated by NCDC.</p> <p>IDDS is also preparing for another sectoral meeting (research). A tentative list of experts was shared with NCDC for their comments and concurrence.</p>
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	This sub-activity has not started, pending formal communication from the NCDC leadership to the identified states informing about IDDS support to help develop the State Action Plan to Combat Antimicrobial Resistance (SAP-CAR). This sub-activity will start in FY 2022 Q4.
NTW-4.3: Develop and demonstrate a model of district level AMR surveillance in the identified district(s) of Punjab	Not started	This sub-activity has not started, pending formal communication from the NCDC leadership to the states informing them about IDDS support to demonstrate the district-level AMR surveillance. This sub-activity will start in FY 2022 Q4.

Malawi TB		
Activity	Status	Activity implementation updates
Malawi-TB-NTW-1: Assessment of TB Testing Access and Demand	Not started	
Milestone-NTW-1.1: Conduct Laboratory Network Analysis	Not started	
Milestone-NTW-1.2: Conduct Diagnostic Network Assessment	Not started	
Malawi-TB-NTW-2: Increase Diagnostic Capacity	In progress	
Milestone-NTW-2.1: Revise diagnostic algorithm to use molecular diagnostic tools as the initial test		IDDS organized and facilitated a diagnostic algorithm revision workshop on June 20–21, in Lilongwe with 17 participants (2 female) from the USAID Mission, NTRL, NTP, and TB Local Organization Network partners. The initial draft of the revised TB diagnostic algorithm was shared with all participants for feedback. In FY 2022 Q4, IDDS will finalize the revised diagnostic algorithm.
Milestone-NTW-2.2: Introduce Truenat as a first-line molecular diagnostic tool	Not started	

Malawi TB		
Activity	Status	Activity implementation updates
Milestone-NTW-2.3: Introduce/expand access to artificial intelligence software to existing digital X-ray instruments	In progress	IDDS initiated discussions with vendors for the procurement of a digital X-ray machine and AI software. On June 30 and July 1, IDDS and Ministry of Health (MoH) officials undertook a site visit to Ekwendeni Hospital, where the new digital X-ray will be installed. The purpose of the site visit was to ascertain what refurbishments are required prior to installation of the X-ray equipment.
Milestone-NTW-2.4: Expand and institutionalize stool-specimen collection, processing and testing for pediatric TB	In progress	IDDS developed the protocol to assess stool based Xpert MTB/RIF as an alternative diagnostic test of pulmonary TB in children. IDDS submitted the protocol to the Malawi Health and Scientific Committee Institutional Review Board (IRB) for ethical review. The study is expected to start in FY 2022 Q4 once IRB clearance is received.
Milestone-NTW-2.5: Bi-directional testing for COVID-19 and TB	Not started	
Malawi-TB-NTW-3: Strengthen Existing TB Diagnostic Systems		
Milestone-NTW-3.1: Support for new rapid molecular diagnostic instruments	Not started	
Milestone-NTW-3.2: Improve specimen referral network	Not started	
Milestone-NTW-3.3: Build sustainable mechanisms for	Not started	

Malawi TB		
Activity	Status	Activity implementation updates
diagnostic network improvement		
Malawi-TB-DR-CAP-I: Improve Access to and Availability of Drug-susceptibility Testing	In progress	
Milestone-DR-CAP-I.1: Increase testing for resistance to existing drugs	In Progress	The IDDS Africa regional DR-TB advisor conducted a tour of duty to Lilongwe, Malawi from June 12 to 23. During the visit, IDDS met with stakeholders from the mission, the NTLEP, and NTRL and selected three high-volume sites (Bwaila District Hospital, Mangochi District Hospital, and Chikwawa District Hospital) where USAID funding mechanisms currently exist for installation of GX 10-color instruments. The DR-TB regional advisor visited all three sites to assess facility preparedness prior to installation and reviewed the data collection and reporting system. During the visit, the IDDS DR-TB advisor led the work to revise the algorithm (see activity NTW 2.1).

Tanzania TB		
Activity	Status	Activity implementations updates
TZA-TB-NTW-I: Reinforce Tanzania TB Diagnostic Network	In progress	
Milestone-NTW-I.1: Strengthen the capacity and quality of testing in four zonal TB laboratories	In progress	<p>IDDS provided technical and logistic assistance to the Central TB Reference Laboratory (CTRL), by holding a workshop in April in Morogoro to review the TB laboratory operation plan 2022–2023, aimed at strengthening the capacity of zonal laboratories to conduct TB testing. During the workshop, technical inputs were elicited from all participants. As a result, the plan was finalized and submitted in June for signature by high-level authorities in the Ministry of Health (MoH). Final signature was still pending as of the end of Q3.</p> <p>IDDS provided technical assistance for monitoring quality and capacity of TB testing in the zonal laboratories through quarterly data collection visits which took place in April.</p> <p>IDDS started planning a TB laboratory technical working group (TWG) meeting to be held in July 2022 to discuss the adoption of new diagnostic tools, GeneXpert (GX) machines performance and maintenance, TB diagnostic supply chain and management, and to update partners on IDDS support and research activities.</p>
Milestone-NTW-I.2: Strengthen Xpert panel/EQA testing	In progress	IDDS collaborated with CTRL to update the list of GX sites to be enrolled in the external quality assessment (EQA) program. The number of sites to be included increased from 220 in FY 2021 to 268 in FY 2022. In FY 2022 Q4, IDDS will procure EQA panels for the 268 sites in the country.
Milestone-NTW-I.3: Provide GxAlert/Aspect connectivity	In progress	IDDS finalized installation and configuration of the in-country server—that will host data for the GX connectivity solution—by procuring required accessories and licenses. The

Tanzania TB		
Activity	Status	Activity implementations updates
		<p>server is now ready and data migration and upgrading to Aspect connectivity will start in FY 2022 Q4 with support from the STOP TB Partnership and IDDS.</p> <p>In May, IDDS provided logistics and technical assistance for the distribution of 50 GxAlert routers (purchased with IDDS funding in FY 2021) to 50 facilities in Mainland Tanzania and Zanzibar to facilitate sending GX data to the central server.</p>
Milestone-NTW-1.4: Support introduction of new TB diagnostic technologies	In progress	<p>IDDS collaborated with CTRL to develop a national roadmap for the introduction of new TB diagnostic technologies into the country's TB diagnostic network. The roadmap was discussed during a workshop held in Morogoro from June 20–24, for which IDDS provided financial and technical support. The meeting was attended by representatives from the National Tuberculosis and Leprosy Program (NTLP), CTRL, MoH and TB implementing partners.</p> <p>In FY 2022 Q4, IDDS will organize additional meetings to review the roadmap and plan the introduction of Truenat equipment including IDDS training of super-users and supporting the integration of Truenat in the Aspect reporting platform.</p> <p>In addition, IDDS and the National Institute for Medical Research held a workshop from May 16–20 to finalize the report of the validation study conducted to assess the performance of Xpert MTB/RIF Ultra cartridges in the Tanzania context. The report, which includes recommendations for adoption Xpert MTB/RIF Ultra within the TB diagnostic network, is with high-level authorities in MoH for approval.</p> <p>In FY 2022 Q4 IDDS will disseminate the study findings and recommendations to TB stakeholders for their awareness and buy-in.</p>
TZA-TB-NTW-2: Complete TB-DNA Activity and Support Implementation of Some Identified Gaps	Completed	<p>IDDS provided logistics and financial support to the NTLP to conduct a TB diagnostic network assessment (DNA) report dissemination meeting held in Morogoro from June 15 to 17. IDDS printed the first 40 copies of the DNA report for distribution to the regional TB coordinators. A total of the 37 participants attended the dissemination meeting.</p>

Tanzania TB		
Activity	Status	Activity implementations updates
		To fill an identified gap in the diagnostic network, IDDS provided financial support for the distribution of sputum containers from the Central Medical Store Department to TB testing facilities in Mainland Tanzania. Thirty-two regions and councils received containers.

Vietnam TB		
Activity	Status	Activity implementation updates
VNM-TB-NTW-I: Optimize the diagnostic network to address issues of access, timeliness, and diagnostic accuracy	In progress	
NTW-I.I: Strengthen and digital transformation of specimen referral network	In progress	For the specimen referral system (SRS) pilot, SystemOne was supposed to provide technical assistance for Aspect/GxAlert implementation to the National Tuberculosis Control Program (NTP). However, the company stopped working with the NTP because their contract was not renewed. In response, IDDS discussed alternatives with the NTP and National Reference Laboratory (NRL) and explored partnering with Tekmax to use their specimen transport tracking software. Tekmax agreed to support the SRS pilot with their tracker, and in FY 2022

Vietnam TB		
Activity	Status	Activity implementation updates
		Q4, IDDS will get approval from NTP to move forward with this approach and start the implementation.
NTW-I.2: Support the expansion of molecular testing systems	In progress	IDDS, the NTP, and the NRL discussed the distribution plan of GeneXpert (GX) 10-color instruments to five laboratories. However, the NTP has not completed the distribution of these instruments. IDDS was informed that another implementation partner will provide the training for the GX 10-color instruments. In FY 2022 Q4, IDDS will meet with the NTP and the NRL to determine whether IDDS support is still needed for technical assistance to the sites during the implementation process.
NTW-I.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	In collaboration with the NRL, IDDS provided on-site training to two laboratory staff on preparing quality control strains for TB culture based on the standard operating procedures (SOPs) that IDDS developed in FY 2021. The training was held at Dong Thap Lung Hospital on May 5. The Dong Thap Lung Hospital's Head of Microbiology Department and the Chief of Laboratory Technician completed the training. In FY 2022 Q4, IDDS will expand this activity to two liquid culture laboratories in IDDS-supported sites based on NRL approval.
NTW-I.4: Provide continuous technical assistance for laboratory quality improvement	In progress	IDDS used the laboratory assessment tool to assess the provincial laboratory in Dong Thap Lung Hospital on May 5–6. The assessment covered various quality assurance topics, including infrastructure, biosafety, laboratory equipment and maintenance, quality assurance and quality control, quality assurance indicators for smears and culture, data management, specimen collection and preparation, microscopy, solid culture, liquid culture, TB speciation, drug susceptibility testing (DST), and external quality assessment (EQA). Based on the assessment results, IDDS and the NRL provided on-site technical assistance to address gaps and deficiencies identified. IDDS and the NRL initiated the process to update the assessment tool, based on the experience of using the tool in Don Thap province. IDDS developed the scope of work for the IT consultant, who will lead the development of the electronic assessment tool. In FY 2022 Q4, IDDS will work with the NRL to finalize the assessment tool and introduce it to the regional laboratories.

Vietnam TB		
Activity	Status	Activity implementation updates
NTW-1.5: Support the artificial intelligence-enabled chest X-ray to strengthen the Double X strategy	In progress	<p>The implementation of artificial intelligence (AI)-enabled chest X-ray (CXR) reading, which started in Q2 in Khan Hoa province, is ongoing. IDDS continued to liaise between the sites and the software manufacturer, Qure.ai, to troubleshoot connectivity issues and resolve bugs. The licensing agreement with Qure.ai, which was to expire in July 2022, has been extended until December 2022. At the beginning of the pilot, a number of technical issues with the software resulted in fewer CXR images processed than initially anticipated. The extension of the licensing agreement allows IDDS to ensure that the implementation sites can receive technical support from the company throughout the duration of the pilot. IDDS is in the process of finalizing the document for Qure.ai's signature.</p> <p>In FY 2022 Q4, IDDS will review and evaluate the primary results and develop the report.</p>
VNM-TB-NTW-2: Improve pediatric stool testing using GX	In progress	
NTW-2.1: Provide technical assistance to GX facilities on stool GX testing to enhance the pediatric TB diagnosis	In progress	<p>IDDS conducted supportive supervision visits on May 5, 2022, to Dong Thap Lung Hospital and Tam Nong District Health Center. During the visits, IDDS held discussions with provincial and district TB staff to review the GX pediatric stool testing activities, address challenges and offer solutions for improvement, and provide refresher training on the SOPs of stool sample collection, packaging, and transportation. An important challenge is that few stool specimens have been collected and sent for testing.</p> <p>In FY 2022 Q4, IDDS and hospital administrators will work with clinical staff at different health facilities to improve the screening of children with presumptive TB and the collection of stool specimens. IDDS is advising the NTP and the NRL to engage their partners and promote the collection of stool specimens during the active case finding campaign starting in FY 2022 Q4.</p> <p>IDDS is in the process of procuring stool specimen collection kits for five provinces, which will be used in the active case finding campaign.</p>

Vietnam TB		
Activity	Status	Activity implementation updates
VNM-TB-NTW-3: Deploy innovative tools and equipment for Vietnam TB diagnostics	In progress	
NTW-3.1: Conduct an evaluation of trace results in application of GX Ultra testing	In progress	IDDS and the NRL discussed updating the TB diagnostic algorithm to include GX Ultra trace results guidelines. The NRL is working with the editorial committee of the Ministry of Health (MoH) to update the algorithm. In FY 2022 Q4, IDDS will support the NTP to introduce the updated algorithm to the IDDS sites.
NTW-3.2: Support the implementation of whole genome sequencing for DR-TB detection	In progress	IDDS developed the landscape assessment questionnaires for a landscape assessment and disseminated them to the laboratories that implement whole genome sequencing in Vietnam. In FY 2022 Q4, IDDS will analyze the data and organize a technical working group (TWG) meeting to discuss findings and outline an implementation plan for whole genome sequencing for DR-TB.
VNM-TB-NTW-4: Technical assistance for new TB tools	In progress	
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	With Core TB funding, IDDS conducted five trainings on Truenat testing between May 24 and June 21. The five trainings included one virtual training course for national and regional participants and four on-site training courses for provincial and district participants. A total of 159 participants (73 female) attended, including leaders, clinical doctors, and laboratory technicians from 34 health facilities in 19 provinces. The NTP started distribution of Truenat machines to the sites, where Tekmax, a local agent for the Truenat manufacturer Molbio, has been installing the instruments and conducting on-site user instruction. The distribution and installation processes are expected to be completed by the end of July. IDDS is in discussion with the NTP to organize a Truenat super-user training. IDDS translated the training materials into Vietnamese, which are under review by the NRL. IDDS is working with the NRL to secure the training dates and a venue. This training is tentatively planned for August.

Vietnam TB		
Activity	Status	Activity implementation updates
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	<p>IDDS is in discussion with the NTP to sort out the reporting mechanism between implementation sites and the STOP TB Partnership.</p> <p>Together with a local agent of Delft, IDDS organized monthly meetings in June and July with the 10 provinces to address the technical issues and discuss the operational plan for each site. IDDS also conducted supportive supervision visits to Dong Thap province (on May 5–6), to Khanh Hoa provinces (on April 6) to review and monitor the implementation of Qure.ai software, support the reading of X-ray films, observe the process of medical examination and notifications, and review and adjust the data collected.</p> <p>In FY 2022 Q4, IDDS will continue to provide technical assistance to the 10 sites by facilitating communications between the implementation sites and Delft and conducting monthly virtual data review meetings.</p>
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	<p>This activity has not started and is pending an announcement by the STOP TB Partnership on the bidding results for a diagnostic connectivity solution that will be used in Vietnam.</p>

Zimbabwe TB		
Activity	Status	Activity implementation updates
ZWE-TB-NTW-1: Strengthen a comprehensive TB diagnostic network with strong underlying health systems	In progress	
NTW-1.1: Increase TB case detection through comprehensive strategies in collaboration with local organizations network in Harare Province	In progress	IDDS provided technical and financial support in the training of 35 laboratory professionals (20 female) from the 25 TB laboratories in Harare Province that were assessed in FY 2022 Q2. The training was conducted in Harare on April 12–13 and covered the content of the Quality Improvement Framework that IDDS previously developed, including internal and external quality assurance, documentation, equipment maintenance, TB testing, and biosafety. After the training, IDDS started conducting on-site mentorship at these laboratories; 23 laboratories received mentorship this quarter. In FY 2022 Q4, IDDS will support the second training workshop for additional laboratories and continue with on-site mentorship activities.
NTW-1.2: Strengthen functionality of the GeneXpert network	In progress	IDDS provided financial and technical support for a GxAlert/Aspect super-user training, which was conducted in Harare on April 26–29. A total of 21 participants (6 female) were trained on troubleshooting, inventory management, equipment maintenance, and recording and reporting. In FY 2022 Q4, IDDS will support the super-users to conduct on-site supportive supervision visits to the sites that are facing connectivity challenges.
NTW-1.3: Expand and decentralize TB diagnostic network	In progress	IDDS submitted the Zimbabwe National TB Testing Standard Operating Procedures manual to HQ for technical review. The document will be submitted to the Ministry of Health and Child Care for final approval in FY 2022 Q4.

Zimbabwe TB		
Activity	Status	Activity implementation updates
NTW-1.4: Strengthen quality in the TB diagnostic network	In progress	No updates this quarter.
NTW-1.5: Reinforce the TB diagnostic network within the private sector	In progress	The TB-HIV Public-Private-Partnership framework was approved by the Ministry of Health and Child Care and submitted to IDDS HQ for technical review. In FY 2022 Q4, the document will be submitted to USAID.
NTW-1.6: Expand supportive supervision and analysis of quality TB data to improve program performance	In progress	No supportive supervision visits were conducted in Q3.
NTW-1.7: Implement the DXO strategy to strengthen the GeneXpert network	In progress	See updates for NTW-1.2.
ZWE-TB-NTW-2: Support the NTRL and NTP to develop and operationalize functional national and provincial TB reference laboratory structures	In progress	
NTW-2.1: Strengthen the NTRLs to serve as the leading laboratories in the TB diagnostic network	In progress	IDDS provided financial and technical support for a Safe Work Practices training for 22 staff members (10 female) from the Bulawayo National TB Reference Laboratory (NTRL) from April 25–29. The participants were trained in biosafety and biosecurity, risk assessment, bio-risk mitigation measures for TB laboratories, and waste management. This on-site hands-on training was conducted at the NTRL and facilitated by a consultant engaged by IDDS. The IDDS diagnostic specialist embedded at the NTRL provided technical assistance as the laboratory prepared for the assessment by the Southern African Development Community Accreditation Service (SADCAS). The laboratory was recommended for accreditation if it addresses the identified non-conformities. The laboratory will address the non-conformities in FY 2022 Q4 and submit the required documentation for review by SADCAS.

Zimbabwe TB		
Activity	Status	Activity implementation updates
NTW-2.2: Support the NTP's leadership activities and TWGs sessions	In progress	No updates for Q3.
ZWE-TB-NTW-3: Conduct OR to generate evidence on TB diagnostic strategies in Zimbabwe context	In progress	IDDS submitted the Smear Microscopy Hub Strategy study protocol to the Medical Research Council of Zimbabwe, and it was approved in June. In FY 2022 Q4, IDDS will seek approval to conduct the study from the provinces, districts, and laboratories that will participate in the study. Training materials for the health care workers will also be developed in preparation for study commencement.
NTW-3.1: Conduct OR on clinically diagnosed TB patients using CXR and other TB clinical signs	In progress	IDDS submitted the Clinically Diagnosed TB Patients Using Chest X-ray and Other TB Clinical Signs protocol, and it was approved by the Medical Research Council of Zimbabwe in May. In FY 2022 Q4, IDDS will train health care workers on data collection and commence data collection.
NTW 3.2: Conduct OR on GeneXpert MTB/RIF Ultra "trace call" results in Zimbabwe	In progress	IDDS started the GeneXpert MTB/RIF Ultra "Trace Call" study participant recruitment on April 1, at all the study sites. As of the end of June, a total of 24 participants have been enrolled in the study. Data collection and study participant recruitment will continue in FY 2022 Q4.