Research for implementation

TDR Expected Results
Progress 2024-2025 and Strategic Plans for 2026-2027

Contents

Expected Result: 1.1.1

Title: Country preparedness for disease outbreaks

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Evolved	**Funding type:**	UD and DF
Start date:	01/01/2013	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	
WHO region:	Global		

Partners: Endemic country programmes and researchers, West Africa Health Organization, WHO regional offices, WHO departments (WHO-ECCH, and the WHO Yellow Fever Department, Eliminate Yellow Fever Epidemic (EYE) Secretariat).

Diseases: Arboviral diseases;Arboviruses;Chikungunya;Dengue;Vector-borne diseases;Other;Epidemics and outbreaks

Review mechanism: Scientific working group + other ad hoc or collaboration-based review systems as appropriate

ER manager: Corinne Simone Collette MERLE

Team: Michelle Villasol, Corinne Merle, Gildas Yahouedo, Nolwenn Conan

Number of people working on projects: 120

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	No	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Objectives aligned
Roles complimentary:	Yes	The partners have complementary role and responsabilities.
Coordination transparent:	Yes	Transparent coordination
Visibility:	Yes	Visibility of TDR higlighted

Objectives and results chain

Approach to ensure uptake: National control programmes and WHO (HQ, ROs) fully involved in research planning, implementation and analysis.

Up-take/Use Indicator: TDR outputs considered among evidence informing guidelines and policy decisions or control programme advisory committee recommendations. EWARS uptake at various stages of piloting in over 13 countries.

Gender and geographic equity: Gender specific Zika issues as they relate to outbreak surveillance and response will be taken into account during research design. All affected regions are considered.

Publication plan: - Braack L, Wulandhari SA, Chanda E, Fouque F, Merle CS, Nwangwu U, Velayudhan R, Venter M, Yahouedo AG, Lines J, Aung PP, Chan K, Abeku TA, Tibenderana J, Clarke SE. Developing African arbovirus networks and capacity strengthening in arbovirus surveillance and response: findings from a

virtual workshop. Parasit Vectors. 2023 Apr 14;16(1):129. doi: 10.1186/s13071-023-05748-7. PMID: 37059998; PMCID: PMC10103543.

- Schlesinger M, Prieto Alvarado FE, Borbón Ramos ME, Sewe MO, Merle CS, Kroeger A, Hussain-Alkhateeb L. Enabling countries to manage outbreaks: statistical, operational, and contextual analysis of the early warning and response system (EWARS-csd) for dengue outbreaks. Front Public Health. 2024 Jan 19;12:1323618. doi: 10.3389/fpubh.2024.1323618. PMID: 38314090; PMCID: PMC10834665

Up-take/use indicator target date: 31/12/2027

Sustainable Development Goals

Good Health and Well-being;Reduced Inequality;Partnerships to achieve the Goal

Concept and approach

Rationale:

This ER addresses an important public health problem (prediction, early detection and response to devastating outbreaks). Considering the growing importance of Aedes-borne diseases, the initial focus was on dengue, chikungunya, Zika and yellow fever but we move slowly towards addressing other climate sensitive diseases such as meningitis, cholera outbreaks and promoting a One Health approach.

Design and methodology:

For this ER, TDR is providing the following support:

1. Support to country control programmes worldwide to identify signals that can alert country control programmes to an impending arbovirus outbreak. This has led to a model contingency plan and **an Early Warning and Response System (EWARS) for arbovirus outbreaks**
2. Support to the Ethiopian National Disease Control Programme to pilot EWARS **for predicting meningitis outbreak**
3. Strengthening surveillance and control of Arboviral diseases in Africa including **yellow fever outbreak prevention & response in high-risk African countries**

Approach to ensure quality:

Scientific working group and, as applicable, other expert review of proposals, progress reports, close monthly monitoring of country progress in the conduct of their research protocol.

ER Objectives

ERObj-0000 : To enable countries to improve their response capacity to arboviruses outbreaks and other diseases outbreaks

ERObj-0068 : Strengthening surveillance and control of Arboviral diseases in Africa including yellow fever outbreak prevention & response in high-risk African countries

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 150000	USD 200000
Designated funds	USD 500000	USD 500000
Total	USD 650000	USD 700000

Planned Budget

Undesignated funds	USD 150000
Designated funds	USD 500000
Total	USD 650000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0300: Lack of interest outside epidemic peaks resulting in insufficient funding

Actions To Mitigate Risk: Raise awareness of potential donors; explore alternative ways of supporting work

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0370: By 2027, more than 15 countries use EWARS-csd in at-risk districts and at least 3 countries integrated EWARS-csd in their surveillance system

Output Indicator: Integration of EWARS-csd in countries 'surveillance system

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description: Current status of EWARS-csd use

1. Full integration of EWARS-csd into the national surveillance platform: Mexico (with 137 endemic municipalities). Because of a change in the MOH, the surveillance system was blocked but with the nomination of the new head of the surveillance disease department it recently restarted. A paper on Mexico experience with EWARS-csd was developed with the team to explain how they moved from research to national implementation (REF)

2. Countries which started to pilot EWARS-csd in hot-spot districts for later inclusion into the national surveillance system: Bangladesh, Cambodia, Dominican republic (for which additional support is provided by WHO PAHO), Ethiopia, India, Lao, Myanmar, Nepal, Thailand, Timor Leste, Colombia, Oman, Ethiopia, Malawi, Mozambique.

3. Countries which are at a early implementation stage (calibration): Burkina Faso, Nigeria and Senegal

4. Countries which had advanced with the wide-spread use of EWARS-csd but were slowed down due to political changes and are now coming back: Sri Lanka (on hold since the political events), Malaysia (still on hold because of political reason), Brazil (implementation is on hold due to political reasons)

The WHO Climate Change and Health unit (WHO/CCH) is collaborating for the implementation of EWARS-csd system in the following countries: Bangladesh, Cambodia, Lao, Myanmar, Nepal, Timor Leste, Ethiopia, Malawi and Mozambique and Oman.

Beside the monthly calls with all teams to catch-up on the country progress and when appropriate provide online training, since 2020, webinars were organised every 6 months with all countries implementing EWARS-csd (in collaboration with WHO/CCH) to maintain a dynamic and share experiences.

Focus on Lao-PRD and Thailand

The National Disease Control (NDC) programme in Thailand is highly committed to scale-up the use of EWARS-csd at National Scale. Memorandum of understanding was signed between the NCDC and the national meteorological department for automatically share data on weekly basis. This will automatically feed the EWARS-csd system and generate alarm. With TDR and CDC funding, they are collaborating with a start-up NECTEC to help them to implement a digital solution for sharing the alarm level automatically through an in-house app with the health services. This system should be available by the end of 2024. Implementation research will be conducted in 2025 to evaluate the effectiveness, feasibility and satisfaction of end users.

In Lao-PRD, progress were made to link EWARS-csd with the DHIS2 of Lao-PRD. We are now discussing with the University of Oslo (developers of the DHIS2) to develop a dashboard in the DHIS2 that could provide weekly alarms at district level.

2. Early Warning and Response System (EWARS) for other climate sensitive diseases such as meningitis

This is a new area of work for which there is a lot of potential. EWARS-csd is tested in Mozambique for predicting Malaria Outbreak. This is led by the WHO/CCH unit. TDR is supporting Ethiopia for using the EWARS-csd platform for predicting meningitis outbreak. The first results are very encouraging and a manuscript was submitted to share the results widely. The MOH of Burkina Faso already expressed interest in using EWARS-csd for meningitis.

Biennium: 2024-2025

EROutp-0400: at least one research package was developped and endorsed by WHO NTD or WHO EYE department

Output Indicator: availability of tools for strengthening capacities of countries in Africa for the surveillance and control of arboviral diseases including Yellow fever

Output Target Date: 01/01/2025

Output Progress Status: On Track

Output Progress Description: In response to large outbreaks in Angola and in Democratic Republic of the Congo in 2016, and with the threat of international spread (11 cases were exported to China), the World Health Organization (WHO), Gavi, the Vaccine Alliance and the United Nations International Children's Emergency Fund (UNICEF) developed a comprehensive multi-partner global strategy to Eliminate Yellow fever Epidemics (EYE) 2017-2026. In order to reach its three objectives for 2026 (1) protect at-risk population; 2) prevent international spread; and 3) contain outbreaks rapidly), one of the mandates of the EYE strategy is to help at-risk countries to prevent yellow fever outbreaks and to prepare for those which might still occur.

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0111: Country preparedness and policy decisions for arbovirus outbreaks informed or facilitated by TDR outputs

Progress made towards outcome : Discussions are ongoing to integrate EEWARS-csd in the Global Arbovirus Initiative surveillance dashboard. A meeting with other modelling groups will be organised in December 2024 to develop guidance for the countries for the choice of the predicting tool to consider depending of their local ressources and context

Biennium: 2024-2025

EROutc-0123: Process and tools were developed to strengthen country capacities for the Surveillance and Control of Arboviral Diseases including Yellow Fever in Africa

Progress made towards outcome : the Root Cause analysis toolkit for understanding the cause of yellow fever outbreak resurgence will be part of the EYE strategy tools to be used when a new yellow fever outbreak occur in a country.

Because of the growing experience of TDR in the development of generic research package (see ER 1.2.6) , the EYE secretariat proposed to TDR to support them in the development of a research package that will guide countries for the conduct of root-cause analysis yellow fever outbreaks in African countries with history of preventive mass vaccination campaign(s), as well as for the investigation of the reasons for delays in vaccination response during an outbreak. with template research protocols (including SOPs and data collection tools)

The research package composed by two research protocols, questionnaires, and guidance documents for conducting the surveys is finalised. It was successfully piloted in Guinea, Cameroon and Central Africa and presented at the EYE annual meeting. This research package will be available in French and English. Its design and layout need to be finalised. It should be available early 2025.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 155000	USD 300000
Designated funds	USD 180000	USD 450000
Total	USD 335000	USD 750000

Planned Budget

Undesignated funds	USD 155000
Designated funds	USD 180000
Total	USD 335000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0336: Lack of interest outside epidemic peaks resulting in insufficient funding

Actions To Mitigate Risk: Raise awareness of potential donors; explore alternative ways of supporting work

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0419: By 2027, more than 15 countries use EWARS-csd in at-risk districts and at least 3 countries integrated EWARS-csd in their surveillance system

Output Indicator: Integration of EWARS-csd in countries 'surveillance system

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0143: Country preparedness and policy decisions for arbovirus outbreaks informed or facilitated by TDR outputs

Progress made towards outcome :

ER Project Links

Project ID : P23-00882 **PI Name :** Hajo Grundmann

ER Project Title : Support for effective implementation of an early warning and response systems for dengue control (EWARS for dengue control).

Project Start Date : 30/05/2022 **Project End Date :** 01/12/2023

Project ID : P23-00939 **PI Name :** Laith Naser Hussain

ER Project Title : Technical assistance for the implementation of an “Effective, affordable and evidence-based dengue early warning and response systems”(EWARS for dengue control)

Project Start Date : 20/03/2023 **Project End Date :** 30/04/2023

Project ID : P23-00945 **PI Name :** Nolwenn Conan

ER Project Title : Addressing the yellow fever immunization gaps by improving its assessment in targeted countries.

Project Start Date : 01/04/2023 **Project End Date :** 30/06/2024

Project ID : P21-00490 **PI Name :** Apinya Niramitsantipong

ER Project Title : Thailand - Better Documenting EWARS Effectiveness on Dengue Control

Project Start Date : 12/11/2021 **Project End Date :** 31/01/2022

Project ID : P21-00349 **PI Name :** Winfried Kern

ER Project Title : Support to research for Improved VL Surveillance, Case Detection and Vector Control in the scope of VL elimination Initiative in Bangladesh and Nepal

Project Start Date : 28/06/2021 **Project End Date :** 26/06/2022

Project ID : P20-00069 **PI Name :** Winfried Kern

ER Project Title : Research Programme on “Effective, affordable and evidence-based dengue early warning and response systems”

Project Start Date : 06/11/2020 **Project End Date :** 01/12/2021

Project ID : P20-00097 **PI Name :** Laith Naser Hussain

ER Project Title : Research Programme on “Effective, affordable and evidence-based dengue early warning and response systems”.

Project Start Date : 16/11/2020 **Project End Date :** 01/12/2021

Project ID : B80229 **PI Name :** Margarita Ronderos

ER Project Title : To prepare reports of the Expert Meeting on Dengue-Zika-Chikungunya Early Outbreak Warning and Response, WHO-HQ, Geneva, Switzerland, 19-20 September 2019

Project Start Date : 01/09/2019 **Project End Date :** 15/11/2019

Project ID : P20-00137 **PI Name :** Gildas Yahouedo

ER Project Title : Data collection for measuring the capacities of the South-East and Central Africa countries for entomological/epidemiological surveillance of arboviral diseases and vector control

Project Start Date : 07/12/2020 **Project End Date :** 28/02/2021

Project ID : P21-00191 **PI Name :** Gildas Yahouedo

ER Project Title : Situation analysis on surveillance and control on vector borne diseases in sub-Saharan Africa

Project Start Date : 01/03/2021 **Project End Date :** 15/05/2021

Project ID : B80015 **PI Name :** David Benitez-Valladares

ER Project Title : Research Programme on 'Effective, affordable and evidence-based dengue early warning and response systems '

Project Start Date : 01/04/2018 **Project End Date :** 03/11/2019

Project ID : B80020 **PI Name :** Laith Naser Hussain

ER Project Title : Research Programme on 'Effective, affordable and evidence-based dengue early warning and response systems '

Project Start Date : 21/02/2018 **Project End Date :** 30/11/2018

Project ID : B80100 **PI Name :** Joacim Rocklov

ER Project Title : Maintenance of the web application version of dengue Early Warning and Response System (EWARS)

Project Start Date : 26/10/2018 **Project End Date :** 31/12/2019

Project ID : B80116 **PI Name :** Ursula Wittwer Backofen

ER Project Title : Research Programme on 'Effective, affordable and evidence-based dengue early warning and response systems '

Project Start Date : 14/01/2019 **Project End Date :** 31/12/2019

Project ID : B80117 **PI Name :** Maquines Odhlambo Sewe

ER Project Title : Research Programme on 'Effective, affordable and evidence-based dengue early warning and response systems '.

Project Start Date : 01/02/2019 **Project End Date :** 30/11/2019

ER Country Links

Country:	Liberia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Angola	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Burundi	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Congo, Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Eritrea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Benin	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mali	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Mauritania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Rwanda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Senegal	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Burkina Faso	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Botswana	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Cameroon	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Algeria	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Chad	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Côte d'Ivoire	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Cabo Verde	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	South Africa	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Central African Republic	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ghana	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Lesotho	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mauritius	**WHO Region :**	AFRO	**World Bank : Income Group**	High income
Country:	Namibia	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income

Country:	Comoros	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Congo, Dem. Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Equatorial Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Ethiopia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Gambia, The	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Eswatini	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Madagascar	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Seychelles	**WHO Region :**	AFRO	**World Bank : Income Group**	High income
Country:	Uganda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Zambia	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Gabon	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Guinea-Bissau	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Kenya	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Malawi	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Nigeria	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Sierra Leone	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	South Sudan	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Mozambique	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Togo	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Tanzania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Niger	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	São Tomé and Principe	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Zimbabwe	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Gambia, The	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Mauritania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Benin	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Senegal	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Sierra Leone	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ghana	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Cabo Verde	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Togo	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income

Country:	Liberia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Niger	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Nigeria	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mali	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Burkina Faso	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Côte d'Ivoire	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Peru	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Colombia	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Venezuela, RB	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Dominican Republic	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Brazil	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Myanmar	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Sri Lanka	**WHO Region :**	SEARO	**World Bank : Income Group**	Upper middle income
Country:	Thailand	**WHO Region :**	SEARO	**World Bank : Income Group**	Upper middle income
Country:	Indonesia	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	India	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Nepal	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Bangladesh	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Maldives	**WHO Region :**	SEARO	**World Bank : Income Group**	Upper middle income
Country:	Malaysia	**WHO Region :**	WPRO	**World Bank : Income Group**	Upper middle income
Country:	Vietnam	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income
Country:	Cambodia	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income

Expected Result: 1.1.4

Title: Country resilience to the threat of drug-resistant infections

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Continuing	**Funding type:**	UD
Start date:	01/01/2018	**End date:**	27/12/2027
ER status:	On Track	**Comment:**	112 research projects started in 11 countries, 87 published, 79% influenced policy/practice; 92% trainees applying SORT IT skills to AMR practice; 38% trainees became mentors showing leadership.

WHO region: Global

Partners: 11 WHO country offices, EMRO regional office, National AMR committees, 87 implementing partners including NGOs, research and academic institutions, relevant MoH departments/programmes, hospitals/clinics in selected countries.

Diseases: Not Disease-Specific;Resistance to treatment and control agents;One Health

Review mechanism: One Health country committees, WCOs, Scientific working group, other collaboration-based review systems as appropriate

ER manager: Rony ZACHARIAH

Team: Ekua Johnson, Garry Aslanyan, Corinne Merle, Michelle Villasol, Maier Mary, Abdul Masoudi, Kamau Edward, Terry Robert, Zachariah Rony

Number of people working on projects: 17

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Aligned
Roles complimentary:	Yes	WHO country offices and SORT IT partners leverage their local convening power and allow use of their trained and experienced human resources for implementation
Coordination transparent:	Yes	All research subjects and participants are endorsed by national AMR selection committees, data and publications are open access, Phone calls each month with partners, all reports shared widely. SORT IT selection criteria and SOPs established.
Visibility:	Yes	The TDR website is updated every quarter and all reports and training documents are archived. All published studies are open access and disseminated through various channels. A new module on communication developed for effective dissmination

Objectives and results chain

Approach to ensure uptake: Early engagement with expected end-users ensures local research relevance, while regular updates to stakeholders and related programs, along with their active involvement in project selection, planning, implementation, and policy development, enhance collaboration. New training modules on real-time data

management and capacity-building for effective research communication with decision-makers have been developed and integrated into all training sessions.

Up-take/Use Indicator: Routine surveys conducted 12-15 months after research completions, new or updated/improved guidelines, policies, implementation plans and/or practice (as applicable) informed by TDR outputs

Gender and geographic equity: Beneficiaries: Geographic selection and target countries are determined by available funding and currently include nations in Africa, Asia, the Eastern Mediterranean, and Latin America. TDR is committed to promoting equality, diversity, and inclusivity in science. Researchers of all gender identities, sexual orientations, ethnicities, religions, cultures, social backgrounds, and those with disabilities are strongly encouraged to apply.

Collaborators: Collaborators include those engaged in the preparation, implementation, and uptake of the project, with potential funding from third parties where applicable.

Publication plan: Scientific meetings, Open access journals, TDR and partner websites, TDR-gateway, lightening video presentations, published annual reports

Published papers on AMR that became fully accessible in 2024

1. Margao S, Fofanah BD, Thekkur P, Kallon C, Ngauja RE, Kamara IF, et al. Improvement in Infection Prevention and Control Performance Following Operational Research in Sierra Leone: A Before (2021) and After (2023) Study. Tropical Medicine and Infectious Disease. 2023;8(7):376.

2. Kamara RZ, Kamara IF, Moses F, Kanu JS, Kallon C, Kabba M, et al. Improvement in Infection Prevention and Control Compliance at the Three Tertiary Hospitals of Sierra Leone following an Operational Research Study. Tropical Medicine and Infectious Disease. 2023;8(7):378.

3. Kpagoi SSTK, Kamara KN, Carshon-Marsh R, Delamou A, Manzi M, Kamara RZ, et al. Assessing Changes in Surgical Site Infections and Antibiotic Use among Caesarean Section and Herniorrhaphy Patients at a Regional Hospital in Sierra Leone Following Operational Research in 2021. Tropical Medicine and Infectious Disease. 2023;8(8):385.

4. Upadhaya S, Acharya J, Zolfo M, Nair D, Kharel M, Shrestha A, et al. Has Data Quality of an Antimicrobial Resistance Surveillance System in a Province of Nepal Improved between 2019 and 2022? Tropical Medicine and Infectious Disease. 2023;8(8):399.

5. Konteh SA, Bangura FI, Leno A, Satyanarayana S, Nair D, Bah MA, et al. Improvement in the Surveillance System for Livestock Diseases and Antimicrobial Use Following Operational Research Studies in Sierra Leone January–March 2023. Tropical Medicine and Infectious Disease. 2023;8(8):408.

6. Shrestha I, Shrestha S, Vijayageetha M, Koju P, Shrestha S, Zachariah R, et al. Surgical Antibiotic Prophylaxis Administration Improved after introducing Dedicated Guidelines: A Before-and-After Study from Dhulikhel Hospital in Nepal (2019–2023). Tropical Medicine and Infectious Disease. 2023;8(8):420.

7. Moiwo MM, Kamara GN, Kamara D, Kamara IF, Sevalie S, Koroma Z, et al. Have Hand Hygiene Practices in Two Tertiary Care Hospitals, Freetown, Sierra Leone, Improved in 2023 following Operational Research in 2021? Tropical Medicine and Infectious Disease. 2023;8(9):431.

8. Lovelace Adjei R, Asantewah, Lady, Adomako B, Korang-Labi A, Avornyo FK, Timire C, et al. Assessing Changes in Bacterial Load and Antibiotic Resistance in the Legon Sewage Treatment Plant between 2018 and 2023 in Accra, Ghana. Tropical Medicine and Infectious Disease. 2023;8(9):427.

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12. 2. Boakye-Yiadom E, Najjemba R, Thekkur P, Labi AK, Gil-Cuesta J, Asafo-Adjei K, et al. Use and Quality of Blood Cultures for the Diagnosis of Bloodstream Infections: A Cross-Sectional Study in the Ho Teaching Hospital, Ghana, 2019–2021. International Journal of Environmental Research and Public Health. 2023;20(17):6631. https://www.mdpi.com/1660-4601/20/17/6631

Up-take/use indicator target date: 31/12/2025

Sustainable Development Goals

Good Health and Well-being;Quality Education;Gender Equality;Clean Water and Sanitation;Industry, Innovation and Infrastructure;Responsible Consumption and Production;Life Below Water;Life on Land;Partnerships to achieve the Goal

Concept and approach

Rationale:

Antimicrobial resistance (AMR) poses a significant global public health threat, rendering standard treatments ineffective and allowing infections to persist and spread. To address emerging drug resistance effectively, countries require support in several key areas:

4. Developing sustainable local capacity for conducting operational research and utilizing routine program data
5. Enhancing data generation and application across key global strategic pillars of action plans for tackling AMR
    a. Strengthening surveillance, monitoring, and reporting systems
    b. Reducing infection incidence across health facilities, communities, and animal health sectors
    c. Optimizing antimicrobial use in human health, veterinary practices, and agriculture
    d. Investing sustainably in new diagnostics and methods for measuring the burden of AMR
6. Establishing robust structures and processes for informed decision-making and knowledge management to maximize the impact of broader research efforts

Design and methodology:

The design emphasizes early and multi-disciplinary engagement with national and international AMR stakeholders who will use the results. It incorporates the output oriented SORT IT approach to generate and communicate evidence for informed decision-making. Research questions are aligned with national priorities, and the training model encompasses the three TDR pillars: 1) research implementation, 2) capacity building, and 3) global engagement. Additionally, SORT IT includes a training-of-trainers program designed to create a multiplier effect and ensure long-term sustainability.

Approach to ensure quality:

The selection of countries, partners, and trainees is guided by specific criteria and project requirements, with close progress and performance monitoring throughout the process. Investigators are chosen based on specific eligibility criteria, including relevant expertise and national endorsement, which is also vetted through proposal reviews by experienced technical committees and external subject matter experts. Training activities are tailored as needed. Mentors and collaborating institutions for implementation of research projects are selected based on specific criteria such as proven experience, hands-on mentorship style and familiarity with the country context.

The SORT IT approach incorporates its own quality and performance standards, which are monitored and reported on at quarterly basis. Publishing is part of the quality control process of generated evidence; Standard Operating Procedures are customized to national needs and capacities. All franchised initiatives include mandatory quality control measures. The quality of publications is monitored through independent evaluations.

ER Objectives

ERObj-0001 : 1. Assist countries in creating practical approaches for implementing effective strategies to prevent, detect, and control drug-resistant infections.

ERObj-0002 : 2. Develop sustainable capacity for conducting operational research utilizing "One Health" approach, and apply the insights gained to make informed decisions that enhance public health.

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 300000	USD 500000
Designated funds	USD 200000	USD 700000
Total	USD 500000	USD 1200000

Planned Budget

Undesignated funds	USD 300000
Designated funds	USD 200000
Total	USD 500000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0291: Insufficient funding

Actions To Mitigate Risk: Expand the scope of fund raising activities. Prospect with new partners on joint projects and fund raising activities.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0357: Research proposals/publications/communication videos/ evidence brief and examples of good practice made available

Output Indicator: Documentation of practical approaches to improve targeted treatment and reduce drug misuse and risk of resistance development and spread

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: A total of 112 research projects have been initiated from 2019, leading to 87 publications, 80 evidence briefs, and 80 lightning videos embedded with publication abstracts.

In 2024, 22 new research projects were launched. Among these, 12 were part of a pioneering SORT IT initiative in Al Ain, UAE, involving 20 institutions from 10 countries and addressing AMR challenges in Egypt, Iran, Tunisia, and the UAE. Additionally, 10 studies focused on assessing research impact in Ghana.

In terms of good practice, eleven success stories (a special journal issue) showcasing field impact and best practices were published - two from Ghana, two from Nepal, and seven from Sierra Leone.

Additionally, the WHO Director-General's office has recognized Sierra Leone's SORT IT approach as a model for multi-level collaboration and capacity building in the fight against antimicrobial resistance.

Biennium: 2024-2025

EROutp-0358: Strategies and activities endorsed by stakeholders at relevant levels

Output Indicator: OR/IR strategies for countries to build effective systems for monitoring and responding to emerging drug resistance of all relevant infectious agents

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: All 112 studies, including the 22 initiated in 2024, have all been vetted and endorsed by national AMR committees and WHO country offices. These studies were recognized as national research priorities and deemed relevant for informing policy and practice.

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0102: Guidelines, policies or policy implementation plans (as applicable) informed by TDR outputs

Progress made towards outcome : The SORT IT research training has become a model for global impact: While 86% of applied research globally fails to influence policies, the SORT IT program stands as an encouraging example of success. According to the 2024 TDR metrics survey, 79% of the 75 "One Health" studies conducted through SORT IT have impacted policy or practice. This demonstrates the program's effectiveness in translating research into actionable outcomes.

Key Achievements:

1. Skill Application:

   92% of SORT IT trainees applied their skills to antimicrobial resistance.

   50% addressed emerging infections.

   64% completed new studies.

   38% became mentors, showcasing their leadership in health research and contributing to significant health system benefits.

2. Field Impact Success Stories: Eleven success stories have been published, including:

   Two from Ghana,

Two from Nepal,

Seven from Sierra Leone.

3. Ongoing Impact Assessments: Ten studies from Ghana are currently undergoing formal impact evaluation through a SORT IT program, running from July 2024 to June 2025.

4. Capacity Building and Leadership: Training of Trainers: Nine former SORT IT trainees are now serving as potential mentors and paired with experienced senior mentors in a Training of Trainers program. In total eighteen (9 trainees and 9 potential mentors) are thus being trained across ten projects in Ghana, demonstrating the leadership and empowerment fostered by the program. 12 individuals and 4 potential mentors are also being trained in Egypt, Iran, Tunisia and UAE making a total of 34 people being trained in 2024

5. International Recognition and Expansion:

a) WHO Endorsement: The WHO Director-General's office has selected Sierra Leone's SORT IT approach as a model for multi-level collaboration and capacity building, particularly in the fight against antimicrobial resistance.

b) National Leadership in Sierra Leone: Trainees from Sierra Leone have secured Canadian funding to launch a SORT IT program with local partners, highlighting the national leadership and capacity developed through the program. In October 2024, these trainees will lead a TDR-supported initiative to enhance HIV, TB, and malaria programs using Global Fund grants, further demonstrating the impact of SORT IT on health systems.

c) Nepal successfully received the Pandemic grant of 20 million and would be utilizing the SORT IT model for capacity building.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 245000	USD 500000
Designated funds	USD 300000	USD 700000
Total	USD 545000	USD 1200000

Planned Budget

Undesignated funds	USD 245000
Designated funds	USD 300000
Total	USD 545000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0339: Insufficient funding

Actions To Mitigate Risk: Expand the scope of fund raising activities. Prospect with new partners on joint projects and fund raising activities.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0430: Number of report / publications / examples released (8 new reports/publications and 2 examples of good practice made available ; 16 publications for the US$ 50 million scenario)

Output Indicator: Documentation of practical approaches to improve targeted treatment and reduce drug misuse and risk of resistance development and spread

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

Biennium: 2026-2027

EROutp-0431: OR/IR strategies and priority research subjects endorsed by stakeholders at relevant levels in two countries (4 countries for the US$ 50 million scenario).

Output Indicator: OR/IR strategies for countries to build effective systems for monitoring and responding to emerging drug resistance of all relevant infectious agents

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0152: Strengthened evidence-base for policy and practice decisions on AMR

Progress made towards outcome :

ER Project Links

Project ID : P21-00220 **PI Name :** Evelina Chapman

ER Project Title : SORT IT module 4 development of training material – how to develop a plain language summary to communicate operational research findings

Project Start Date : 01/04/2021 **Project End Date :** 16/04/2021

Project ID : P20-00008 **PI Name :** Alisa Denisiuk

ER Project Title : Provide research assistance in the creation of a COVID-19 Data Platform and Repository/Registry tracking sheet

Project Start Date : 01/09/2020 **Project End Date :** 15/12/2020

Project ID : B80168 **PI Name :** Selma Dar Berger

ER Project Title : Providing senior technical expertise for implementing the Structured Operational Research and Training Initiative (SORT IT) on antimicrobial resistance in Low- and Middle-Income Countries

Project Start Date : 16/04/2019 **Project End Date :**

Project ID : B80173 **PI Name :** Debra Donckel

ER Project Title : Providing senior technical expertise for implementing the Structured Operational Research and Training Initiative (SORT IT) on antimicrobial resistance in Low- and Middle-Income Countries

Project Start Date : 01/07/2019 **Project End Date :** 15/10/2021

Project ID : B80174 **PI Name :** Maria Zolfo

ER Project Title : Providing senior technical expertise for implementing the Structured Operational Research and Training Initiative (SORT IT) on antimicrobial resistance in Low- and Middle-Income Countries

Project Start Date : 30/04/2019 **Project End Date :**

Project ID : B80196 **PI Name :** Hayk Datvyan

ER Project Title : Providing senior technical expertise for implementing the Structured Operational Research and Training Initiative (SORT IT) on antimicrobial resistance in Low- and Middle-Income Countries

Project Start Date : 06/06/2019 **Project End Date :**

Project ID : B80197 **PI Name :** Alexandre Delamou

ER Project Title : Providing senior technical expertise for implementing the Structured Operational Research and Training Initiative (SORT IT) on antimicrobial resistance in Low- and Middle-Income Countries

Project Start Date : 06/06/2019 **Project End Date :**

Project ID : C00016 **PI Name :** Selma Dar Berger

ER Project Title : APW with the Union for Independent review of ethics considerations for analysis of routine prog for SORT IT courses

Project Start Date : 26/02/2020 **Project End Date :**

Project ID : P20-00118 **PI Name :** Selma Dar Berger

ER Project Title : Technical support for conducting a "survey to inform rescheduling of upcoming SORT IT courses on Antimicrobial Resistance due to COVID-19

Project Start Date : **Project End Date :**

Project ID : P20-00131 **PI Name :** Katherine Tayler-Smith

ER Project Title : Literature search, categorization and archiving of scientific publications for supporting mod 3 of the Asia & Africa regional and Nepal national SORT IT Programs on tackling AMR

Project Start Date : **Project End Date :**

Project ID : P20-00139 **PI Name :** Hayk Datvyan

ER Project Title : Providing technical support for v module 3 (manuscript writing) of the Asia regional and Africa regional SORT IT on tackling antimicrobial resistance (AMR) using a virtual SORT IT platform

Project Start Date : 01/01/2021 **Project End Date :** 15/03/2021

Project ID : P20-00123 **PI Name :** Anthony D. Harries

ER Project Title : Senior Knowledge Management trainer: provide technical support and training to participants on SORT IT courses (Sierra Leone and Nepal) on antimicrobial resistance (AMR)

Project Start Date : **Project End Date :**

ER Country Links

Country:	Sierra Leone	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Uganda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ghana	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Ecuador	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Colombia	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	United Arab Emirates	**WHO Region :**	EMRO	**World Bank : Income Group**	High income
Country:	Egypt, Arab Rep.	**WHO Region :**	EMRO	**World Bank : Income Group**	Lower middle income
Country:	Iran, Islamic Rep.	**WHO Region :**	EMRO	**World Bank : Income Group**	Upper middle income
Country:	Tunisia	**WHO Region :**	EMRO	**World Bank : Income Group**	Lower middle income
Country:	Myanmar	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Nepal	**WHO Region :**	SEARO	**World Bank : Income Group**	Low income

Expected Result: 1.1.5

Title: Directions for development and accelerated access to new tools and strategies

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Continuing	**Funding type:**	UD
Start date:	01/01/2018	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	For Internal Use: Broader accessibility of the E.R. to whole Unit will be ensured for best utilization of opportunities
WHO region:	Global		
Partners:	TBD		
Diseases:	Not Disease-Specific		

Review mechanism: Scientific working group + other ad hoc or collaboration-based review systems as appropriate

ER manager: Christine HALLEUX

Team: Christine Halleux, Florence Fouque, Corinne Merle, Mariam Otmani, Vanessa Veronese, Rony Zacharriah

Number of people working on projects: 0

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	No	Build strengths:	Yes
Reduce burden:	No	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Yes still apply - no partners involved yet for this biennium
Roles complimentary:	Yes	Yes still apply - no partners involved yet for this biennium
Coordination transparent:	Yes	Yes still apply - no partners involved yet for this biennium
Visibility:	Yes	Yes still apply - no partners involved yet for this biennium

Objectives and results chain

Approach to ensure uptake:	We engage with country institutions to identify research need and design research intervention. By involving potential end users from the beginning and ensuring that the research respond to their need, we optimize uptake.
Up-take/Use Indicator:	Number of: a) projects/initiatives which take into account TDR contributions/directions; and b) researchers, developers, organizations, funders utilizing TDR input/output
Gender and geographic equity:	Gender and geographic equity considerations will be included
Publication plan:	TBD

Up-take/use indicator target date:	31/12/2025

Sustainable Development Goals

Good Health and Well-being

Concept and approach

Rationale:	Control programme objectives cannot be reached for many poverty-related infectious diseases, especially NTDs, because they lack new effective and safe tools, optimally implemented, for their diagnosis and treatment, as well as efficient methods for quantifying the effect.
Design and methodology:	Inclusiveness and openness are the guiding principles. The scope of this project covers essential, intertwined elements to develop and assess the right tools that will help achieve control and elimination targets.
Approach to ensure quality:	Different approaches are put in place to ensure quality of the work: selection and approval of projects by an independent external experts group; regular monitoring of progress by TDR and validation of final report by scientific working group when relevant; compliance with ethical standards.

ER Objectives

ERObj-0003 : 1. Foster innovation to fill gaps in new products for neglected infections

ERObj-0004 : 2. Engage stakeholders

ERObj-0005 : 3. Identify priorities, opportunities

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 160000	USD 300000
Designated funds	USD 0	USD 0
Total	USD 160000	USD 300000

Planned Budget

Undesignated funds	USD 160000
Designated funds	USD 0

Total	USD 160000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0282: Resistance to change by key stakeholders unwilling to adopt new solutions

Actions To Mitigate Risk: Achieving critical mass of supporters; showing concrete results

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0348: Number of R&D initiatives informed by TDR research project output or TDR staff /adviser expertise (at least 4 by 2023)

Output Indicator: Outputs of TDR research projects and TDR staff and adviser expertise used to provide directional perspective for R&D new tools (including advice/support to R&D sponsors) as well as new ways of implementing the tools

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: The following R&D initiatives have been informed by TDR research project output or TDR staff / adviser expertise:

Development of moxidectin for the control and elimination of onchocerciasis (TDR input into protocols and research programmes)

Validation of rK39 for visceral leishmaniais (see ER 1.2.1)

Input into discussion of the potential use of the Leishmanin skin test for detection of Leishmania exposure and immunity

Application of sterile insect technology for control of VBDs (see ER 1.3.14)

Strategy development, implementation and monitoring

Biennium: 2024-2025

EROutp-0349: Scientific working group meeting reports and recommendations

Output Indicator: Strategy development, implementation and monitoring

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: The SWG meeting is scheduled for end of October 2024 and the activities report has been provided to the SWG members in advance of the meeting for their review.

Biennium: 2024-2025

EROutp-0350: Number of disease control programmes using generic protocols to inform their Implementation Research studies

Output Indicator: Generic protocols to address Implementation Research issues encountered by different disease control programmes

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: The generic protocols for the ShooRT study and TB4Child have been used by several national control programmes to conduct research at country level , generating evidence that will in turn inform guidelines revisions (link wiht ER 1.2.6).

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0094: Accelerated access to new tools and stategies

Progress made towards outcome : TDR has provided input into a certain number of initiative to support developpment and implementation of new tools and strategies (see cross cutting work with ER 1.2.1, 1.2.6, 1.1.15).

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 100000	USD 180000
Designated funds	USD 0	USD 0
Total	USD 100000	USD 180000

Planned Budget

Undesignated funds	USD 100000
Designated funds	USD 0
Total	USD 100000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0328: Resistance to change by key stakeholders unwilling to adopt new solutions

Actions To Mitigate Risk: Achieving critical mass of supporters; showing concrete results

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0411: Annual report produced and Scientific working group meeting organized yearly. (Target: Oversight of IMP work by the Scientific Working Group, with one yearly meeting, organized)

Output Indicator: Strategy development, implementation and monitoring

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

Biennium: 2026-2027

EROutp-0412: Number of R&D initiatives informed by TDR research project output or TDR staff /adviser expertise. Target: at least 2 by 2027 and five for the US$ 50Mo scenario)

Output Indicator: Outputs of TDR research projects and TDR staff and adviser expertise used to provide directional perspective for R&D new tools (including advice/support to R&D sponsors) as well as new ways of implementing the tools

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0139: TDR implementation research is aligned with and responding to countries and programmes health needs to tackle infectious diseases of poverty

Progress made towards outcome :

ER Project Links

ER Country Links

Expected Result: 1.1.7

Title: Maximized utilization of data for public health decision-making for UHC/SDGs

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Continuing	**Funding type:**	UD and DF
Start date:	01/01/2012	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	We advanced UHC and SDGs by: 1)influencing TB disability policy, 2)adapting 7-1-7 metrics for TB preventive therapy, 3) addressing the Africa francophone research gaps 4) tackling emerging infections, 5) improving communication for research uptake.

WHO region: Global

Partners: The SORT IT global partnership includes 87 partner institutions includuing Public health programmes in target countries, ministries of health, NGOs, academic institutions and WHO country offices.

Diseases: COVID-19;Ebola;Malaria;Neglected Tropical Diseases;Schistosomiasis;Tuberculosis;Epidemics and outbreaks;Control and elimination of diseases of poverty;Climate change's impact on health

Review mechanism: WHO country and regional offices, National disease control programme, Scientific working group + other collaboration-based review systems as appropriate

ER manager: Rony ZACHARIAH

Team: Corinee Merle, Edward Kamau, Ekua Johnson, Garry Aslanyan, Maier Mary, Michelle Villasol, Rony Zachariah, Robert Terry.

Number of people working on projects: 14

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Aligned
Roles complimentary:	Yes	WHO country offices and SORT IT partners leverage their local convening power and allow use of their personnel for expansion. Training of trainers is integrated as part of the strategy
Coordination transparent:	Yes	Collaboration with WCOs and Disease control programmes, Regular online meetings with partners to coordinate activities. Selections criteria and SOPs. All research subjects and trainees are endorsed by national selection committees.
Visibility:	Yes	The TDR website is updated every quarter and all reports and training documents are archived. All published studies are open access and disseminated through various channels. A new module on communication developed for effective dissemination

Objectives and results chain

Approach to ensure uptake: Early engagement with expected end-users ensures local research relevance, while regular updates to stakeholders and related programs, along with their active involvement in project selection, planning,

implementation, and policy development, enhance collaboration. New training modules on real-time data management and capacity-building for effective research communication with decision-makers have been developed and integrated into all training sessions.

Up-take/Use Indicator: Routine surveys conducted 12-15 months after research completions, new or updated/improved guidelines, policies, implementation plans and/or practice (as applicable) informed by TDR outputs

Gender and geographic equity: All calls emphasize TDR's commitment to equality, diversity, and inclusivity in science. Researchers of all gender identities, sexual orientations, ethnicity, religious, cultural, and social backgrounds, and (dis)abilities are encouraged to apply. Geographic equity is also prioritized in the selection of trainees and projects but oriented by funding obligations. The focus is on vulnerable and excluded groups, aligning with efforts to achieve UHC.

Publication plan: Open access publications; policy and issue briefs; TDR gateway, documents for WHO control programmes

Published papers that became fully accessible in 2024 (TDR led/funded activities)

1. The Kenya Uganda Zambia and Zimbabwe TB Disability Study Group, Adakun SA, Banda FM, Bloom A, Bochnowicz M, Chakaya J, Chansa A, Chiguvare H, Chimzizi R, Colvin C, Dongo JP, Durena A, Duri C, Edmund R, Harries AD, Kathure I, Kavenga FN, Lin Y, Luzze H, Mbithi I, Mputu M, Mubanga A, Nair D, Ngwenya M, Okotu B, Owiti P, Owuor A, Thekkur P, Timire C, Turyahabwe S, Tweyongyere E, YaDiul M, Zachariah R, Zimba K. Disability, comorbidities and risk determinants at end of TB treatment in Kenya, Uganda, Zambia and Zimbabwe. IJTLD OPEN. 2024 May 1;1(5):197–205. https://www.ingentaconnect.com/content/10.5588/ijtldopen.24.0082

2. Kamara J, Moses F, Thekkur P, Kamara IF, Ashubwe J, Wurie AB, Kamara RZ, Youkee D, Samura S, Bangura T, Nuwagira I, Zachariah R, Sesay T, Kenneh S. The effect of the COVID-19 pandemic on emergency maternal and under-five referrals in Sierra Leone: A cohort study. F1000Research. 2024 Jun 27;13:703. https://f1000research.com/articles/13-703

3. Jalloh AT, Merson L, Nair D, Hassan S, Kamara IF, Nuwagira I, Tengbe SM, Tejan YS, Kabba M, Lakoh S, Grant DS, Samuels RJ, Kamara RZ, Terry RF. Association of cancer and outcomes of patients hospitalized for COVID-19 between 2020 and 2023. F1000Research. 2024 Jun 21;13:673. https://f1000research.com/articles/13-673

4. Yeabah TO, Kaba I, Ramaswamy G, Dahal P, Delamou A, Vonhm BT, Jetoh RW, Merson L, Levine AC, Relan P, Harries AD, Kumar AMV. Factors associated with death in patients admitted with Ebola virus disease to Ebola Treatment Units in Guinea, Sierra Leone, and Liberia – December 2013 to March 2016. F1000Research. 2024 Jun 21;13:672. https://f1000research.com/articles/13-672

5. Dwalu E, Tweya H, Beglaryan M, Umeokonkwo CD, Jetoh RW, Shobayo BI, Tarweh F, Owiti P, Relan P, Hassan S, Goteh GW, Lehyen DB, Ako-Egbe L, Kamara IF, Akpan GE, Adewuyi P, Kpanyen PN, Vonhm BT, Gilayeneh JSM. Epidemiological characteristics and hospital outcomes of hospitalized Lassa fever cases during the 2022-2023 outbreak in Liberia. F1000Research. 2024 Jun 19;13:661. https://f1000research.com/articles/13-661

6. Lehyen DB, Ako-Egbe L, Dwalu E, Vonhm BT, Thekkur P, Zachariah R, Bawo L. Health care workers hospitalized for COVID-19 in Liberia: who were they, and what were their outcomes? F1000Research. 2024 Jun 18;13:656. https://f1000research.com/articles/13-656

7. Millimouno TM, Grovogui FM, Kourouma K, Hassan S, Kaba I, Kamara IF, Mbasha JJ, Collins T, Merson L, Delamou A. Epidemiological profiles and outcomes of healthcare workers hospitalized for COVID-19 in five Sub-Saharan African countries: a cohort study. F1000Research. 2024 Jun 18;13:655. https://f1000research.com/articles/13-655

8. Lampaert E, Nsio Mbeta J, Nair D, Mashako M, De Weggheleire A, Sprecher A, M. Coulborn R, Ahuka-Mundeke S. Evaluation of centralised and decentralised models of care during the 2020 Ebola Virus Disease outbreak in Equateur Province, Democratic Republic of the Congo: A brief report. F1000Research. 2024 Jun 17;13:642. https://f1000research.com/articles/13-642

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Published papers from franchised SORT IT courses, which became fully accessible in 2024, but were not directly funded or mentored by TDR. However, they did involve considerable oversight by TDR to ensure that SORT IT quality control standards were maintained and that TDR materials were also used. This initiative aims to build capacity, including in high-income country (HIC) institutions, which are involved in expanding the SORT IT approach in low- and middle-income countries (LMICs)

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Up-take/use indicator target date: 31/12/2025

Sustainable Development Goals

Good Health and Well-being;Quality Education;Gender Equality;Clean Water and Sanitation;Reduced Inequality;Life Below Water;Life on Land;Partnerships to achieve the Goal

Concept and approach

Rationale:

Countries and WHO need real-world evidence on how to apply policies and implement proven interventions. They also need evidence from routine programme settings to guide operational decisions, make recommendations and shape guidelines, practices and policies. TDR can play a key role in this area for defining relevant research questions for decision making and enhancing country capacity to compile, analyze, and interpret data. This aligns with SDG 17.18, which calls for increased capacity-building to ensure high-quality, timely, and dis-aggregated data for informed decision-making in countries. This ER aims to make countries and institutions "data rich, information rich, and action rich," promoting local research, local solutions, and local ownership.

Design and methodology:

The design emphasizes early and multi-disciplinary engagement with national and international AMR stakeholders who will use the results. It incorporates the output oriented SORT IT approach to generate and communicate evidence for informed decision-making. Research questions are aligned with national priorities, and the training model encompasses the three TDR pillars: 1) research implementation, 2) capacity building, and 3) global engagement. Additionally, SORT IT includes a training-of-trainers program designed to create a multiplier effect and ensure long-term sustainability.

Approach to ensure quality:	**Country, Partner, and Trainee Selection:** The selection of countries, partners, and trainees is guided by specific criteria and project requirements, with close monitoring of progress and performance throughout the process. Investigators are chosen based on eligibility criteria, including relevant expertise and national endorsement. Proposals are vetted through reviews by experienced technical committees and external subject matter experts. Training activities are customized as needed, while mentors and collaborating institutions are selected based on criteria such as proven experience, hands-on mentorship style, and familiarity with the country context. **Quality Control and Standards:** The SORT IT approach integrates its own quality and performance standards, which are monitored and reported quarterly. Publishing is a key component of the quality control process for the evidence generated. All franchised initiatives implement mandatory quality control measures, with the quality of publications monitored through independent evaluations. Standard Operating Procedures are tailored to national needs and capacities, ensuring consistency across all initiatives.

ER Objectives

ERObj-0006 : 1. Build sustainable capacity to promote and support the effective use of public health data for evidence-based decision-making

ERObj-0007 : 2. Promote and support data sharing for evidence-based decision-making (guidelines/policy/practice and research)

ERObj-0063 : 3. Strengthen health systems to accelerate efforts towards achieving UHC, SDGs and tackling public health emergencies

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 400000	USD 500000
Designated funds	USD 500000	USD 900000
Total	USD 900000	USD 1400000

Planned Budget

Undesignated funds	USD 400000
Designated funds	USD 573000
Total	USD 973000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0292: Possibility of limited or dwindling funds

Actions To Mitigate Risk: Fundraising efforts, including outside usual regular donors

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0359: Number of successful trainees and number of data analyses conducted and reported

Output Indicator: Build capacity for the effective collection and analysis and use of data for decision making

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: A total of 190 individuals (97, 51% female) were trained:

112 trained (69 female) on TB disability: In Kenya, Uganda, Zambia, and Zimbabwe.

9 trained (1 female) in manuscript writing and outbreak communication: In Guinea, Liberia, DRC, and Sierra Leone.

14 trained (6 female) in manuscript writing and research communication: In Francophone Africa (Burkina Faso, Guinea, Mali, Niger, Senegal).

16 trained (6 female) in manuscript writing in Kenya

12 trained (4 female) in communication on Neglected Tropical Diseases (NTDs)

Three franchised SORT IT courses:

7 trained (3 female) through a Global Fund supported training on TB by Axhya+ and NTEP of India

8 Trained (3 female) on Health systems strengthening for cancer care in India (3 female)

12 trained (7 female) through Cheshire and Wirral partnership NHS trust on mental health

Data analysis done

A total of 70 data analysis done across Asia, Africa and Europe

4 - one each on TB disability: In Kenya, Uganda, Zambia, and Zimbabwe

9 - on outbreak communication: In Guinea, Liberia, DRC, and Sierra Leone

14 - on NTDs (Burkina Faso, Guinea, Mali, Niger, Senegal)

16 - on malaria elimination in Kenya

Three franchised SORT IT courses with following numbers of data analysis:

7 - on a Global Fund supported training on TB by Axhya+ and NTEP of India

8 - on Health systems strengthening for cancer care in India

12 - Cheshire and Wirral partnership NHS trust on mental health

Other outputs :

- Revision of training curricula including updating lectures and presentations based on trainee evaluation and feedback.

- Development of a new SORT IT curriculum (Module 2), including an e-manual and Training-of-Trainers program, using Epicollect5 and Jamovi software based

on country feedback .

- Continued adaptation of the SORT IT online training platform for online or hybrid trainings based on real-time experience.

- Development of a generic multi-country protocol for managing TB disability in Kenya, Uganda, Zambia, and Zimbabwe that can be used for global scale up.

- Development of 4 country specific Standard Operating Procedures (SOPs) on management of TB associated disability for use by countries.

- Production of 22 study protocols and data collection instruments: 10 in Ghana and 12 in the EMRO region.

- 41 manuscripts: 10 on outbreaks and emerging infections, and 14 on NTDs in Francophone countries and 17 on infectious diseases in Kenya.

Biennium: 2024-2025

EROutp-0360: Number of publications and issue briefs and research uptake tools

Output Indicator: Publications and issue/policy briefs to inform evidence-based policies/ practice

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: A total of 41 publications have been produced on topics including COVID-19, Ebola, mental health, malaria, and innovations in TB management. This includes two special issues: one in F1000 and one in the East African Medical Journal. Additionally, 20 evidence briefs on emerging infections and NTDs have been developed, along with accompanying lightening presentations for decision-makers.

Biennium: 2024-2025

EROutp-0433: Number of publications and issue briefs and research uptake tools

Output Indicator: Publications and issue/policy briefs to inform evidence-based policies/ practice

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: A total of 41 publications have been produced on topics including COVID-19, Ebola, mental health, malaria, and innovations in TB management. This includes two special issues: one in F1000 and one in the East African Medical Journal. Additionally, 20 evidence briefs on emerging infections and NTDs have been developed, along with accompanying lightening presentations for decision-makers.

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0103: Quality controlled publications and strengthened evidence-base for policy and practice decisions

Progress made towards outcome : A total of 41 publications were produced, all of which appeared in peer-reviewed journals to ensure external quality control. Notably, 68% of the research influenced policies and practices, while 52% of those trained continued with new research, demonstrating significant capacity-building outcomes.

Key achievements include:

1. TB Disability Research Shaping WHO Policy: Multicountry data and publications on TB disability are directly contributing to WHO policy and guidelines. The Global TB Programme recognizes these efforts as a major milestone in shaping global TB policy.

2. Mobile Data Capture in TB Programs is being scaled up: Experience with mobile phone data capture in TB programs is being scaled up in Kenya, Uganda, Zambia, and Zimbabwe, demonstrating successful adaptation and expansion.

3. Mpox Survey and utilization of acquired SORT IT skills. According to a recent survey, 54 out of 124 SORT IT alumni surveyed, from 28 countries, have been actively involved in Mpox preparedness and response. Among these, 93% are applying the skills they acquired through SORT IT in their current roles

4. Metric Approach shaped Global policy on TB prevention: This approach enhances the early detection, notification, and response to TB cases, aiming to reduce transmission and improve outcomes. It was featured in the 2024 WHO Operational Handbook on TB Preventive Therapy and is being adapted for use in outbreak responses and Mpox.

5. The west Africa NTDs and snakebite initiative: AA new initiative in west Africa including four countries (Burkina Faso, Mali, Niger and Senegal) is enhancing country's capacity to utilize NTDs including snake bite program data for evidence-informed decision making. A strong south-south collaboration has been established among these countries and AIPH, in Burkina Faso and CEA-PCMT, in Guinea and with the support of national NTDs program, through provision of technical expertise by SORT IT alumni based in Guinea. 14 manuscripts have been developed and are undergoing peer-review for publication in a special issue of TMID https://www.mdpi.com/journal/tropicalmed/special_issues/NTD_West_Africa. SORT IT module 4 on effective research communication will be conducted in the last week of September 2024.

6. Triggered improvements in international Data sharing and Management: Based on challenges identified through SORT IT work on shared Ebola and COVID-19 data, IDDO is implementing changes to enhance tailored data extraction, address quality issues, standardize reporting forms, and introduce capacity-building measures.

7. Innovative Research Dissemination: TDR has pioneered a new initiative linking lightning videos with journal publications to improve research dissemination to decision-makers. This initiative stems directly from TDR's work on enhancing research communications.

7. Expansion of SORT IT Global Partnership: The SORT IT global partnership has expanded to include 87 partners, a testament to the global interest and success of its initiatives and outcomes. In addition, the SORT IT virtual platform has been translated into French and Russian versions. The French version will be pilot tested during the SORT IT module 4 course in Conakry (see item #4 above).

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 300000	USD 450000
Designated funds	USD 800000	USD 900000
Total	USD 1100000	USD 1350000

Planned Budget

Undesignated funds	USD 300000
Designated funds	USD 800000
Total	USD 1100000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0340: Possibility of limited or dwindling funds

Actions To Mitigate Risk: Fundraising efforts, including outside usual regular donors

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0429: Number of successful trainees and number of data analyses conducted and reported (30 successful trainees and 20 data analyses conducted and reported on topics relevant to the Global Health Challenges (45 and 30 respectively for the US$ 50 M scenario)

Output Indicator: Build capacity for the effective collection and analysis and use of data for decision making

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

Biennium: 2026-2027

EROutp-0432: Number of publications and communication briefs (16 publications and 16 communication briefs with at least 40% having an impact on evidence for change in policies/practice (24 for the US$ 50 million scenario).

Output Indicator: Publications and communication briefs to inform evidence-based policies/ practice

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0151: Strengthened evidence-base for policy and practice decisions

Progress made towards outcome :

ER Project Links

Project ID : P24-01281 **PI Name :** John Paul Dongo

ER Project Title : UGANDA - Financial management support for in-country expenses: operational research project for managing disability, co-morbidities and risk factors associated with tuberculosis in Uganda (phase 2)

Project Start Date : 15/04/2024 **Project End Date :** 30/09/2024

Project ID : P24-01278 **PI Name :** Jeremiah Chakaya

ER Project Title : KENYA - Financial management support for in-country expenses: operational research project for managing disability, co-morbidities and risk factors associated with tuberculosis in Kenya (Phase 2)

Project Start Date : 15/04/2024 **Project End Date :** 30/09/2024

Project ID : P24-01277 **PI Name :** Divya Nair

ER Project Title : Development of databases and quality assurance: operational research project for managing disability, co-morbidities and risk factors associated with tuberculosis in Zambia, and Zimbabwe (Phase 2)

Project Start Date : 15/04/2024 **Project End Date :** 30/12/2024

Project ID : P24-01276 **PI Name :** Pruthu Kalasappa

ER Project Title : Development of databases and quality assurance: operational research project for managing disability, co-morbidities and risk factors associated with tuberculosis in Kenya and Uganda (Phase 2)

Project Start Date : 15/04/2024 **Project End Date :** 30/12/2024

Project ID : P24-01275 **PI Name :** Monde Muyoyeta

ER Project Title : ZAMBIA - Financial management support for in-country expenses: operational research project for managing disability, co-morbidities and risk factors associated with tuberculosis in Zambia (Phase 2)

Project Start Date : 15/04/2024 **Project End Date :** 31/12/2024

Project ID : P24-01273 **PI Name :** Jonta Kamara

ER Project Title : GES (Invoice No. 001) payment for administrative fees for the SL Ethics & Scientific Review Committee

Project Start Date : 08/04/2024 **Project End Date :** 30/04/2024

Project ID : P24-01260 **PI Name :**

ER Project Title : GES (Invoice No. 31500070) payment for IJTLD-02-24-0082.R1

Project Start Date : 20/05/2024 **Project End Date :** 20/06/2024

Project ID : P24-01249 **PI Name :** Anthony D. Harries

ER Project Title : Providing senior (second-line) operational research and subject matter expertise for the Structured Operational Research and Training Initiative (SORT IT) on pandemics and antimicrobial resistance in Low- and Middle-Income Countries.

Project Start Date : 20/03/2024 **Project End Date :** 01/11/2024

Project ID : P24-01240 **PI Name :** Selma Dar Berger

ER Project Title : Senior level expertise & technical support for the implementation of a path-finder project (real time implementation research) for assessing and managing disability, co-morbidities and risk factors associated with TB after completing TB treatment in China

Project Start Date : 02/04/2024 **Project End Date :** 30/03/2025

Project ID : P24-01237 **PI Name :** Hayk Datvyan

ER Project Title : Providing technical and software support for maintenance and adaptation of the virtual SORT IT platform (e-SORT IT) in 2024

Project Start Date : 10/03/2024 **Project End Date :** 10/03/2025

Project ID : P24-01233 **PI Name :** Selma Dar Berger

ER Project Title : Databases, metrics and archives on SORT IT activities and performance standards: courses, participants, facilitators, milestones, outcomes, publications, impact and other relevant materials - (2024/2025)

Project Start Date : 10/03/2024 **Project End Date :** 31/01/2025

ER Country Links

Country:	Mali	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Zambia	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Burkina Faso	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Senegal	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Uganda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income

Country:	Ethiopia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Congo, Dem. Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Kenya	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Zimbabwe	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Zambia	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mali	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Niger	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Armenia	**WHO Region :**	EURO	**World Bank : Income Group**	Upper middle income

Expected Result: 1.2.1

Title: Strategies to achieve and sustain disease elimination

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Continuing	**Funding type:**	UD and DF
Start date:	01/03/2014	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	
WHO region:	Global		
Partners:	Control programmes and research institutes in countries; WHO NTD department; global stakeholders. Specifically for oncho elimination, also: Medicines Development for Global Health, Communauté Evangelique au Centre de l'Afrique (CECA20)		
Diseases:	Onchocerciasis;Visceral leishmaniasis;Control and elimination of diseases of poverty		
Review mechanism:	Scientific working group + other ad hoc or collaboration-based review systems as appropriate		

ER manager: Christine HALLEUX

Team: Michelle Villasol, Annette Kuesel, Abraham Aseffa, Rony Zachariah, Christine Halleux

Number of people working on projects: 100

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	No	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Aligned
Roles complimentary:	Yes	Partners were select to complement TDR capacity such as being positioned on the field, linked with Ministries of Health and potential end-users, experts bringing their knowledge to support TDR project.
Coordination transparent:	Yes	Coordination transparent
Visibility:	Yes	Visibility of TDR highlighted

Objectives and results chain

Approach to ensure uptake:	Control programmes and researchers from concerned countries, as well as WHO 3 levels are fully engaged in the design and implementation of the research. By involving potential end users from the beginning and ensuring that the research respond to their need, we optimize uptake.
Up-take/Use Indicator:	TDR outputs considered among evidence informing decision-making at global, regional and national levels
Gender and geographic equity:	Work will target LMICs (for oncho in Africa, for VL Nepal/Bangladesh and Eastern African countries). Whenever possible funding to women investigators will be favoured. Whenever possible results of research will be disaggregated by gender.

Publication plan:	TDR news, peer review publications, presentation at international congress, dissemination in-country including policy brief
Up-take/use indicator target date:	31/12/2029

Sustainable Development Goals

Good Health and Well-being;Reduced Inequality;Partnerships to achieve the Goal

Concept and approach

Rationale:	Some diseases are targeted for elimination in certain areas. Research is needed to inform appropriate strategies and practices. While some of these can be broadly applied, others need to be targeted to the disease, and/or the interventions and/or specific epidemiological setting and/or the extent to which prevalence/incidence of infection have been reduced and the elimination goal (elimination as a public health problem or elimination of transmission). TDR has decades long history of research for the tools that have allowed countries targeting VL elimination in the ISC and onchocerciasis elimination where feasible in Africa. TDR has been funding and managing research to support these elimination goals in past biennia and is continuing this work as recommended by the scientific working group, including support to VL control/elimination in Eastern Africa following the recommendations in the new WHO NTD Roadmap 2021-2030.
Design and methodology:	Continuation of collaboration with and between researchers and national/regional or global control programmes. Research will be designed to address specific knowledge gaps and research priorities, and will be conducted by qualified investigators (with appropriate training).
Approach to ensure quality:	Selection of investigators and proposals with appropriate expertise through review of their proposals and progress reports/renewal requests by the scientific working group complemented by external subject matter experts (ad hoc reviewers). Grant proposal review by external reviewers nominated by funders, if applicable.

ER Objectives

ERObj-0011 : Generate evidence to guide programmes on strategies to achieve and sustain elimination, where and when to stop intervention and how to certify elimination

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 540000	USD 1300000
Designated funds	USD 100000	USD 300000
Total	USD 640000	USD 1600000

Planned Budget

Undesignated funds	USD 540000
Designated funds	USD 100000
Total	USD 640000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0277: Insufficient funding

Actions To Mitigate Risk: Raise awareness of potential donors; explore alternative ways of supporting work

Mitigation Status: On Track

Biennium: 2024-2025

ERRisk - 0280: Research question are not targetting key priorities for programmes

Actions To Mitigate Risk: Ensure large involvement of WHO country/regional/HQ level and of country representatives in discussion to identify priority research questions.

Mitigation Status: On Track

Biennium: 2024-2025

ERRisk - 0324: Delay in research activites due to political situation

Actions To Mitigate Risk: Plan carefully activities, work as much as possible with local partners

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0344: Report to scientific working group; results delivered to the country control programmes and/or NTD programmes/advisory committees at regional and/or HQ level

Output Indicator: Improved basis for monitoring progress of preventive chemotherapy-based onchocerciasis elimination programmes towards elimination and for decisions to stop intervention

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: To support onchocerciasis programmes to monitor progress towards elimination of parasite transmission and decisions to stop interventions, this project is designed to provide tools to

a. Delineate parasite transmission zones (Note: The WHO Guidelines for stopping mass drug administration (MDA) and verifying elimination of human onchocerciasis are to be applied to transmission zones, but includes no criteria for delineating them. Objective criteria are currently not available. (https://apps.who.int/iris/handle/10665/204180).

b. Estimate the risk of recurrence through human and vector migration should the criteria to stop MDA be met in only one part of the transmission zone and estimate risk of recurrence after MDA was stopped and after elimination of O. volvulus transmission was verified.

c. Estimate the minimum number of reproductively active adult parasites. This tool would also allow to identify the origin of any resurgence after MDA was discontinued.

And to

d. Build capacity within endemic countries through training of technicians and PhD students from endemic countries (previously Cameroon and Ghana, now only Ghana) within the collaborating endemic country institution and in the laboratory of non-endemic country collaborators.

This element of ER 1.2.1 has been devolved to investigators who have leveraged the results of TDR funded work for funding from other sources. The last set of TSAs (one to Ghana, one to Australia) were issued in 1Q 2023 and a no-cost extension to 1Q 2025 was issued to maximize the outputs with the funding provided. This includes

(1) Capacity building: the Ghanaian PhD student can complete the analysis of data from samples she obtained during the initial time of working on her PhD in Ghana and which she anayzed during the subsequent (and ongoing) time in the laboratory of the Australian collaborators. She will also be trained on a new parasitological method.

(2) Finalization of an easy to use ("shiny") app developed in the Australian institution with input from the Ghanaian institution. This will allow NTD programmes to use the model developed in this project to estimate the risk of recurrence through human and vector migration should the WHO criteria to stop interventions be met in one area (and thus parasite transmission is presumed to have been interruption) but not in areas within vector and people movement distance where parasite transmission is known to be continuing.

(3) Publication of the model to estimate the risk of recurrence through human and vector migration expanded to incorporate the effect of parasites with different levels of response to ivermectin. Parasites with so-called 'sub-optimal' response were perceived at one point as potentially indicating emerging resistance to ivermectin. While this may not be the case given that the TDR funded Phase 3 study of moxidectin identified such parasites at different prevalences in different ivermectin-naïve areas, increasing prevalence and geographical distribution of such parasites may impact progress towards elimination. Consequently, the ability to estimate such impact will be informative for control programmes (as well as for funders of elimination efforts).

(4) Completion of work including nodulectomies, assessment of the reproductive capacity of the macrofilariae and genetic analysis of the parasites which will contribute to the genome-based objective criteria for delineation of parasite transmission zones. This work had been approved for funding by the IMP SWG. However, the protocol was not finalized in time for WHO ERC approval and thus funding in the 2022-2023 biannium so that the investigators require funding from other sources.

In 2021, a special session was held at the Annual Conference of the 'Coalition for Operational Research on Neglected Tropical Diseases' (COR NTD) on this project. Presentations and discussions focussed on the need for and the risks of the absence of objective criteria for delineation of transmission zones and progress at that time.

Once the final data from this project are available, another special COR NTD session should be targeted as well as presentation of the results to the NTD STAG and the WHO NTD initiated 'Global Onchocerciasis Network for Elimination' to support dissemination of the results.

Publications of TDR funded work

Shrestha H, McCulloch K, Chisholm RH, Armoo SK, Veriegh F, Sirwani N, Crawford KE, Osei-Atweneboana MY, Grant WN, Hedtke SM. Synthesizing environmental, epidemiological and vector and parasite genetic data to assist decision making for disease elimination. Mol Ecol. 2024 Jun;33(11):e17357. doi: 10.1111/mec.17357. Epub 2024 Apr 29. PMID: 38683054.

Crawford KE, Hedtke SM, Doyle SR, Kuesel AC, Armoo S, Osei-Atweneboana MY, Grant WN. Genome-based tools for onchocerciasis elimination: utility of the mitochondrial genome for delineating Onchocerca volvulus transmission zones. Int J Parasitol. 2024 Mar;54(3-4):171-183. doi: 10.1016/j.ijpara.2023.11.002. Epub 2023 Nov 20. PMID: 37993016.

Publication with funding leveraged from TDR funded work.

Hedtke SM, Post RJ, Feleke SM, Gebretsadik FS, Boakye DA, Krueger A, Grant WN, Wilding CS. Cytotaxonomic characterization and estimation of migration patterns of onchocerciasis vectors (Simulium damnosum sensu lato) in northwestern Ethiopia based on RADSeq data. PLoS Negl Trop Dis. 2024 Jan 4;18(1):e0011868. doi: 10.1371/journal.pntd.0011868. PMID: 38175836; PMCID: PMC10793886.

Biennium: 2024-2025

EROutp-0345: Study reports/publications provided to WHO and countries (directly and/or via ESPEN)

Output Indicator: Data to support WHO guidelines and onchocerciasis endemic country registration and policies on moxidectin for onchocerciasis elimination

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: TDR is continuing to collaborate closely with Medicines Development for Global Health (MDGH) and the investigators in Ghana, DRC and Côte d'Ivoire of three studies needed (in addition to those which supported the US FDA approval of moxidectin for treatment of individuals at least 12 years old) by WHO and endemic countries to decide on inclusion of moxidectin in onchocerciasis elimination strategies. This includes ensuring WHO ERC continuing approvals.

The paediatric study to identify a moxidectin dose for 4-11 year old children for further evaluation was completed (NCT03962062, for protocol see: https://mox4oncho-multimox.net/resources). Preparation of the publication is ongoing.

The protocol of the study obtaining additional safety data, including in individuals without evidence of O. volvulus infection, was amended to include children 4-11 years old (MDGH-MOX-3002, (https://www.clinicaltrials.gov/study/NCT04311671, for protocol see: https://mox4oncho-multimox.net/resources). The study was completed in 2024. It included 5564 adults, 2293 adolescents (12-17 years old) and 187 children (4-11 years) in the DRC randomized 4:1 to moxidectin:ivermectin and 3240 adults, 890 adolescents and 840 children in Côte d'Ivoire randomized 4:1 to moxidectin:ivermectin with concomitant administration of 400 mg albendazole. The inclusion of co-administration of albendazole in a lymphatic filariasis (LF) co-endemic area could pave the way for a guideline covering both onchocerciasis and LF. WHO NTD staff had indicated their preference for such guideline at the time the additional studies were discussed with them. The statistical analysis plan has been completed with final analyses expected to be available in the first half of 2025. A 'shell publication' is being prepared already to ensure earliest possible availability for WHO systematic reviews for guideline development. The timing of the WHO guideline development will depend on whether WHO/NTD will consider the additional data from the paediatric study and the safety study sufficient to initiate the WHO guidelines process and whether the Guidelines Development Committee agrees with that assessment.

The third study (MDGH-MOX-3001, (https://www.clinicaltrials.gov/study/NCT0387s6262, for protocol see: https://mox4oncho-multimox.net/resources) will provide data on the effect of moxidectin and ivermectin after five biannual and 3 annual administrations. The protocol had to be amended to reduce the sample size from 1000 to around 320 because of a dearth of individuals with the required intensity of O. volvulus infection combined with budget limitations. Enrolment has been completed and the study is currently expected to be completed in the second half of 2026. The statistical analysis has been developed.

TDR is also continuing to collaborate with investigators to disseminate information about moxidectin. The following were published in 2024:

1. Turner HC, Kura K, Roth B, Kuesel AC, Kinrade S, Basáñez MG. An Updated Economic Assessment of Moxidectin Treatment Strategies for Onchocerciasis Elimination. Clin Infect Dis. 2024 Apr 25;78(Supplement_2):S138-S145. doi: 10.1093/cid/ciae054. PMID: 38662693; PMCID: PMC11045023.

2. Wafeu GS, Lepage TM, Campillo JT, Efon-Ekangouo A, Nana-Djeunga HC, Nzune-Toche N, Domche A, Sumo L, Njitchouang GR, Tsasse MAF, Bopda J, Balog YA, Niamsi-Emalio Y, Mbickmen-Tchana S, Talla GK, Kana YSN, Messina FDM, Pion SD, Kuesel AC, Kamgno J, Boussinesq M, Chesnais CB. (2024) Safety and Short-term Efficacy of a Single Dose of 2 mg Moxidectin in Loa loa-Infected Individuals: A Double-Blind, Randomized Ivermectin-Controlled Trial With Ascending Microfilarial Densities. Open Forum Infect Dis. 2024 Apr 25;11(7):ofae240. doi: 10.1093/ofid/ofae240. PMID: 38966851; PMCID: PMC11222972.

3. Kanza EM, Nyathirombo A, Larbelee JP, Opoku NO, Bakajika DK, Howard HM, Mambandu GL, Nigo MM, Wonyarossi DU, Ngave F, Kennedy KK, Kataliko K, Bolay KM, Attah SK, Olipoh G, Asare S, Mumbere M, Vaillant M, Halleux CM, Kuesel AC. (2024) Onchocerca volvulus microfilariae in the anterior chambers of the eye and ocular adverse events after a single dose of 8 mg moxidectin or 150 µg/kg ivermectin: results of a randomized double-blind Phase 3 trial in the Democratic Republic of the Congo, Ghana and Liberia. Parasit Vectors. 2024 Mar 15;17(1):137. doi: 10.1186/s13071-023-06087-3. PMID: 38491528; PMCID: PMC10943894.

Biennium: 2024-2025

EROutp-0346: Report to scientific working group; results delivered to the country control programmes

Output Indicator: Generate evidence on sustainable strategies for the elimination of VL in the Indian sub-continent

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: New evidence on priority challenges of VL elimination has been generated and disseminated:

- Determination of the seroprevalence of HIV among VL patients in Bangladesh: HIV-VL co-infection rate appears to be very low in Bangladesh.

Four research projects were completed and analysis finalized:

- Micro stratification of Visceral Leishmaniasis (VL) Endemic Areas to Identify Hotspots and Disease Shifting Pattern in Bangladesh and Nepal

- Decision-making for indoor residual spraying in post-elimination phase of visceral leishmaniasis in Bangladesh and Nepal

Two new research projects have been initiated after receiving ethical approvals:

Biennium: 2024-2025

EROutp-0347: Report to scientific working group; results delivered to the country control programmes

Output Indicator: Generate evidence to support establishment of programmes towards elimination of VL in Eastern Africa

Output Target Date: 31/12/2030

Output Progress Status: On Track

Output Progress Description: VL endemic countries in Eastern Africa have requested for WHO support to address the growing problem of VL in the region. TDR is collaborating with WHO to support the launch of a VL elimination programme in Eastern Africa with lessons drawn from the successful experience of the Kala-Azar Elimination Programme in the Indian subcontinent.

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ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0093: Guidelines, policy decisions and or practice informed by TDR outputs

Progress made towards outcome : The following guidelines, policy decision and/ or practice were informed by TDR outputs:

* Elimination of leishmaniasis as a public health problem in Bangladesh:

Bangladesh has become the first country globally to be validated for elimination of visceral leishmaniasis or kala-azar, a life-threatening neglected tropical disease. The country achieved the elimination target of less than one case per 10,000 population at the sub-district (upazilla) level in 2017 and has sustained it to date despite disruptions caused by the COVID-19 pandemic. Since 2005, TDR has worked with research institutions and control programmes in Bangladesh, India and Nepal to conduct research that informs policy and practice for elimination targets. TDR has supported research on improving disease surveillance through active case detection, new diagnostic tools, single-dose treatment and vector control tools such as indoor residual spraying. One of the longest and most successful implementation research programmes at TDR, these efforts have contributed to the success of the VL elimination work in the Indian subcontinent.

Although the epidemiology of VL in the region poses more challenges for elimination than in South-East Asia, a recent WHO-convened key stakeholders meeting in Nairobi in January 2023 (with high-level representatives from countries, global and African partners, the African Union Commission and delegates from WHO/HQ, AFRO, EMRO and six WHO country offices) concluded that elimination of VL from the eastern African focus is both feasible and timely. A Call for Action (the “Nairobi Declaration”) was issued, and a draft Strategic Plan has been developed.

Progress in 2024:

1) In support of the regional VL elimination plan, TDR and WHO initiated work to assess programme capacities in VL-endemic countries in East Africa to implement WHO's treatment recommendations towards achieving universal health coverage and NTD roadmap targets. A team of investigators at the University of Gondar, Ethiopia, has been leading the review of programme status in Eritrea, South Sudan and Sudan to identify areas for strengthening in the launch of elimination efforts.

2) In addition, TDR is working with WHO on preparations for the comparative evaluation of the performance of point of care rk39 rapid tests in the diagnosis of VL in the Eastern African region. WHO/NTD jointly in collaboration with TDR initiated on the evaluation of the rk39 RDTs for VL diagnosis in East Africa. Africa CDC and the International Diagnostics Centre (IDC) has been collaborating with WHO/NTD on the evaluation of rk39 RDTs for VL diagnosis in East Africa. Currently, the IT-LEISH RDT, has the highest performance for rapid diagnosis of VL among all available commercial brands in the East African setting. The IT-LEISH RDT, previously commercialized by BioRad, had been used by countries worldwide for years but it is now being produced in Tunisia by a new company (Global Access Diagnostics, GADx), which has acquired the manufacturing rights for the IT-LEISH RDT from Bio-Rad. TDR in collaboration with WHO/NTD plans to identify the best RDTs for the diagnosis of VL in Eastern Africa through a 2-phased approach as follows:

a) Phase 1: Rapid validation of the performance and operational characteristics of the IT-LEISH RDT manufactured by GADx using archived specimens from East Africa. (basis for this report)

b) Phase 2: Full evaluation of selected RDTs submitted by companies in response to an open call by TDR/WHO for RDTs to support the elimination of VL in East Africa.

A protocol for laboratory evaluation and field evaluation has been developped and the laboratory-based evaluation of one of the most promising rK39 test diagnostic (GADx IT-LEISH rk39 Rapid Diagnostic Test) has been conducted. The laboratory-based evaluation of the performance of the GADx IT-Leish RDT showed excellent concordance with the IT-Leish RDT previously manufactured by bioRad and with reference standard test results by microscopy and/or PCR of VL amastigotes in splenic aspirates or bone marrow or lymph node biopsies. [The BioRad IT-Leish RDT reported a 91.2% sensitivity (88.2% HIV+, 95% HIV-) and 100% specificity.] Overall, KEMRI sensitivity and specific was higher than LRTC (4%). Similar findings were reported in Asia. This may have been due to differences in sample types. KEMRI contributed serum samples and LRTC contributed whole blood samples. This evaluation was performed in a laboratory setting by trained laboratory technicians. Since the RDTs are intended to be used by field workers, it would be of interest to evaluate its sensitivity and specificity in settings of intended use performed by field workers.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 415000	USD 800000
Designated funds	USD 500000	USD 500000
Total	USD 915000	USD 1300000

Planned Budget

Undesignated funds	USD 415000
Designated funds	USD 500000
Total	USD 915000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0325: Delay in research activites due to political situation

Actions To Mitigate Risk: Plan carefully activities, work as much as possible with local partners

Mitigation Status: Planning phase

Biennium: 2026-2027

ERRisk - 0326: Research question are not targetting key priorities for programmes

Actions To Mitigate Risk: Ensure large involvement of WHO country/regional/HQ level and of country representatives in discussion to identify priority research questions.

Mitigation Status: Planning phase

Biennium: 2026-2027

ERRisk - 0327: Insufficient funding

Actions To Mitigate Risk: Raise awareness of potential donors; explore alternative ways of supporting work

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0409: Evidence generated. Results of studies supporting efforts towards VL elimination disseminated. (Target for VL and Oncho: at least resutls of four studies; target for 50Mo budget: results of at least seven studies)

Output Indicator: Generate evidence to support efforts towards elimination of VL

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

Biennium: 2026-2027

EROutp-0410: Evidence generated. Results of studies supporting efforts towards oncho elimination disseminated. (Target for VL and Oncho: at least resutls of four studies; target for 50Mo budget: results of at least seven studies)

Output Indicator: Generate evidence to support efforts towards elimination of onchocerciasis: Data to support WHO guidelines and onchocerciasis endemic country registration and policies on moxidectin for onchocerciasis elimination

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0137: Guidelines, policy decisions and or practice on diseases elimination informed by TDR outputs

Progress made towards outcome :

ER Project Links

Project ID : P24-01303 **PI Name :** Magha Raj Banjara

ER Project Title : Management of implementation research projects in the scope of research in support of visceral leishmaniasis elimination

Project Start Date : 20/04/2020 **Project End Date :** 19/02/2025

Project ID : P24-01312 **PI Name :** Soumik Kha Sagar

ER Project Title : Introduction of case detection with visceral leishmaniasis and Post Kala-azar Dermal Leishmaniasis in Non-programmatic Upazila Health Complexes in Bangladesh: Feasibility, acceptability and cost

Project Start Date : 01/06/2024 **Project End Date :** 31/12/2025

Project ID : P24-01313 **PI Name :** Anand Ballabh Joshi

ER Project Title : Active surveillance for visceral leishmaniasis in selected new foci districts in Nepal: feasibility, acceptability and cost

Project Start Date : 01/06/2024 **Project End Date :** 31/12/2025

Project ID : P23-01098 **PI Name :** Annette Kuesel

ER Project Title : Conducting TDR project activities specified in the MDGH-WHO Donor Agreement

Project Start Date : 18/10/2023 **Project End Date :** 27/09/2025

Project ID : B40131 **PI Name :** Warwick Norman Grant

ER Project Title : Study design & genetic analyses: Development of diagnostic genetic markers to detect sub optimal response to ivermectin

Project Start Date : 17/12/2014 **Project End Date :** 30/04/2017

Project ID : B40127 **PI Name :** Warwick Norman Grant

ER Project Title : A population genetic model for the selection and transmission of ivermectin sub-optimal response genotypes

Project Start Date : 17/12/2014 **Project End Date :** 30/04/2017

Project ID : B40126 **PI Name :** S. J. De Vlas

ER Project Title : Simulating scenarios for development & spread of anthelminthic resistance as a consequence of large scale mass drug admin

Project Start Date : 21/01/2015 **Project End Date :** 30/04/2017

Project ID : B40124 **PI Name :** Mike Osei-Atweneboana

ER Project Title : Developing molecular tools to define Onchocerca volvulus transmission zones & estimate transmission risks between zones

Project Start Date : 17/12/2014 **Project End Date :** 30/04/2017

Project ID : B40123 **PI Name :** Samuel Wanji

ER Project Title : Research for genetic markers of O. volvulus resp. to ivermectin & development of an oncho contol programme surveillance

Project Start Date : 01/09/2014 **Project End Date :** 30/04/2017

Project ID : B40122 **PI Name :** Mike Osei-Atweneboana

ER Project Title : Development of diagnostic genetic markers to detect sub-optimal response to ivermectin treatment.

Project Start Date : 16/01/2015 **Project End Date :** 30/09/2017

Project ID : P22-00865 **PI Name :** Dr Shomik Maruf

ER Project Title : Micro stratification of Visceral Leishmaniasis (VL) Endemic Areas to Identify Hotspots and Disease Shifting Pattern in Bangladesh

Project Start Date : 15/12/2022 **Project End Date :** 30/08/2023

Project ID : P23-00951 **PI Name :** Asrat Mekuria

ER Project Title : Assessing programme capacities in visceral leishmaniasis-endemic countries in East Africa to implement WHO’s treatment recommendations towards achieving universal health coverage and NTD roadmap targets

Project Start Date : 05/07/2023 **Project End Date :** 30/06/2025

Project ID : P22-00720 **PI Name :** Anand Ballabh Joshi

ER Project Title : Decision Making for Indoor Residual Spraying in Post Elimination Phase of Visceral Leishmaniasis in Nepal

Project Start Date : 22/12/2022 **Project End Date :** 21/12/2023

Project ID : P22-00719 **PI Name :** Debashis Ghosh

ER Project Title : Decision Making for Indoor Residual Spraying in Post Elimination Phase of Visceral Leishmaniasis in Bangladesh

Project Start Date : 22/12/2022 **Project End Date :** 21/12/2023

Project ID : P22-00851 **PI Name :** Anand Ballabh Joshi

ER Project Title : Micro stratification of Visceral Leishmaniasis (VL) Endemic Areas to Identify Hotspots and Disease Shifting Pattern in Nepal

Project Start Date : 15/12/2022 **Project End Date :** 31/12/2023

Project ID : P23-00961 **PI Name :**

ER Project Title : To be used for a new project

Project Start Date : 05/07/2023 **Project End Date :** 04/03/2024

Project ID : P23-00990 **PI Name :** Benjamin Collins

ER Project Title : Evaluation of rapid diagnostics for Visceral Leishmaniasis (VL) control and elimination: planning and preparatory phase

Project Start Date : 01/07/2023 **Project End Date :** 21/12/2023

Project ID : P22-00745 **PI Name :** Hajo Grundmann

ER Project Title : Support to research for Improved VL Surveillance, Case Detection and Vector Control in the scope of VL elimination Initiative in Bangladesh and Nepal

Project Start Date : 15/09/2022 **Project End Date :** 14/09/2023

Project ID : P22-00763 **PI Name :** Anand Ballabh Joshi

ER Project Title : Decision Making for Indoor Residual Spraying in Post Elimination Phase of Visceral Leishmaniasis in Nepal

Project Start Date : 19/12/2022 **Project End Date :** 18/12/2023

Project ID : B80297 **PI Name :** Kwadwo Kyereme Frempong

ER Project Title : Population genetic simulations for tools for onchocerciasis control programmes to determine transmission zones: Part 2 Ghana Epidemiological and entomological data

Project Start Date : 13/11/2019 **Project End Date :** 21/02/2024

Project ID : P22-00690 **PI Name :**

ER Project Title : Open Access Publication: American Society of Tropical Medicine and Hygiene - American Journal of Tropical Medicine and Hygiene Article: Response to Visceral Leishmaniasis Cases through Active Case Detection and Vector Control i n Low Endemic Hilly Distric

Project Start Date : 21/06/2022 **Project End Date :** 24/06/2022

Project ID : P21-00229 **PI Name :** Faria Hossain

ER Project Title : Determination of the sero-prevalence of HIV among VL patients in Bangladesh

Project Start Date : 01/06/2022 **Project End Date :** 30/09/2023

Project ID : P21-00358 **PI Name :** Dinesh Mondal

ER Project Title : Assessment of the Impact of Implementation Research on the Visceral Leishmaniasis (VL) Elimina-tion Efforts in Bangladesh: the National Perspective

Project Start Date : 08/07/2021 **Project End Date :** 30/11/2021

Project ID : P21-00481 **PI Name :** Shannon Hedtke

ER Project Title : Population genetic tools for onchocerciasis control programmes to determine transmission zones: Utility of vector nuclear vs mitochondrial DNA and testing of different methods for single microfilariae analysis

Project Start Date : 01/12/2021 **Project End Date :** 31/03/2025

Project ID : B80149 **PI Name :** Warwick Norman Grant

ER Project Title : Tools for onchocerciasis control programs to determine transmission zones and to monitor parasite response to ivermectin

Project Start Date : 19/03/2019 **Project End Date :**

Project ID : P21-00374 **PI Name :** Daniel Boakye

ER Project Title : Review, compilation and publication of unpublished data and experience of the Onchocerciasis Control Programme in West Africa and peer-reviewed literature on the role of the vector in transmission of O. volvulus, vector-related considerations for criteria

Project Start Date : 23/08/2021 **Project End Date :** 22/08/2022

Project ID : P21-00397 **PI Name :**

ER Project Title : Payment for Publication fees

Project Start Date : 25/08/2021 **Project End Date :** 27/08/2021

Project ID : P21-00357 **PI Name :** Anand Ballabh Joshi

ER Project Title : Assessment of the Impact of Implementation Research on the Visceral Leishmaniasis (VL) Elimination Efforts in Nepal: the National Perspective

Project Start Date : 08/07/2021 **Project End Date :** 30/11/2021

Project ID : B70122 **PI Name :** Pradeep Das

ER Project Title : Embedding Diagnostics and Surveillance of Visceral Leishmaniasis into non-specialised VL centres in the health care...

Project Start Date : 25/11/2017 **Project End Date :** 25/02/2019

Project ID : B70048 **PI Name :** Ursula Wittwer Backofen

ER Project Title : Organization of a TDR-WHO expert meeting on 'Research support for the post- Visceral Leishmaniasis (VL) elimination....

Project Start Date : 01/05/2018 **Project End Date :** 30/11/2018

Project ID : B80180 **PI Name :** Ursula Wittwer Backofen

ER Project Title : Organization of a TDR expert meeting on 'Research support for the post- Visceral Leishmaniasis (VL) elimination phase in

Project Start Date : 01/06/2019 **Project End Date :** 30/11/2019

Project ID : B80309 **PI Name :** Emily Adams

ER Project Title : Technical Support for Studies on VL Diagnosis in Secondary Health Structures.

Project Start Date : 26/11/2019 **Project End Date :** 31/03/2021

Project ID : B80311 **PI Name :** Faria Hossain

ER Project Title : Review of HIV seroprevalence in VL patients in Bangladesh

Project Start Date : 25/11/2019 **Project End Date :** 30/06/2021

Project ID : B70123 **PI Name :** Dinesh Mondal

ER Project Title : Embedding Diagnostics for VL into the Secondary Health Care System in Bangladesh

Project Start Date : 15/11/2017 **Project End Date :** 30/12/2019

Project ID : B80076 **PI Name :** Debashis Ghosh

ER Project Title : Research to Support Visceral Leishmaniasis Program in Indian Sub-Continent

Project Start Date : 01/04/2019 **Project End Date :** 31/12/2020

Project ID : P20-00144 **PI Name :** Anand Ballabh Joshi

ER Project Title : Follow up Assessment of Visceral Leishmaniasis (VL) Treated Patients and Assessment of Impact of COVID-19 in VL Control Services in Nepal

Project Start Date : 19/05/2021 **Project End Date :** 31/12/2022

Project ID : P20-00143 **PI Name :** Anand Ballabh Joshi

ER Project Title : Epidemiological, Serological and Entomological Investigation of New Visceral Leishmaniasis (VL) Foci in Nepal

Project Start Date : 26/05/2021 **Project End Date :** 31/12/2022

Project ID : P20-00145 **PI Name :** Anand Ballabh Joshi

ER Project Title : Determination of Prevalence of Post Kala-azar Dermal Leishmaniasis (PKDL) and Assessment of Treatment Seeking Behaviour of PKDL Patients in Nepal

Project Start Date : 19/05/2021 **Project End Date :** 18/05/2022

Project ID : P20-00142 **PI Name :** Debashis Ghosh

ER Project Title : Determination of Prevalence of Post Kala-azar Dermal Leishmaniasis (PKDL) and Assessment of Treatment Seeking Behaviour of PKDL Patients in Bangladesh

Project Start Date : 10/05/2022 **Project End Date :** 31/12/2022

Project ID : P20-00141 **PI Name :** Dr Shomik Maruf

ER Project Title : Follow up Assessment of Visceral Leishmaniasis (VL) Treated Patients and Assessment of Impact of COVID-19 in VL Control Services in Bangladesh

Project Start Date : 01/05/2021 **Project End Date :** 31/12/2022

Project ID : P20-00140 **PI Name :** Debashis Ghosh

ER Project Title : Epidemiological, Serological and Entomological Investigation of New Visceral Leishmaniasis (VL) Foci in Bangladesh

Project Start Date : 03/05/2021 **Project End Date :** 02/05/2022

Project ID : B80043 **PI Name :** Anand B. Joshi

ER Project Title : Research Support for the Consolidation and Maintenance Phase of the Visceral Leishmaniasis Elimination Program in Nepal

Project Start Date : 08/02/2018 **Project End Date :** 30/04/2021

ER Country Links

Country:	South Sudan	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Côte d'Ivoire	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Ethiopia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income

Country:	Eritrea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ghana	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Congo, Dem. Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Sudan	**WHO Region :**	EMRO	**World Bank : Income Group**	Low income
Country:	Bangladesh	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Nepal	**WHO Region :**	SEARO	**World Bank : Income Group**	Lower middle income
Country:	Australia	**WHO Region :**	WPRO	**World Bank : Income Group**	High income

Expected Result: 1.2.6

Title: Optimized approaches for effective delivery and impact assessment of public health interventions

Strategic Work Area: Research for implementation **Workstream:** Research for implementation

ER type:	Evolved	**Funding type:**	UD and DF
Start date:	01/01/2015	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	Good progress
WHO region:	Global		

Partners: Control programmes and research institutions in target countries - WHO/Global TB, WHO NTD and WHO Global Malaria Programmes, WHO regional offices, GFTAM, USAID, PMI, MMV, LSHTM, The Union and Damien Foundation

Diseases: COVID-19;Malaria;Neglected Tropical Diseases;Tuberculosis;Resistance to treatment and control agents

Review mechanism: Scientific working group + other ad hoc or collaboration-based review systems as appropriate

ER manager: Corinne Simone Collette MERLE

Team: Corinne Merle, Abdul Masoudi, Vanessa Veronese, Emmanuelle Papot, Ekua Johnson

Number of people working on projects: 500

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	No	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes
Roles complimentary:	Yes
Coordination transparent:	Yes
Visibility:	Yes

Objectives and results chain

Approach to ensure uptake: Involvement of different WHO headquarters, regional and country departments, key stakeholders such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, NGOs and control programmes; capacity built at country level.

Up-take/Use Indicator: Evidence taken into consideration in treatment and normative guidelines

Gender and geographic equity: For all activities, we try to ensure that men and women researchers are, as far as we can, equally represented.

Concerning the geographic equity, some activities focused initially in West and Central Africa (see rationale) for the WARN-TB and CARN-TB activities- this experience will be expended to East and Southern Africa. Other activities for this ER are not restricted to geographic area allowing us to work with all the 6 WHO regions.

Publication plan: Peer review publications, presentation at international congress, dissemination in-country including policy brief

In 2024:

- Wachinou AP, Fotso P, Loko H, Segoun S, Esse M, Houessinon C, Veronese V, Agodokpessi G, Merle C, Affolabi D. Mapping of Interventions of Social Protection for Tuberculosis Patients in Africa: A Scoping Review Protocol. West Afr J Med. 2024 Mar 29;41(3):348-353. PMID: 38788254.

- Dogo FM, Ate S, Agossou K, Menon S, Fiogbé AA, Akpadja K, Adjoh SK, Veronese V, Merle CS, Koura KG. Decentralising DOT for drug-susceptible TB from the health facilities to the community level in Togo. Int J Tuberc Lung Dis. 2024 Apr 1;28(4):195-201. doi: 10.5588/ijtld.23.0427. PMID: 38563340.

- ingh BB, Dhand NK, Cadmus S, Dean AS, Merle CS. Systematic review of bovine and zoonotic tuberculosis in the Western Pacific and the Southeast Asia regions of the World Health Organization. Front Public Health. 2024 Jul 31;12:1345328. doi: 10.3389/fpubh.2024.1345328. PMID: 39165781; PMCID: PMC11334259.

- Snobre J, Gasana J, Ngabonziza JCS, Cuella-Martin I, Rigouts L, Jacobs BK, de Viron E, Herssens N, Ntihumby JB, Klibazayre A, Ndayishimiye C, Van Deun A, Affolabi D, Merle CS, Muvunyi C, Sturkenboom MGG, Migambi P, de Jong BC, Mucyo Y, Decroo T. Safety of high-dose amikacin in the first week of all-oral rifampicin-resistant tuberculosis treatment for the prevention of acquired resistance (STAKE): protocol for a single-arm clinical trial. BMJ Open. 2024 Jul 24;14(7):e078379. doi: 10.1136/bmjopen-2023-078379. PMID: 39053960; PMCID: PMC11284928.

- Tinto B, Bicaba B, Kagoné TS, Kayiwa J, Rabe I, Merle CSC, Zango A, Ayouba A, Salinas S, Kania D, Simonin Y. Co-circulation of two Alphaviruses in Burkina Faso: Chikungunya and O'nyong nyong viruses. PLoS Negl Trop Dis. 2024 Jun 13;18(6):e0011712. doi: 10.1371/journal.pntd.0011712. PMID: 38870214; PMCID: PMC11206941.

- Adusi-Poku Y, Addai L, Wadie B, Afutu FK, Bruce SAK, Baddoo NA, Wagaw ZA, Campbell JR, Merle CS, Frimpong Amenyo RP. Implementation of systematic screening for tuberculosis disease and tuberculosis preventive treatment among people living with HIV attending antiretroviral treatment clinics in Ghana: a national pilot study. BMJ Open. 2024 May 28;14(5):e083557. doi: 10.1136/bmjopen-2023-083557. PMID: 38806436; PMCID: PMC11138302.

- Schlesinger M, Prieto Alvarado FE, Borbón Ramos ME, Sewe MO, Merle CS, Kroeger A, Hussain-Alkhateeb L. Enabling countries to manage outbreaks: statistical, operational, and contextual analysis of the early warning and response system (EWARS-csd) for dengue outbreaks. Front Public Health. 2024 Jan 19;12:1323618. doi: 10.3389/fpubh.2024.1323618. PMID: 38314090; PMCID: PMC10834665.

- Chijioke-Akaniro O, Akinyemi PA, Asuke S, Anyaike C, Uwaezuoke NA, Ochuko U, Ubochioma E, Omoniyi A, Merle CS, Daniel S. Influence of the new dispersible fixed-dose combination anti-Tuberculosis drug on treatment adherence among children with Tuberculosis in Osun State, Nigeria. Int Health. 2024 Sep 5;16(5):534-543. doi: 10.1093/inthealth/ihad104. PMID: 37971028; PMCID: PMC11375581.

-Seaneke SK, Darko DM, Nkansah E, Asamoa-Amoakohene A, Ashie A, Sampson Ewudzie J, Tregunno P, Raguenaud ME, Merle CS, Hennig BJ, Sabblah GT. First results from the lessons learnt from the deployment of the Med Safety App for reporting adverse drug reactions in Ghana. Digit Health. 2023 Nov 5;9:20552076231211276. doi: 10.1177/20552076231211276. PMID: 37936957; PMCID: PMC10627026.

- Sanchez Tejeda G, Benitez Valladares D, Correa Morales F, Toledo Cisneros J, Espinoza Tamarindo BE, Hussain-Alkhateeb L, Merle CS, Kroeger A. Early warning and response system for dengue outbreaks: Moving from research to operational implementation in Mexico. PLOS Glob Public Health. 2023 Sep 20;3(9):e0001691. doi: 10.1371/journal.pgph.0001691. PMID: 37729119; PMCID: PMC10511095.

- Chijioke-Akaniro O, Onyemaechi S, Kuye J, Ubochioma E, Omoniyi A, Urhioke O, Lawanson A, Ombeka VO, Hassan A, Asuke S, Anyaike C, Merle CS. Challenges in engaging the private sector for tuberculosis prevention and care in Nigeria: a mixed methods study. BMJ Open. 2023 Sep 13;13(9):e069123. doi: 10.1136/bmjopen-2022-069123. PMID: 37709312; PMCID: PMC11148675.

- Merle CS; RTSS-SMC working group. Implementation strategies for the introduction of the RTS,S/AS01 (RTS,S) malaria vaccine in countries with areas of highly seasonal transmission: workshop meeting report. Malar J. 2023 Aug 23;22(1):242. doi: 10.1186/s12936-023-04657-5. PMID: 37612716; PMCID: PMC10464391.

-Braack L, Wulandhari SA, Chanda E, Fouque F, Merle CS, Nwangwu U, Velayudhan R, Venter M, Yahouedo AG, Lines J, Aung PP, Chan K, Abeku TA, Tibenderana J, Clarke SE. Developing African arbovirus networks and capacity strengthening in arbovirus surveillance and response: findings from a virtual workshop. Parasit Vectors. 2023 Apr 14;16(1):129. doi: 10.1186/s13071-023-05748-7. PMID: 37059998; PMCID: PMC10103543.

- Diouf MP, Kande S, Oboh MA, Manga IA, Tairou F, Seck A, Diallo A, Lo AC, Sow D, Sylla K, Ndiaye M, Tine RC, Faye B, Merle C, Amambua-Ngwa A, Miligan P, Ndiaye JA. Prevalence of Malaria Infection in Pregnant

Women Attending Antenatal Clinics in Southern Senegal. Am J Trop Med Hyg. 2024 Jan 2:tpmd230164. doi: 10.4269/ajtmh.23-0164. Epub ahead of print. PMID: 38167431.

Up-take/use indicator target date: 31/12/2025

Sustainable Development Goals

Good Health and Well-being;Gender Equality;Reduced Inequality;Partnerships to achieve the Goal

Concept and approach

Rationale:

Operational/Implementation research (OR/IR) embedded within country disease control programme activities aims to improve the effective delivery of health interventions. IR is a key driver for:

7. assessing the quality and effectiveness of a disease control programme intervention;
8. understanding the barriers to effectiveness;
9. developing new strategies to improve effectiveness and cost-effectiveness; and
10. piloting and implementing successful strategies at scale.

TDR activities are conducted at national, regional, and global levels and are driven by WHO disease control programme demands (primarily the WHO Programmes and departments for global TB, neglected tropical diseases, NTD, Malaria and Pharmacovigilance and/or WHO regional offices), as well as national disease control programme priorities. Activities under this ER combine financial and technical support for conducting IR, translating research into national policy and/or practices, and strengthening capacity for conducting IR among disease control programme staff. The ultimate goal of this ER is to strengthen national capacity to build sustainable mechanisms and processes for evidence-informed decision-making to improve the delivery and effectiveness of public health interventions.

The activities conducted under this ER can be categorized as follows:

1. tuberculosis-related activities
2. malaria-related activities
3. NTD activities
4. drugs/vaccines safety monitoring, and pharmacovigilance activities
5. digital health activities

Design and methodology:

1. Regional approach: establishment of disease control programme networks as a platform for i) the conduct of regional activties/workshops which are based on the research priorities and capacity building needs of partners, and ii) sharing of innovative solutions and challenges that can enhance national responsese to infectious diseases (in collaboration with relevant WHO programmes, in particular WHO/GTB)

2. Training: Activities which address identified training needs through: i) a regional training programme; and ii) a "learning by doing" approach with technical support and mentoring for the development and conduct of pilot IR projects that generate data for the implementation and scale-up of new public health interventions;

3. Technical and financial support for scaling-up public health interventions and evaluting and documenting the effectiveness, feasibility, acceptability and when appropriate, cost of the innovative strategy through IR.

4. Development of research packages/toolkits to 'democratise' the scientific process and enable users to build skills and self-sufficiency in IR, such as the ShORRT research package, the IR4DTB toolkit, the TB cost toolkit, the TDA4Child. These tools also facilitate the development of country-led research protocols and development of data collection tools for the conduct of operational/implementation research projects

5. Collaborative approach with involving WHO departments across the 3 levels, key funders for infectious diseases and key national and international NGOs/researchers.

Approach to ensure quality: - Careful interactive development of the workplan of the full project and risk assessment - Careful selection of key partners - Close collaboration with National Disease control programmes and close monitoring of progress

ER Objectives

ERObj-0012 : 1. Build country programme capacity to develop research questions and generate data to inform effective implementation of their policies

ERObj-0013 : 2. To support national programmes with evidence for the selection and effective implementation of strategies to control diseases through either case- or population-based approaches

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 600000	USD 1050000
Designated funds	USD 1500000	USD 1700000
Total	USD 2100000	USD 2750000

Planned Budget

Undesignated funds	USD 600000
Designated funds	USD 1500000
Total	USD 2100000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0283: Inability of some control programmes to define research priorities and capacity building needs

Actions To Mitigate Risk: Shared experience and expertise within the regional network and external technical support provided for the weakest control programmes

Mitigation Status: Planning phase

Biennium: 2024-2025

ERRisk - 0299: Insufficient engagement of national control programmes

Actions To Mitigate Risk: Adequate communication strategy to maintain interaction of all partners within the network

Mitigation Status: Planning phase

Biennium: 2024-2025

ERRisk - 0356: Inability to deliver on DF projects if there is freeze of staff and consultants

Actions To Mitigate Risk: Negotiation with senior management to obtain autorization to hire consultants on DF when budget is allocated for consultants on the proposal and consultant is needed for project delivery.

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0374: Establishment of the East and Southern Africa network with governance and terms of reference in place and at least 50% of the countries who defined their TB control gaps and developed a national TB research agenda. -

Output Indicator: Strengthened regional networks of National Tuberculosis Programmes in West, Central, East and Southern Africa capable of identifying research priorities

Output Target Date: 31/12/2026

Output Progress Status:

Output Progress Description: - For WARN/CARN, a series of webinars were held on TB related topics, and increased involvement in various IR projects

- SEARN TB network - now has 22 NTP members, has held 2 webinars in 2024 and has an operational governance structure in place

Biennium: 2024-2025

EROutp-0375: At least 3 countries should implement strategies to optimise effectiveness of RTS,S with more robust study designs to measure the impact of these strategies if extra funding is provided

Output Indicator: Approaches to optimized the effectiveness of malaria vaccine in countries with high seasonality developed

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description: development of a research package for facilitating the conduct of studies/surveys to measure the effectiveness of malaria vaccine, the coverage and understanding the barriers for optimal delivery strategy

Biennium: 2024-2025

EROutp-0393: OR/IR projects results of at least 15 NTPs are disseminated via oral or written study reports/scientific publications. With additional funding the number of research projects can be increased to 20.

Output Indicator: Strengthened National TB programmes capacities for conducting OR/IR to generate the evidence-base for improving TB control

Output Target Date: 31/12/2026

Output Progress Status: On Track

Output Progress Description: Across West and Central, and Southern and East Africa:

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ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0110: Guidelines and policy decisions informed by TDR outputs

Progress made towards outcome :

Biennium: 2024-2025

EROutc-0125: The delivery and impact assessment of public health interventions for TB are optimized through IR

Progress made towards outcome : 1. The Regional network of National TB Programmes in Southern and Eastern Africa (SEARN-TB) continues to be supported by TDR, led by the Armaeur Hansen Research Institute (AHRI) as the network secretariat.
Biennium: 2024-2025

EROutc-0126: The delivery and impact assessment of public health interventions for malaria are optimized through IR

Progress made towards outcome : 1. Progress continues on the SMC project, with two more countries submitting manuscripts (Guinea and Ghana), analysis has been finalised for seven countries (Niger, Mali, Senegal, Burkina Faso, Cameroon, Benin, and Togo), while three additional countries have finalised their protocols (Chad, The Gambia, and Guinea Bissau)
Biennium: 2024-2025

EROutc-0127: The delivery and impact assessment of public health interventions for NTDs are optimized through IR

Progress made towards outcome : 1. An assessment of the feasibility and acceptability of the WHO SkinNTDs App by the health care workers and community -based surveillance volunteers in Ghana: a pilot study is underway and being technically and financially supported by TDR.
Biennium: 2024-2025

EROutc-0128: The delivery and impact assessment of public health interventions for drug and vaccine safety and pharmacovigilance are optimized through IR

Progress made towards outcome : 1. Support to Burkina Faso and Malawi for the MedSafety app, USSD coding system is ongoing

Biennium: 2024-2025

EROutc-0129: The delivery and impact assessment of public health interventions using digital health optimized through IR

Progress made towards outcome : 1. Following the IR4DTB workshop in the WHO AFRO region targeting NTP staff in May 2023, 11 country proposals were selected to receive financial and technical support to conduct IR to test, evaluate and/or scale up new digital technologies within the context of a country's national response to TB throughout 2024. Studies are nearing completion with publication of some papers expected by the end of 2024. The six countries in the WHO EURO region, selected after the 2022 IR4DTB workshop, have finalised their studies with draft or published manuscripts available for all. Through support from the Mayo Clinic,

the IR4DTB site was translated into Spanish to extend its reach into Latin and South America.

2. Support for the introduction of paediatric formulation of Praziquantel is ongoing in Tanzania as part of the ADP project with other partners. TDR is mainly providing technical and financial assistance to the National Institute for Medical Research of Tanzania for preparatory work with raising awareness and identifying potential introduction barriers within the community, definition of the best model of delivery to consider (national dialogue meeting and key stakeholder engagements) and the development of an implementation research protocol for evaluating the three delivery models that were proposed during the national dialogue and strategies for involving the community in the delivery.

2. A new project funded by EDCTP was secured in 2024 which aims to optimize the delivery and uptake of malaria vaccines in countries with areas of highly seasonal transmission over five years in partnership with LIH, University of Thies, University Cheik Anta Diop in Dakar, LSHTM in UK, Rabat WHO collaborating centre, WHO and MMV. The project aims to support national immunisation and malaria programmes in 13 countries in West and Central Africa with highly seasonal malaria, to optimise delivery and uptake of malaria vaccines, and to exploit the opportunities of malaria vaccine introduction to strengthen delivery of other vaccines.

2. The West and Central African Regional Network for TB Control (WARN/CARN TB) remains operational, gaining more autonomy and financial support from external sources, such as the Union for Lung Health.

3. The evaluation and implemention of social protection programmes for people affected by TB across Africa have been supported by TDR through 1) technical and financial support to six countries identified under a funding scheme launched in late 2022 to support IR projects in the WHO AFRO region and build the evidence base on the impact of social protection schemes for TB patients and their families, in collaboration with GTB, the Union, and Damien Foundation. Six studies are in progress and expected to be completed by end of 2023; 2) Finalisation of a generic IR toolkit for evaluating the impact of social protection schemes for TB patients and their families has been completed and will be officially launched at the Union Conference in November 2024, and; 3) Support to GTB to conduct a landscape analysis of social protection schemes in DRC, which gathered evidence on key gaps and recommendations for strengthening the overall SP landscape in these contexts which was completed in early 2024

4. The ShoRRT project continues to run in 27 countries, with financial and technical support provided directly by TDR to Nigeria and DRC, and indirect support provided to other countries through the development of a generic statistical analysis plan to inform a standardised approach to analysis of key treatment effectiveness, safety, and quality of life outcomes at end of treatment and follow up time points. Additional technical support for data analysis was provided in 2024 to countries by external consultants and the Luxembourg Institute of Health.

5. The TDA4Child initiative continues, with direct TDR technical support provided to the Democratic Republic of Congo, Nigeria and Burkina Faso for the adaptation of the master protocol and study implementatin. A regional protocol has been developed via a consortium with Benin, Senegal, Togo and Guinea, with additional financial support from The Union.

- 11 countries are currently conducting IR on digital technologies for TB

- 6 countries are conducting IR related to social protection for TB

- 3 are conducting IR on the evaluation of other digital appsfor public health (Skin NTP app and MedSafety App)

- X countries are implementing the TDA4Child toolkit

- X countries are implementing ShoRRT

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Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 465000	USD 1000000
Designated funds	USD 1500000	USD 1700000
Total	USD 1965000	USD 2700000

Planned Budget

Undesignated funds	USD 465000
Designated funds	USD 1500000
Total	USD 1965000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0334: Insufficient engagement of national control programmes

Actions To Mitigate Risk: Adequate communication strategy to maintain interaction of all partners within the network

Mitigation Status: Planning phase

Biennium: 2026-2027

ERRisk - 0335: Inability of some control programmes to define research priorities and capacity building needs

Actions To Mitigate Risk: Shared experience and expertise within the regional network and external technical support provided for the weakest control programmes

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0416: Establishment of the East and Southern Africa network with governance and terms of reference in place and at least 50% of the countries who defined their TB control gaps and developed a national TB research agenda. -

Output Indicator: Strengthened regional networks of National Tuberculosis Programmes in West, Central, East and Southern Africa capable of identifying research priorities

Output Target Date: 31/12/2026

Output Progress Status: On Track

Output Progress Description:

Biennium: 2026-2027

EROutp-0415: At least 3 countries should implement strategies to optimise effectiveness of RTS,S with more robust study designs to measure the impact of these strategies if extra funding is provided

Output Indicator: Approaches to optimized the effectiveness of malaria vaccine in countries with high seasonality developed

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description:

Biennium: 2026-2027

EROutp-0417: OR/IR projects results of at least 15 NTPs are disseminated via oral or written study reports/scientific publications. With additional funding the number of research projects can be increased to 20.

Output Indicator: Local implementation research evidence generated by National Control Programmes to improve TB control in Africa

Output Target Date: 31/12/2026

Output Progress Status: On Track

Output Progress Description:

Biennium: 2026-2027

EROutp-0418: Evidence generated. At least three models of paediatric praziquantel delivery should have been piloted to inform national policies (cost-benefit studies and investment cases will also be conducted for US$ 50 million scenario)

Output Indicator: Generate evidence to improve access to new health technocalogies for neglected tropical diseases and improve control neglected tropical diseases

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0138: Guidelines, policy decisions and / or practice informed by TDR outputs.

Progress made towards outcome :

ER Project Links

Project ID : P25-01519 **PI Name :** LAVINIA DI RUFFANO

ER Project Title : Conducting a scoping review to inform the creation of a new area of work on digital Technologies for TDR.

Project Start Date : 05/02/2025 **Project End Date :** 01/09/2025

Project ID : P25-01524 **PI Name :** Dissou Affolabi

ER Project Title : Coordination of WARN-TB and CARN-TB activities

Project Start Date : 17/02/2025 **Project End Date :** 31/12/2025

Project ID : P25-01522 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Supporting the SEARN TB secreatariat for regional TB response in Southern and East Africa in 2025.

Project Start Date : 10/02/2025 **Project End Date :** 31/12/2025

Project ID : P25-01515 **PI Name :** Maggie Zhang

ER Project Title : Publication of the results of the ShoRRT study in Dominican Republic.

Project Start Date : 22/01/2025 **Project End Date :** 10/02/2025

Project ID : P25-01513 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Coordination and organization of the first annual meeting of the SEARN-TB network

Project Start Date : 20/01/2025 **Project End Date :** 10/03/2025

Project ID : P24-01505 **PI Name :** Chukwuma Anyaike

ER Project Title : Support for dissemination meeting of the results of operational research study conducted by the National TB Programme of Nigeria.

Project Start Date : 23/12/2024 **Project End Date :** 31/01/2026

Project ID : P24-01461 **PI Name :** Dissou Affolabi

ER Project Title : Coordination of FR/EN translation activities for a regional webinar of National TB Programmes

Project Start Date : 13/12/2024 **Project End Date :** 30/12/2024

Project ID : P24-01460 **PI Name :** Amadou Seck

ER Project Title : To provide support for the development of data collection systems of NTD and TB research packages.

Project Start Date : 05/12/2024 **Project End Date :** 28/02/2025

Project ID : P24-01455 **PI Name :** Dissou Affolabi

ER Project Title : Organization of the 2024 WARN-TB & CARN-TB meeting

Project Start Date : 02/12/2024 **Project End Date :** 31/01/2025

Project ID : P24-01385 **PI Name :** Michel KASWA KAYOMO

ER Project Title : Support for data cleaning, statistical analysis and knowledge sharing activities of the National TB programme of DRC regarding the TDA4Child project

Project Start Date : 19/09/2024 **Project End Date :** 31/12/2024

Project ID : P24-01384 **PI Name :** Chukwuma Anyaike

ER Project Title : Nigeria – Support for data cleaning, statistical analysis and knowledge sharing activities of the National TB programme of Nigeria regarding the VEDUTA project.

Project Start Date : 19/09/2024 **Project End Date :** 31/12/2024

Project ID : P24-01376 **PI Name :** Ratchanekorn Wutirat

ER Project Title : to support the renewal of the domain name, hosting and SSL certificate for the IR4DTB website

Project Start Date : 21/09/2024 **Project End Date :** 31/12/2024

Project ID : P24-01353 **PI Name :** Stavia Turyahabwe

ER Project Title : Support for the conduct of the TDA4Child initiative in Uganda

Project Start Date : 28/07/2024 **Project End Date :** 20/02/2025

Project ID : P24-01350 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Continued support to the SEARN TB secretariat for regional TB response in Southern and East Africa.

Project Start Date : 22/07/2024 **Project End Date :** 31/12/2024

Project ID : P24-01346 **PI Name :** Dissou Affolabi

ER Project Title : Support to the secretariat of the WARN-TB and CARN-TB

Project Start Date : 22/07/2024 **Project End Date :** 31/12/2024

Project ID : P24-01319 **PI Name :**

ER Project Title : Implementation of Systematic Screening for Tuberculosis Disease and Tuberculosis Preventive Treatment Among People Living with HIV Attending Antiretroviral Treatment Clinics in Ghana: A National Pilot Study

Project Start Date : 31/05/2024 **Project End Date :** 30/06/2024

Project ID : P24-01254 **PI Name :** Paul Kazyoba

ER Project Title : Training of front line and Health workers for arPZQ delivery

Project Start Date : 20/03/2024 **Project End Date :** 31/03/2024

Project ID : P24-01252 **PI Name :** Paul Milligan

ER Project Title : Development of a research package for the introduction of malaria vaccine

Project Start Date : **Project End Date :**

Project ID : P24-01244 **PI Name :** Yacine MAR DIOP

ER Project Title : Support to NTP activities for implementing VOT in for hard-to-reach population in Senegal

Project Start Date : 11/03/2024 **Project End Date :** 31/03/2024

Project ID : P24-01242 **PI Name :** Paul Kazyoba

ER Project Title : Support for implementing the CASA strategy in preparation of the introduction of the pediatric formulation of praziquantel

Project Start Date : 08/03/2024 **Project End Date :** 31/03/2024

Project ID : P24-01241 **PI Name :**

ER Project Title : Adaptation of the 99DOTS platform for its use in security compromised districts in Burkina Faso

Project Start Date : 11/03/2024 **Project End Date :** 31/03/2024

Project ID : P24-01234 **PI Name :** Jean-Louis Ndiaye

ER Project Title : Organization of a national dialogue meeting for the introduction of Malaria vaccines in Senegal

Project Start Date : 07/03/2024 **Project End Date :** 31/03/2024

Project ID : P23-01182 **PI Name :** Muhammed Lamin Darboe

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in the Gambia.

Project Start Date : 04/01/2025 **Project End Date :** 30/07/2025

Project ID : P23-01168 **PI Name :** Jay Achar

ER Project Title : support for the analysis and result dissemination in a scientific paper for a sub-study of ShORRT in countries of the WARN-TB/CARN-TB

Project Start Date : 05/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01166 **PI Name :** Kostyantyn DUMCHEV

ER Project Title : Technical support for coordination of a special issue on CAD4TB among six countries in WHO Euro region

Project Start Date : 04/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01164 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : To support the finalisation and communication of research findings among the SEARN-TB Regional network

Project Start Date : 04/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01165 **PI Name :** Dissou Affolabi

ER Project Title : To support the finalisation and communication of research findings among the WARN-TB & CARN-TB regional network

Project Start Date : 04/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01161 **PI Name :** JEREMIA MSHIU JOHNSON

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Tanzania

Project Start Date : 04/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01124 **PI Name :** Jean-Louis Ndiaye

ER Project Title : Support for the publication of a scientific malaria paper.

Project Start Date : 01/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01158 **PI Name :** Wilfried Bekou

ER Project Title : Support for the development of the 5 years strategic plan for the WARN-TB/CARN-TB.

Project Start Date : 01/12/2023 **Project End Date :** 31/12/2023

Project ID : P23-01157 **PI Name :** Aboubacar Sidiki MAGASSOUBA

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Guinea

Project Start Date : 01/12/2023 **Project End Date :** 30/12/2023

Project ID : P23-01153 **PI Name :** Michel Vaillant

ER Project Title : Finalising the statistical plan for ShoRRT and providing support to Pakistan

Project Start Date : 28/11/2023 **Project End Date :** 31/12/2023

Project ID : P23-01146 **PI Name :** Dissou Affolabi

ER Project Title : Translation of evalution study material for Social protection in TB patients and generic research package for evaluating the impact of social protection support

Project Start Date : 23/11/2023 **Project End Date :** 31/12/2023

Project ID : P23-01140 **PI Name :** Amadou Seck

ER Project Title : To provide support for the development of data collection systems of TB research packages

Project Start Date : 21/11/2023 **Project End Date :** 31/12/2023

Project ID : P23-01136 **PI Name :** Vania Araujo

ER Project Title : support for the evaluation of the performance of the WHO Global TB TDA for children.

Project Start Date : 14/11/2023 **Project End Date :** 31/12/2023

Project ID : P23-01113 **PI Name :** Benedita Jose

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in [COUNTRY]

Project Start Date : 30/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01112 **PI Name :** Obioma Chijioke Akaniro

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Nigeria.

Project Start Date : 30/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01110 **PI Name :** Dissou Affolabi

ER Project Title : Organization of the 2023 WARN-TB & CARN-TB meeting.

Project Start Date : 30/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01099 **PI Name :** Dieynaba Sophie N'diaye

ER Project Title : Supporting a scoping study of the social protection landscape for people affected by TB in DRC.

Project Start Date : 27/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01061 **PI Name :** Priya Shete

ER Project Title : Collection of key stakeholder feedback and validation of a generic research protocol for evaluating the impact of social protection-related activities on TB patients and their families

Project Start Date : 06/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01060 **PI Name :** Stavia Turyahabwe

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Uganda.

Project Start Date : 06/10/2023 **Project End Date :** 30/12/2023

Project ID : P23-01054 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Supporting the piloting of the TB Impact assessment DHIS module to evaluate the impact of COVID-19 pandemic on TB service provision in Ethiopia

Project Start Date : 10/08/2023 **Project End Date :** 30/12/2023

Project ID : P23-01052 **PI Name :** Tsehlo Tsehlo

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Lesotho

Project Start Date : 25/09/2023 **Project End Date :** 30/12/2023

Project ID : P23-01051 **PI Name :** Chukwuma Anyaike

ER Project Title : Nigeria – support for the conduct of the TDA4Child initiative dubbed as VEDUTA in Nigeria

Project Start Date : 19/09/2023 **Project End Date :** 31/12/2023

Project ID : P23-01050 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Supporting the Armaeur Hansen Research Institute (AHRI) as Secretariat of SEARN TB for activities to support the regional TB response in Southern and East Africa

Project Start Date : 15/09/2023 **Project End Date :** 30/12/2023

Project ID : P23-01049 **PI Name :** Moses Lutaakome Joloba

ER Project Title : Support to Makerere university for activities for using digital technologies to support the TB response in partnership with the Ugandan Supranational reference laboratory

Project Start Date : 15/09/2023 **Project End Date :** 30/12/2023

Project ID : P23-01035 **PI Name :** Dieynaba Sophie N'diaye

ER Project Title : Support for strengthening the capacities of National Tuberculosis Programmes in health economics

Project Start Date : 04/09/2023 **Project End Date :** 12/09/2023

Project ID : P23-01009 **PI Name :** Kostyantyn DUMCHEV

ER Project Title : Technical support for data analysis and manuscript preparation to countries as part of the Implementation Research for Digital Technologies in TB (IR4DTB) project in WHO EURO region

Project Start Date : 24/07/2023 **Project End Date :** 30/12/2023

Project ID : P23-01002 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Coordination and organization of a regional workshop on strengthening TB surveillance systems and identifying priorities for implementation research in Addis Ababa.

Project Start Date : 06/07/2023 **Project End Date :** 30/12/2023

Project ID : P23-00993 **PI Name :** Ellyn McCaffrey

ER Project Title : Piloting and refining a generic research protocol for evaluating the impact of social protection-related activities on TB patients and their families

Project Start Date : 26/06/2023 **Project End Date :** 30/12/2023

Project ID : P23-00980 **PI Name :** Michel KASWA KAYOMO

ER Project Title : Supporting the National TB Programme to conduct in-country study monitoring for the finalization of the ShORRT project in DRC

Project Start Date : 29/05/2023 **Project End Date :** 31/07/2023

Project ID : P23-00977 **PI Name :** Emmanuelle Papot

ER Project Title : French translation of the TDA4Child research package

Project Start Date : 21/05/2023 **Project End Date :** 28/05/2023

Project ID : P23-00975 **PI Name :** Schadrac Agbla

ER Project Title : Support for conducting data analysis for ShORRT

Project Start Date : 19/05/2023 **Project End Date :** 31/05/2023

Project ID : P23-00968 **PI Name :** Ratchanekorn Wutirat

ER Project Title : Design and development of Spanish version of the Implementation Research for Digital technologies and TB toolkit website and offline, PDF versions in Spanish

Project Start Date : 10/05/2023 **Project End Date :** 30/09/2023

Project ID : P23-00967 **PI Name :** Priya Shete

ER Project Title : Development of a generic research protocol for evaluating the impact of social protection-related activities on TB patients and their families

Project Start Date : 12/05/2023 **Project End Date :** 30/08/2023

Project ID : P23-00964 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Support to the secretariat of the Southern and East Africa Regional Network for TB

Project Start Date : 08/05/2023 **Project End Date :** 30/07/2023

Project ID : P23-00956 **PI Name :** Amadou Seck

ER Project Title : To provide support for data collection systems and analysis activities for TB-related research packages

Project Start Date : 17/04/2023 **Project End Date :** 31/12/2023

Project ID : P23-00949 **PI Name :** Alemseged Abdissa Lencho

ER Project Title : Coordination and organization of the first meeting of NTPs in Southern and East Africa to establish a new regional research network

Project Start Date : 06/04/2023 **Project End Date :** 30/05/2023

Project ID : P23-00948 **PI Name :** Michel Vaillant

ER Project Title : Supporting the data analysis of the ShORRT research package

Project Start Date : 04/04/2023 **Project End Date :** 31/07/2023

Project ID : P23-00926 **PI Name :** Amadou Seck

ER Project Title : Supporting the organisation of Spanish-language translation required for the ShoRRT REDCap training course.

Project Start Date : 27/02/2023 **Project End Date :** 03/03/2023

Project ID : P23-00891 **PI Name :** Mykhailo Riabinchuk

ER Project Title : Supporting the NTP in Ukraine to conduct activities for using digital technologies to support the TB response

Project Start Date : 09/02/2023 **Project End Date :** 28/03/2023

Project ID : P23-00889 **PI Name :**

ER Project Title : A new online toolkit to support implementation research to enhance the use of digital innovations to End TB.

Project Start Date : 31/01/2023 **Project End Date :** 15/02/2023

Project ID : P22-00837 **PI Name :** Thi Mai Phuong Nguyen

ER Project Title : Effectiveness and safety of Bedaquilline-based, Modified All-oral 9-11 month treatment regimen for rifampicin resistant Tuberculosis in Vietnam

Project Start Date : 27/01/2024 **Project End Date :** 28/02/2024

Project ID : P22-00852 **PI Name :** Chukwuma Anyaike

ER Project Title : Support to NTP activities in Nigeria for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P23-00887 **PI Name :** Beatrice Mahler

ER Project Title : Support to NTP activities for using digital technologies to support the TB response in Romania.

Project Start Date : 30/01/2023 **Project End Date :** 24/03/2023

Project ID : P22-00873 **PI Name :** Muhammed Amir Khan

ER Project Title : Support for implementing a demonstration project on “CXR-symptom” screening and TB Preventive Treatment (TPT) of known type-2 diabetes patients at public facilities.

Project Start Date : 22/12/2022 **Project End Date :** 31/03/2024

Project ID : P22-00872 **PI Name :** Dieynaba Sophie N'diaye

ER Project Title : Support for strengthening the capacities of National Malaria Programmes in health economics

Project Start Date : 22/12/2022 **Project End Date :** 15/01/2024

Project ID : P22-00870 **PI Name :** Dissou Affolabi

ER Project Title : Organization of the 2022 WARN-TB & CARN-TB meeting

Project Start Date : 16/12/2022 **Project End Date :** 30/01/2023

Project ID : P22-00864 **PI Name :** Adjima Combary

ER Project Title : Support to NTP activities in Burkina Faso for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P22-00856 **PI Name :** Almamy Amara TOURE

ER Project Title : Support to NTP activities in Guinea for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P22-00857 **PI Name :** Adama Marie Bangoura

ER Project Title : Support to NTP activities in Guinea for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P22-00855 **PI Name :** Josélyne NSANZERUGEZE

ER Project Title : Support to NTP activities in Burundi for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P22-00853 **PI Name :** Dissou Affolabi

ER Project Title : Support to NTP activities in BENIN for mitigating the impact of TB through social protection

Project Start Date : 12/12/2022 **Project End Date :** 31/12/2023

Project ID : P22-00830 **PI Name :** Dissou Affolabi

ER Project Title : Coordination and organization of a regional meeting of NTPs in West and Central Africa on improving TB surveillance capacity to monitor and mitigate the impact of COVID-19 and future public health emergencies

Project Start Date : 25/11/2022 **Project End Date :** 09/12/2022

Project ID : P22-00828 **PI Name :** James Kamanzi

ER Project Title : Support to the Rwanda Biomedical Centre to support the Rwandan National TB Programme to installing and piloting the DHIS 2 TB IMPAX dashboard for monitoring the impact of COVID and other public health emergencies on TB services in Rwanda

Project Start Date : 18/11/2022 **Project End Date :** 09/12/2022

Project ID : P22-00825 **PI Name :** Frederico Carroli

ER Project Title : Translation in Portuguese of ShORRT research package material

Project Start Date : 17/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00822 **PI Name :** Aboubacar Sidiki MAGASSOUBA

ER Project Title : Conduct of a survey on TB&SARS-CoV-2 dual testing

Project Start Date : 14/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00821 **PI Name :** Christ Kevin Rajoum HOUESSINON

ER Project Title : Support for the conduct of a survey on TB&SARS-CoV-2 dual testing

Project Start Date : 14/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00819 **PI Name :** Janet Neubecker

ER Project Title : EDITING of the TB&SARS-CoV-2 dual testing report

Project Start Date : 11/11/2022 **Project End Date :** 18/11/2022

Project ID : P22-00814 **PI Name :** Tatiana Polunina

ER Project Title : Russian translation support for follow up meeting among participating countries of the IR4DTB training workshop

Project Start Date : 09/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00813 **PI Name :** Lyudmila Yurastova

ER Project Title : Russian translation support for follow up meeting among participating countries of the IR4DTB training workshop

Project Start Date : 09/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00812 **PI Name :** Adama Marie Bangoura

ER Project Title : Support to the National TB Programme for installing and piloting the DHIS 2 TB IMPAX dashboard for monitoring the impact of COVID and other public health emergencies on TB services in Guinea

Project Start Date : 07/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00811 **PI Name :** Oumar Abdelhadi

ER Project Title : Support to PROGRAMME NATIONAL DE LUTTE CONTRE LA TUBERCULOSE for installing and piloting the DHIS 2 TB IMPAX dashboard for monitoring the impact of COVID and other public health emergencies on TB services in Chad

Project Start Date : 07/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00810 **PI Name :** Adjima Combary

ER Project Title : Support to Programme National Tuberculose for installing and piloting the DHIS 2 TB IMPAX dashboard for monitoring the impact of COVID and other public health emergencies on TB services in Burkina Faso.

Project Start Date : 07/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00809 **PI Name :** Dissou Affolabi

ER Project Title : Support to Programme National contre la Tuberculose (PNT) for installing and piloting the DHIS 2 TB IMPAX dashboard for monitoring the impact of COVID and other public health emergencies on TB services in Benin

Project Start Date : 07/11/2022 **Project End Date :** 30/11/2022

Project ID : P22-00795 **PI Name :** Janet Neubecker

ER Project Title : EDITING of the Seasonal Malaria Chemoprevention field guide.

Project Start Date : 14/10/2022 **Project End Date :** 01/11/2022

Project ID : P22-00794 **PI Name :** Tatiana Polunina

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 21/10/2022 **Project End Date :** 30/10/2022

Project ID : P22-00793 **PI Name :** Lyudmila Yurastova

ER Project Title : Further support for Russian-English language translation as part of the activities related to the Implementation Research for Digital Technologies in TB (IR4DTB) toolkit

Project Start Date : 21/10/2022 **Project End Date :** 30/10/2022

Project ID : P22-00791 **PI Name :** Emmanuelle Papot

ER Project Title : Support to the national TB programme of Niger for defining patients and health system risk factors of death in TB/HIV patients and the development of a generic protocol.

Project Start Date : 10/10/2022 **Project End Date :** 30/12/2023

Project ID : P22-00779 **PI Name :** Naira Khachatryan

ER Project Title : Support to NTP activities for using digital technologies to support the TB response, Armenia.

Project Start Date : 30/09/2022 **Project End Date :** 30/06/2023

Project ID : P22-00765 **PI Name :** Osman Eltayeb

ER Project Title : Support for the conduct of the ShoRRT project in Nigeria.

Project Start Date : 20/09/2022 **Project End Date :** 30/12/2022

Project ID : P22-00753 **PI Name :** Elena Tudor

ER Project Title : Support to Moldova NTP activities for using digital technologies to support the TB response

Project Start Date : 26/09/2022 **Project End Date :** 30/06/2023

Project ID : P22-00703 **PI Name :** Ratchanekorn Wutirat

ER Project Title : IR4DTB: renewal domain name, hosting and SSL certificate

Project Start Date : 01/07/2022 **Project End Date :** 31/07/2022

Project ID : P22-00672 **PI Name :** Georgy PIGNASTYY

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 13/06/2022 **Project End Date :** 17/06/2022

Project ID : P22-00670 **PI Name :** Tatiana Polunina

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 13/06/2022 **Project End Date :** 17/06/2022

Project ID : P22-00671 **PI Name :** Lyudmila Yurastova

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 13/06/2022 **Project End Date :** 17/06/2022

Project ID : P22-00655 **PI Name :** Dieynaba Sophie N'diaye

ER Project Title : Support for integrating cost aspects in implementation/operational research projects.

Project Start Date : 30/05/2022 **Project End Date :** 31/05/2023

Project ID : P22-00668 **PI Name :** Ana CIOBANU

ER Project Title : Study mentorship support during the virtual workshop on Implementation Research for Digital Technologies in TB (IR4DTB)

Project Start Date : 13/06/2022 **Project End Date :** 25/06/2022

Project ID : P22-00667 **PI Name :** Kostyantyn DUMCHEV

ER Project Title : Study mentorship support during the virtual workshop on Implementation Research for Digital Technologies in TB (IR4DTB)

Project Start Date : 13/06/2022 **Project End Date :** 30/06/2022

Project ID : P22-00666 **PI Name :** Araksya HOVHANNESYAN

ER Project Title : Study mentorship support during the virtual workshop on Implementation Research for Digital Technologies in TB (IR4DTB)

Project Start Date : 13/06/2022 **Project End Date :** 25/06/2022

Project ID : P22-00663 **PI Name :** Thomas Scalway

ER Project Title : Design and layout for the French version of the country analysis report on surveillance and control of arboviral disease in Africa

Project Start Date : 09/06/2022 **Project End Date :** 31/07/2022

Project ID : P22-00658 **PI Name :** Dissou Affolabi

ER Project Title : Coordination of activities to improve TB surveillance capacity among National TB Programme members of the West and Central Africa Network for TB Control and WARN-TB/CARN-TB activities.

Project Start Date : 06/06/2022 **Project End Date :** 15/01/2023

Project ID : P22-00654 **PI Name :** Tatiana Polunina

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 25/05/2022 **Project End Date :** 10/06/2022

Project ID : P22-00650 **PI Name :** Lyudmila Yurastova

ER Project Title : Russian translation support for Implementation Research for Digital Technologies in TB (IR4DTB) toolkit work package

Project Start Date : 25/05/2022 **Project End Date :** 31/05/2022

Project ID : P22-00649 **PI Name :** Muhammed Amir Khan

ER Project Title : Operationalizing “Prevent-TB” assisted “CXR-symptom” screening and TB Preventive Treatment (TPT) of the household contacts of known TB patients at public BMUs

Project Start Date : 24/05/2022 **Project End Date :** 31/03/2023

Project ID : P22-00602 **PI Name :** Valerie Louis

ER Project Title : French translation of the CAD calibration toolkit

Project Start Date : 14/03/2022 **Project End Date :** 30/04/2022

Project ID : P22-00586 **PI Name :** Author Billing Team

ER Project Title : Prevalence, acceptability, and cost of routine screening for pulmonary tuberculosis among pregnant women in Cotonou, Benin

Project Start Date : 22/02/2022 **Project End Date :** 30/03/2022

Project ID : P22-00578 **PI Name :** Amadou Seck

ER Project Title : Implementing and supporting the data collection system of the ShORRT research package

Project Start Date : 07/02/2022 **Project End Date :** 31/12/2022

Project ID : P21-00555 **PI Name :** Nimer Ortuno-Gutierrez

ER Project Title : WARN-TB and CARN-TB- Capacity Building for conducting OR/IR projects

Project Start Date : 05/10/2020 **Project End Date :** 31/08/2021

Project ID : P21-00554 **PI Name :** Desire Lucien Dahourou

ER Project Title : WARN-TB and CARN-TB- Capacity Building for conducting OR/IR projects

Project Start Date : 07/09/2020 **Project End Date :** 31/08/2021

Project ID : P21-00553 **PI Name :** Jonathon Campbell

ER Project Title : MDR/RR-TB implementation research package

Project Start Date : 29/08/2020 **Project End Date :** 31/12/2020

Project ID : P21-00538 **PI Name :** Toussaint ROUAMBA

ER Project Title : Statistical support to estimate the burden of arboviral disease in Burkina Faso and evaluate the feasibility of using measles/rubella surveillance specimens for sentinel surveillance of Zika and other AVD

Project Start Date : 07/12/2021 **Project End Date :** 31/12/2021

Project ID : P21-00532 **PI Name :** Claudia Mutaquiha

ER Project Title : ShORRT Research capacity strengthening in Mozambique

Project Start Date : 03/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00545 **PI Name :** ERNEST W. CHOLOPRAY

ER Project Title : Liberia - support for the use of the TB costing toolkit

Project Start Date : 12/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00544 **PI Name :** Gloria Puerto Castro

ER Project Title : Research capacity strengthening (ShORRT) in Colombia

Project Start Date : 12/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00536 **PI Name :** Fatima Leticia Luna Lopez

ER Project Title : Research capacity strenghtening (ShORRT) in Mexico

Project Start Date : 06/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00531 **PI Name :** Ratchanekorn Wutirat

ER Project Title : Design and development of Russian version of the Implementation Research for Digital technologies and TB toolkit website and offline, PDF versions in Russian, GBP 9531

Project Start Date : 03/12/2021 **Project End Date :** 31/12/2021

Project ID : P21-00529 **PI Name :** Annie Bisso

ER Project Title : Cameroon - support for the use of the TB costing toolkit

Project Start Date : 01/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00530 **PI Name :** Melanea Casanova

ER Project Title : Research capacity strenghtening (ShORRT) in the Dominican Republic

Project Start Date : 02/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00528 **PI Name :** Milena Borbon Ramos

ER Project Title : Support to Columbia for the evaluation of EWARS

Project Start Date : 03/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00527 **PI Name :** Milena Borbon Ramos

ER Project Title : Columbia – better documenting EWARS effectiveness on Dengue control

Project Start Date : 30/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00525 **PI Name :** Hasitha Tissera

ER Project Title : Sri-Lanka – better documenting EWARS effectiveness on Dengue control

Project Start Date : 03/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00524 **PI Name :** Thomas Scalway

ER Project Title : Design and layout of the country analysis report on surveillance and control of arboviral disease in Africa

Project Start Date : 01/12/2021 **Project End Date :** 31/12/2021

Project ID : P21-00522 **PI Name :** Nadia Fanou Fogny

ER Project Title : Support to the National Malaria Programme of the OPT-SMC project for the qualitative aspects of their OR/IR projects.

Project Start Date : 01/12/2021 **Project End Date :** 31/12/2021

Project ID : P21-00512 **PI Name :** Dissou Affolabi

ER Project Title : Annual meeting of the West and Central Africa for TB control Networks (WARN-TB & CARN-TB)

Project Start Date : 30/11/2021 **Project End Date :** 31/12/2021

Project ID : P21-00518 **PI Name :** Amadou Seck

ER Project Title : Online training on Good Datamanagement practices and REDCap

Project Start Date : 01/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00519 **PI Name :** Manuel de Jesus Bravo Reyes

ER Project Title : Nicaragua – research capacity strenghtening (ShORRT)

Project Start Date : 01/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00516 **PI Name :** Adjima Combary

ER Project Title : Burkina Faso - support for the use of the TB costing toolkit

Project Start Date : 01/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00514 **PI Name :** Dissou Affolabi

ER Project Title : implementating social protection for TB patients – the PECEM-TB project in Benin

Project Start Date : 01/12/2021 **Project End Date :** 28/02/2022

Project ID : P21-00505 **PI Name :** Dissou Affolabi

ER Project Title : Benin- Face to face training on Good Datamanagement practices and REDCap

Project Start Date : 23/11/2021 **Project End Date :** 28/02/2022

Project ID : P21-00506 **PI Name :** Benjamin Sombie

ER Project Title : Burkina Faso- Face to face training on Good Datamanagement practices and REDCap

Project Start Date : 23/11/2021 **Project End Date :** 28/02/2022

Project ID : P21-00507 **PI Name :** Jean Louis A. Ndiaye

ER Project Title : Senegal- Face to face training on Good Datamanagement practices and REDCap

Project Start Date : 23/11/2021 **Project End Date :** 28/02/2022

Project ID : P21-00495 **PI Name :** Martha McGuire

ER Project Title : Evaluation of the West and Central African network for TB Research (WARN/CARN TB).

Project Start Date : 15/11/2021 **Project End Date :** 31/12/2021

Project ID : P21-00494 **PI Name :** Vanessa Veronese

ER Project Title : Follow-up activities for the WARN-TB & CARN-TB and the piloting of the framework for evaluating the impact of COVID-19 on TB control

Project Start Date : 15/11/2021 **Project End Date :** 30/11/2021

Project ID : P21-00493 **PI Name :** Natasha Waschewsky

ER Project Title : French translation of OPT-SMC document

Project Start Date : 15/11/2021 **Project End Date :** 01/12/2021

Project ID : P21-00492 **PI Name :** Muhammed Amir Khan

ER Project Title : Support for the development of a research protocol for operationalizing “symptom-CXR” screening of Household TB contacts and LTBi preventive treatment

Project Start Date : 12/11/2021 **Project End Date :** 28/02/2022

Project ID : P21-00487 **PI Name :** Adjima Combary

ER Project Title : Support to Programme National Tuberculose, Burkina Faso for pilot testing of the Impact assessment framework to evaluate the impact of COVID-19 pandemic on TB service provision in West and Central Africa

Project Start Date : 10/11/2021 **Project End Date :** 20/12/2021

Project ID : P21-00486 **PI Name :** Oumar Abdelhadi

ER Project Title : Support to Programme National de lutte contre la Tuberculose, Chad for pilot testing of the Impact assessment framework to evaluate the impact of COVID-19 pandemic on TB service provision in West and Central Africa.

Project Start Date : 10/11/2021 **Project End Date :** 20/12/2021

Project ID : P21-00485 **PI Name :** Adama Marie Bangoura

ER Project Title : Support to Programme National de Lutte Antituberculeuse (PNLAT), Guinea for pilot testing of the Impact assessment framework to evaluate the impact of COVID-19 pandemic on TB service provision in West and Central Africa and use of TB costing tool.

Project Start Date : 10/11/2021 **Project End Date :** 20/12/2021

Project ID : P21-00483 **PI Name :** Dissou Affolabi

ER Project Title : Support to Programme National contre la Tuberculose (PNT), Benin for pilot testing of the Impact assessment framework to evaluate the impact of COVID-19 pandemic on TB service provision in West and Central Africa

Project Start Date : 10/11/2021 **Project End Date :** 20/12/2021

Project ID : P21-00480 **PI Name :** Thomas Scalway

ER Project Title : Design and layout of the OPT-SMC research package

Project Start Date : 08/11/2021 **Project End Date :** 31/12/2021

Project ID : P21-00479 **PI Name :** Kobto Koura

ER Project Title : The UNION - support for the use of the TB costing toolkit

Project Start Date : 08/11/2021 **Project End Date :** 31/12/2021

Project ID : P21-00447 **PI Name :** Vibol IEM

ER Project Title : ShORRT research capacity strengthening in Lao PDR

Project Start Date : 04/10/2021 **Project End Date :** 31/12/2021

Project ID : P21-00445 **PI Name :** Yaw Adusi-Poku

ER Project Title : ShORRT Research capacity strengthening in Ghana

Project Start Date : 04/10/2021 **Project End Date :** 31/12/2021

Project ID : P21-00440 **PI Name :** Vanessa Veronese

ER Project Title : Follow-up activities for the use of the framework for evaluating the impact of COVID-19 on TB control and for the WARN-TB & CARN-TB communication activities

Project Start Date : 30/09/2021 **Project End Date :** 05/11/2021

Project ID : P21-00433 **PI Name :** Schadrac Agbla

ER Project Title : ShORRT data management and analysis

Project Start Date : 01/10/2021 **Project End Date :** 31/12/2021

Project ID : P21-00429 **PI Name :** Vincent Mbassa

ER Project Title : Research capacity strengthening (CARN-TB activities) - Cameroon.

Project Start Date : 25/09/2020 **Project End Date :** 31/07/2021

Project ID : P21-00428 **PI Name :** Tatiana Polunina

ER Project Title : Russian translation of Implementation Research for Digital Technologies in TB (IR4DTB) toolkit

Project Start Date : 27/09/2021 **Project End Date :** 15/12/2021

Project ID : P21-00422 **PI Name :** Thomas Scalway

ER Project Title : French TB cost collection toolkit and finalisation of the English version.

Project Start Date : 21/09/2021 **Project End Date :** 15/12/2021

Project ID : P21-00417 **PI Name :** Vanessa Veronese

ER Project Title : Supporting the writing of WARN.TB and CARN-TB papers and for the conduct of evaluation on the impact of COVID-19 on TB control

Project Start Date : 13/09/2021 **Project End Date :** 23/09/2021

Project ID : P21-00403 **PI Name :** Valerie Louis

ER Project Title : IR4DTB French translation.

Project Start Date : 06/09/2021 **Project End Date :** 15/10/2021

Project ID : P21-00396 **PI Name :** Vanessa Veronese

ER Project Title : Strengthening monitoring and preparedness of TB services to avert disruptions caused by COVID-19 and future global health emergencies

Project Start Date : 24/08/2021 **Project End Date :** 07/09/2021

Project ID : P21-00388 **PI Name :** Adama Marie Bangoura

ER Project Title : Support for reporting OR study results in scientific papers - Guinea

Project Start Date : 13/08/2021 **Project End Date :** 20/09/2021

Project ID : P21-00387 **PI Name :** Gando Herve Gildas

ER Project Title : Research capacity strengthening (ShORRT) - CAR

Project Start Date : 05/08/2021 **Project End Date :** 31/12/2021

Project ID : P21-00372 **PI Name :** C. A. Hugues Traore

ER Project Title : Support to the WARN-TB and CARN-TB for strengthening NTP Capacities for conducting OR/IR projects

Project Start Date : 19/07/2021 **Project End Date :** 31/12/2021

Project ID : P21-00371 **PI Name :** Dieynaba Sophie N'diaye

ER Project Title : Support for the development and use of the TB costing tool research package

Project Start Date : 19/07/2021 **Project End Date :** 31/12/2021

Project ID : P21-00370 **PI Name :** Thomas Scalway

ER Project Title : Design and development of a two-page fact sheet on the CAD toolkit.

Project Start Date : 15/07/2021 **Project End Date :** 30/09/2021

Project ID : P21-00368 **PI Name :** Maria Hoole

ER Project Title : WARN-TB & CARN-TB - Short video in French.

Project Start Date : 15/07/2021 **Project End Date :** 15/08/2021

Project ID : P21-00361 **PI Name :** Ratchanekorn Wutirat

ER Project Title : IR4DTB: renewal domain name, hosting and SSL certificate

Project Start Date : 05/07/2021 **Project End Date :** 31/07/2021

Project ID : P21-00337 **PI Name :** Elhadji Konco Ciré BA

ER Project Title : Evaluation of the impact of the Good Data management practice training programme conducted in 5 west African countries

Project Start Date : 13/07/2021 **Project End Date :** 30/09/2021

Project ID : P21-00289 **PI Name :** Frederico Carroli

ER Project Title : Spanish/Portuguese translation - ShORRT readiness assessment checklist; data dictionary; interpretation services.

Project Start Date : 15/05/2021 **Project End Date :** 30/05/2021

Project ID : P21-00275 **PI Name :** Amadou Seck

ER Project Title : Support for the development of the database of REDCap for the DIAMA project

Project Start Date : 07/05/2021 **Project End Date :** 30/05/2021

Project ID : P21-00271 **PI Name :** Thomas Scalway

ER Project Title : Design and layout of the CAD toolkit

Project Start Date : 03/05/2021 **Project End Date :** 30/05/2021

Project ID : P21-00238 **PI Name :** Isidore T. Traore

ER Project Title : WARN-TB and CARN-TB- Capacity Building for conducting OR/IR projects.

Project Start Date : 07/09/2020 **Project End Date :** 31/08/2021

Project ID : P21-00237 **PI Name :** Dissou Affolabi

ER Project Title : Support to the WARN-TB & CARN-TB for scientific written communication

Project Start Date : 29/03/2021 **Project End Date :** 31/12/2021

Project ID : P21-00234 **PI Name :** Varalakshmi Elango

ER Project Title : Training on how to implement GCP principles for TB surveys

Project Start Date : 26/03/2021 **Project End Date :** 31/05/2021

Project ID : P21-00233 **PI Name :** Jennifer Kealy

ER Project Title : Training on how to implement GCP principles for TB surveys

Project Start Date : 26/03/2021 **Project End Date :** 31/05/2021

Project ID : P21-00232 **PI Name :** Dissou Affolabi

ER Project Title : Coordination of the activities of the West and Central Africa networks for TB control

Project Start Date : 29/03/2021 **Project End Date :** 31/12/2021

Project ID : P21-00228 **PI Name :** Amadou Seck

ER Project Title : ShORRT research package: support for implementing and supporting data collection

Project Start Date : 25/03/2021 **Project End Date :** 25/12/2021

Project ID : P21-00209 **PI Name :** Thomas Scalway

ER Project Title : Situation analysis concerning surveillance and arboviral diseases control in West Africa - this is in conjunction with PO202465012 which was closed

Project Start Date : 10/03/2021 **Project End Date :** 30/06/2021

Project ID : P21-00208 **PI Name :** James Kamanzi

ER Project Title : Research capacity strenghtening (ShORRT), Rwanda.

Project Start Date : 03/03/2021 **Project End Date :** 30/11/2021

Project ID : P21-00207 **PI Name :** Dissou Affolabi

ER Project Title : Implementation of aDSM in West and Central Africa and meeting of the WARN_TB and CARN-TB Networks

Project Start Date : 01/03/2021 **Project End Date :** 26/03/2021

Project ID : P20-00155 **PI Name :** Sarah Galbraith-Emami

ER Project Title : Technical editing of the guidance for ensuring good clinical and data management practices for national TB surveys

Project Start Date : 28/12/2020 **Project End Date :** 10/01/2021

Project ID : P21-00204 **PI Name :** Adama Marie Bangoura

ER Project Title : Research capacity strengthening (ShORRT) - Guinea

Project Start Date : 09/03/2021 **Project End Date :** 30/11/2021

Project ID : P21-00202 **PI Name :** Adjima Combary

ER Project Title : Research capacity strengthening (ShORRT) - Burkina Faso

Project Start Date : 08/03/2021 **Project End Date :** 30/11/2021

Project ID : P21-00201 **PI Name :** Mohammed Fall Dogo

ER Project Title : Research capacity strenghtening (ShORRT) - TOGO

Project Start Date : 08/03/2021 **Project End Date :** 30/11/2021

Project ID : P21-00189 **PI Name :** Michel KASWA KAYOMO

ER Project Title : ShORRT: All-oral shorter treatment regimens for multidrug-and rifampicin-resistant tuberculosis (MDR/RR-TB): Evaluating their effectiveness, safety and impact on the quality of life of patients in the Democratic Republic of the Congo

Project Start Date : 15/02/2021 **Project End Date :** 30/11/2021

Project ID : P21-00190 **PI Name :** Dissou Affolabi

ER Project Title : ShORRT: All-oral shorter treatment regimens for multidrug-and rifampicin-resistant tuberculosis (MDR/RR-TB): Evaluating their effectiveness, safety and impact on the quality of life of patients in Benin

Project Start Date : 15/02/2021 **Project End Date :** 30/11/2021

Project ID : P21-00180 **PI Name :** Adebola Lawanson

ER Project Title : ShORRT: the Bedaquiline-based all-oral Shorter Treatment regimen for DR-TB patients (BESTREAM) study: a modified approach

Project Start Date : 20/02/2021 **Project End Date :** 19/02/2022

Project ID : P21-00174 **PI Name :** Valérie R. Louis

ER Project Title : French translation of reserch for TB documents

Project Start Date : 29/01/2021 **Project End Date :** 15/03/2021

Project ID : P21-00171 **PI Name :** Debora Pedrazzoli

ER Project Title : To finalise the development of generic tools (protocol, data collection tools, study procedures) for enhancing the conduct of implementation TB research led by National TB programmes aiming at implementing MDR/RR-TB.

Project Start Date : 25/01/2021 **Project End Date :** 24/07/2021

Project ID : P21-00173 **PI Name :** Vanessa Veronese

ER Project Title : To finalise the development of a model implementation research frameworks for digital innovations using the already existing version of the IR toolkit

Project Start Date : 27/01/2021 **Project End Date :** 26/07/2021

Project ID : C00006 **PI Name :** Mao Tan Eang

ER Project Title : Research capacity strengthening for improving MDR-TB treatment and care - Cambodia

Project Start Date : 03/02/2020 **Project End Date :** 30/11/2020

ER Country Links

Country:	São Tomé and Principe	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Rwanda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Niger	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Gambia, The	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Angola	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Senegal	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Nigeria	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Chad	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Togo	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Burkina Faso	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Sierra Leone	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Liberia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Equatorial Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Guinea-Bissau	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Cameroon	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Cabo Verde	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Benin	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Central African Republic	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Mali	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Congo, Dem. Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Burundi	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Congo, Rep.	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mauritania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income

Country:	Côte d'Ivoire	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Guinea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ghana	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Gabon	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Zimbabwe	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mozambique	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Tanzania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Malawi	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Ethiopia	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	South Africa	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Lesotho	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Uganda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Namibia	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Zambia	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	South Sudan	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Kenya	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Eritrea	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Botswana	**WHO Region :**	AFRO	**World Bank : Income Group**	Upper middle income
Country:	Guatemala	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Peru	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Bolivia	**WHO Region :**	AMRO	**World Bank : Income Group**	Lower middle income
Country:	Mexico	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Ecuador	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Nicaragua	**WHO Region :**	AMRO	**World Bank : Income Group**	Lower middle income
Country:	Colombia	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Haiti	**WHO Region :**	AMRO	**World Bank : Income Group**	Low income
Country:	Argentina	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Sudan	**WHO Region :**	EMRO	**World Bank : Income Group**	Low income
Country:	Pakistan	**WHO Region :**	EMRO	**World Bank : Income Group**	Lower middle income
Country:	Djibouti	**WHO Region :**	EMRO	**World Bank : Income Group**	Lower middle income
Country:	Somalia	**WHO Region :**	EMRO	**World Bank : Income Group**	Low income
Country:	Moldova	**WHO Region :**	EURO	**World Bank : Income Group**	Lower middle income

Country:	Ukraine	**WHO Region :**	EURO	**World Bank : Income Group**	Lower middle income
Country:	Armenia	**WHO Region :**	EURO	**World Bank : Income Group**	Upper middle income
Country:	Georgia	**WHO Region :**	EURO	**World Bank : Income Group**	Upper middle income
Country:	Uzbekistan	**WHO Region :**	EURO	**World Bank : Income Group**	Lower middle income
Country:	China	**WHO Region :**	WPRO	**World Bank : Income Group**	Upper middle income
Country:	Vietnam	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income
Country:	Lao PDR	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income
Country:	Cambodia	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income
Country:	Papua New Guinea	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income
Country:	Mongolia	**WHO Region :**	WPRO	**World Bank : Income Group**	Lower middle income

Expected Result: 1.2.8

Title: Digital solutions for improved public health

Strategic Work Area: Research for implementation **Workstream:** Research for delivery and access

ER type:	New	**Funding type:**	UD and DF
Start date:	01/01/2026	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	New ER, in planning stage
WHO region:	Global		
Partners:	Disease control programmes and research institutions in LMIC		
Diseases:	Epidemics and outbreaks;Control and elimination of diseases of poverty;Climate change's impact on health;Resistance to treatment and control agents		
Review mechanism:	Scientific working group and other ad-hoc or collaboration-based review systems as appropriate		

ER manager: Vanessa Veronese
Team: Vanessa Veronese
Number of people working on projects: 1

FENSA clearance obtained for all Non-State Actors? No
Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	No	Use resources:	No
Align goals:	No	Address knowledge gaps:	No
Integrate mandates:	No	Build strengths:	No
Reduce burden:	No	Foster networking:	No
Increase visibility:	No		

TDR partnership criteria indicators

Objectives aligned:	No
Roles complimentary:	No
Coordination transparent:	No
Visibility:	No

Objectives and results chain

Approach to ensure uptake:	Involvement of different WHO headquarters, regional and country departments, key stakeholders such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, NGOs and control programmes; capacity built at country level.
Up-take/Use Indicator:	Evidence taken into consideration in treatment and normative guidelines
Gender and geographic equity:	For all activities, we try to ensure parity across male/female representation and participation. For geographic equity, we will aim to distribute our activities across the 6 WHO regions.
Publication plan:	Peer review publications, presentation at international congress, dissemination in-country including policy briefs

Up-take/use indicator target date:	31/12/2027

Sustainable Development Goals

Good Health and Well-being;Reduced Inequality;Climate Action

Concept and approach

Rationale:	Implementation research has a key role to play in supporting the piloting and scale up of new technological innovations for health. Digital technologies offer new ways to tackle persistent public health challenges, to improve the reach and efficiency of health services, and/or the judicious use of public resources. However, challenges related to implementation – often conditioned by local factors and therefore context-specific – play an important role in determining how the introduction, uptake and scale-up of digital innovations will play out in different settings. IR therefore offers a systematic approach to investigating how innovations such as digital technologies can be effectively and equitably implemented and scaled to maximize impact, while circumventing barriers to access among hard to reach and/or marginalized populations
Design and methodology:	This ER will adopt the following approaches: 1. Utilizing regional networks of disease control programmes: existing disease control programme networks will be used as a platform for i) the conduct of regional activities/workshops which are based on the research priorities and capacity building needs of partners, and ii) sharing of innovative solutions and challenges that can enhance national responses to infectious diseases (in collaboration with relevant WHO programmes and departments) 2. Training and capacity building for IR: Activities that can address identified gaps and capacity building needs will be conducted to build local capacity and provide mentorship for the conduct of IR projects that generate data on the implementation and scale-up of digital solutions across the four global health challenges. 3. Technical and financial support for the introduction and scale up of digital solutions and evaluating and documenting the effectiveness, feasibility, and acceptability through IR 4. Development of research packages/toolkits to 'democratise' the scientific process and enable users to build skills and self-sufficiency in IR as related to digital solutions 5. Collaborative approach with involving WHO departments across the 3 levels, key funders for infectious diseases and key national and international NGOs/researchers.
Approach to ensure quality:	- Careful interactive development of the workplan of the full project and risk assessment - Careful selection of key partners - Close collaboration with National Disease control programmes and relevant WHO deparments and close monitoring of progress

ER Objectives

ERObj-0069 : To support the generation of evidence on digital health technologies that can inform the introduction, implementation and scale up of these tools across TDR strategic health priorities by national disease control programmes

Biennium Budget

ER Biennium Risks

ER Biennium Outputs

ER Biennium Outcomes

Biennium Budget

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0348: Insufficient engagement of national disease control programmes

Actions To Mitigate Risk: Development of communication strategy to build and maintain ongoing interaction of partners

Mitigation Status:

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0428: Completion of two IR projects initiated in 2024-25 on the use of digital technologies. At least one new IR project on the use of digital technologies initiated (three new studies initiated for US$ 50 million scenario)

Output Indicator: Local evidence generated on the use of digital tools across the four global health challenges

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0142: Guidelines, policy decisions and or practice on digital tools informed by TDR outputs

Progress made towards outcome :

ER Project Links

ER Country Links

Expected Result: 1.3.3

Title: Population health vulnerabilities to VBDs: Increasing resilience under climate change conditions (Operationalizing a One Health Approach for the Control of VBDs in the Context of Climate Change)

Strategic Work Area: Research for implementation **Workstream:** Research for policy

ER type:	Evolved	**Funding type:**	UD
Start date:	01/01/2020	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	
WHO region:	AFRO		

Partners: WHO-CCH, WHO-AFRO, WHO-NTD, Makerere University, University of Nairobi, Africa One Health University Network (AFROHUN), Ministry of Health-Uganda, Daktari NGO Spain, Institute Pasteur Dakar (IPD), Nigerian Institute of Medical Research (NIMR),

Diseases: Malaria;Rift valley fever;Schistosomiasis;Tuberculosis;Trypanosomiasis;Vector-borne diseases

Review mechanism: Through SWG, dedicated ad hoc group of external experts

ER manager: Corinne Simone Collette MERLE

Team: 1 Professional staff (P5), one consultant (0.4FTE) and 1 admin staff (Michelle Villasol)

Number of people working on projects: 46

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	No	Build strengths:	Yes
Reduce burden:	No	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	The objectives of this programme are aligned with TDR strategy
Roles complimentary:	Yes	TDR partners add complementary value and contribution to achieving TDR strategy.
Coordination transparent:	Yes	Coordination with partners is above board and transparent.
Visibility:	Yes	Partners share similar goals as TDR, thus expanding TDR's visibility in the field.

Objectives and results chain

Approach to ensure uptake: TDR and collaborating research institutions will conduct networking and policy-advice activities to promote the products generated from the research programme:

a) Translation and dissemination of the scientific knowledge, evidence and adaptation tools and strategies generated through partnership and networking (south-south and north-south). Project recipients will facilitate the transfer of research findings to various user groups including academics, policy-makers and the public through a range of means including via TDR, projects and partner websites. They will present the results in relevant fora and national dialogues and publish the results in scientific journals from the various disciplines of the investigators, as well as through interdisciplinary publication channels. TDR and collaborators will also produce scientific synthesis and research summaries on the research results;

b) Promotion of research-to-policy uptake of the research results by engaging in researcher, practitioner and policy dialogues at local and national levels through research-to-policy dialogue, policy documents, media, involving policy-makers in research meetings/workshops, implementation and evaluation of the projects, strategy events such as Community of Practice meetings and stakeholder consultations;

c) Enhancement of public awareness of climate change adaptation options by communicating research findings to communities, health officials and policy-makers through various means (including publications, feedback seminars, dissemination of scientific results to the general public, popularization of research findings by the media in collaboration with research institutions using films and other forms of documentation);

d) Promotion of intersectoral collaboration by integration of representatives of other sectors in the transdisciplinary research activities and in the research meeting process; and

e) Undertake monitoring and evaluation activities (internal and external M&E) to ensure that expected outputs and outcomes are achieved in line with project objectives. In collaboration with the researchers, TDR's communications team and IDRC, the results of the programme will be widely disseminated using various means.

The overall performance of the programme will be monitored and evaluated by TDR. In addition to the annual report, TDR activities are reported in the TDR newsletter and on its website.

Up-take/Use Indicator: 1. Increased national, regional and international attention triggered through research results; 2. Use of tools by African countries for increased resilience to VBD risks under climate change conditions; 3. Number and significance of events where decision-making by public health officials is a focus; 4. Number of reports, workshops, meetings, national fora and media popularization produced/organized; and 5. Evidence of impact of capacity built in research institutions and communities

Gender and geographic equity: All proposals follow gender-sensitive approaches, with all research activities having an explicit gender perspective/framework and taking into account possible gender differentials in the epidemiology and transmission of VBDs and will, if possible and appropriate, define gender-sensitive approaches to the community-based adaptation strategies to reduce population health vulnerabilities. This perspective is further stressed in the call for proposals and during proposed training and workshops where the participation of women researchers is actively encouraged. Best approaches to engage women in programmes and activities aimed at climate change adaptation for health and reduced risk for VBDs will also be addressed.

The ration male to female is 3.18

Publication plan: 6 posters presented at the One Health Conference, publications in preparation

Up-take/use indicator target date: 31/12/2027

Sustainable Development Goals

Good Health and Well-being;Reduced Inequality;Climate Action;Partnerships to achieve the Goal

Concept and approach

Rationale:

This Expected Result (ER) is about generating evidence to enable the development of innovative strategies to reduce VBD-related human vulnerability and to increase resilience of African populations to VBD-related health threats with using a One-Health approach. It aims to broaden and extend knowledge, research capacity, collaboration and policy advice products that can be used throughout Africa and other regions. Operationalizing One Health combines well-documented, evidence-based principles and practices that specifically address the problem of population's vulnerability. It is widely agreed among international development agencies, medical and public health scientists that One Health can contribute significantly to global health in this regard.

In July 2022, a joint call of proposal was launched by TDR in collaboration with WHO Neglected disease department and the focal persons for climate & Health and for One-Health approach of the regional office of the WHO for Africa for consortiums of collaborating institutions in Africa to address One Health implementation research priorities for VBDs in the context of climate change.

Design and methodology:	In July 2022, a joint call of proposal was launched by TDR in collaboration with WHO Neglected disease department and the focal persons for climate & Health and for One-Health approach of the regional office of the WHO for Africa for consortiums of collaborating institutions in Africa to address One Health implementation research priorities for VBDs in the context of climate change.
Approach to ensure quality:	TDR's unit on Research for Implementation is best positioned for research and capacity building toward operationalizing an integrated, multisectoral and holistic One Health approach for the control of VBDs in the context of climate change. Through TDR's convening and facilitation role, various partners and stakeholders from different sectors are brought together for the One Health approach which is envisioned as a novel, essential policy and management tool for the control of VBDs at a time of changing environment/climate conditions in Africa.

ER Objectives

ERObj-0023 : To operationalize and implement a One Health approach, embedded into the health and environment strategic alliance of country task teams, to enable African countries to manage the impact of VBDs in the context of climate change

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 400000	USD 600000
Designated funds	USD 500000	USD 600000
Total	USD 900000	USD 1200000

Planned Budget

Undesignated funds	USD 400000
Designated funds	USD 500000
Total	USD 900000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0275: Health researchers and other stakeholders may encounter challenges in working under transdisciplinary circumstances (e.g. across different disciplines, knowledge sources and other multisectoral partners).

Actions To Mitigate Risk: The transdisciplinary approach will be promoted and advocated for from the onset as an essential aspect required of the proposals and throughout the projects. The online training course will also supplement the implementation of the research projects.

Mitigation Status: On Track

Biennium: 2024-2025

ERRisk - 0276: Knowledge translation outcomes may usually not be under the control or influence of the projects, particularly those in the decision- and policy-making positions.

Actions To Mitigate Risk: For this research programme, stakeholders, including from the affected communities and policy/decision-makers, will be engaged from the very beginning at the inception and during the course and completion of the research projects to ensure their active involvement in conducting and reporting on the research on the research with the expectation that the results will be utilized as effectively as possible. It is anticipated that the periodic review of successes and failures of the projects and of the implementation of the research programme will allow timely remediation to potential problems that might occur during the course of the implementation of the projects.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0371: scientific publications of 4 research results for at least 4 African research consortia and launch of 3 new research projects. Under the 50 million scenario, two more research projects could be conducted.

Output Indicator: Conduct of One Health research projects for the control of VBDs in the context of climate change

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: Fourteen projects were received and reviewed by a panel composed by external experts and TDR team. In November 2022, four research proposals were selected and initiated to address One Health implementation research priorities for Vector borne diseases (VBDs) in the context of climate change in Africa.

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0112: Scaled-up application of the One Health Transdisciplinary Ecosytem Approach for Vector Borne Diseases and other infectious diseases in the context of climate change

Progress made towards outcome : This is an ongoing process.

Project 1: Strengthening surveillance of leishmaniasis in Uganda and Kenya through a collaborative multisectoral One Health capacity building approach in endemic foci (Uganda and Kenya)

This study is conducted by the Makerere University, the University of Nairobi, Africa One Health University Network (AFROHUN) Uganda and the Kenya Medical Research Institute (KEMRI). This study aims to identify leishmaniasis hotspots and decipher the risks

and climate factors associated with the disease within endemic foci using retrospective passive and active screening data in humans and animals, as well as climate data.

Project 2: Enhancing One Health surveillance and control of vector-borne diseases related to climate change in the West Africa region (Senegal and Nigeria)

This study is conducted by the Institute Pasteur Dakar (IPD) and the Nigerian Institute of Medical Research (NIMR). The study aims to jointly undertake mixed retrospective-prospective research to determine the effect of climate change on mosquito borne disease emergence, outbreaks and spread in Senegal and Nigeria and establish a process for the systematic translation of strategies for prevention, preparedness, and response, which can then be extended to other parts of West Africa.

Project 3: One Health approach to controlling and understanding the dynamics of fascioliasis and schistosomiasis in the context of climate change (Tanzania and Rwanda)

This study is conducted by the Kilimanjaro Clinical Research Institute (KCRI), the Tanzania Plant Health and Pesticides Authority (TPHPA) and the University of Rwanda. The aim of this study is to co-develop comprehensive One Health approaches in Tanzania and Rwanda to tackle the complex transmission-enabling environment of the snail-borne trematodiases around fresh water-sources.

Project 4: Application of a One Health approach for reducing the burden of vector-borne diseases in vulnerable communities in the context of climate change (South Africa and Rwanda)

This study is conducted by the University of Kwazulu-Natal and the University of Global Health Equity. The aim of this study is to develop metrics, a One Health implementation guide and a collaborative platform for the evaluation of One Health-based schistosomiasis prevention and control projects. The study builds on previous models and will develop novel One Health operationalization metrics relevant for the prevention and control of schistosomiasis in the context of climate change among vulnerable communities. The findings of this exercise will be applicable to a broader range of One Health and Vector borne Disease settings. The collaborative platform will strengthen partnerships among African scientists and research institutions in the field of One Health for the prevention and control of VBDs in the context of climate change among vulnerable communities in Africa.

Six posters/oral presentations were accepted to share research results at the One Health World Conference (Cape Town, 19-23 Sept 2024). corresponding manuscripts at at a drafting stage and should be submited by the end of 2024

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Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 300000	USD 600000
Designated funds	USD 400000	USD 600000
Total	USD 700000	USD 1200000

Planned Budget

Undesignated funds	USD 300000
Designated funds	USD 400000
Total	USD 700000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0337: Knowledge translation outcomes may usually not be under the control or influence of the projects, particularly those in the decision- and policy-making positions.

Actions To Mitigate Risk: For this research programme, stakeholders, including from the affected communities and policy/decision-makers, will be engaged from the very beginning at the inception and during the course and completion of the research projects to ensure their active involvement in conducting and reporting on the research on the research with the expectation that the results will be utilized as effectively as possible. It is anticipated that the periodic review of successes and failures of the projects and of the implementation of the research programme will allow timely remediation to potential problems that might occur during the course of the implementation of the projects.

Mitigation Status: On Track

Biennium: 2026-2027

ERRisk - 0338: Health researchers and other stakeholders may encounter challenges in working under transdisciplinary circumstances (e.g. across different disciplines, knowledge sources and other multisectoral partners).

Actions To Mitigate Risk: The transdisciplinary approach will be promoted and advocated for from the onset as an essential aspect required of the proposals and throughout the projects. The online training course will also supplement the implementation of the research projects.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0420: Evidence generated

Output Indicator: Conduct of One Health research projects for the control of VBDs in the context of climate change

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0144: Guidance, policy decisions and or practice on One Health approach for the control of vector-borne diseases in the context of climate change informed by TDR outputs

Progress made towards outcome :

ER Project Links

Project ID : P24-01373 **PI Name :** Susanna Borroto

ER Project Title : ADR to AM to support the TDR side-event on "The impact of climate change on vector control tools

Project Start Date : 25/07/2024 **Project End Date :** 30/09/2024

Project ID : P24-01368 **PI Name :** Thomas Scalway

ER Project Title : Development of Communication materials in relation with the TDR activities on Innovative Vector Control Technologies

Project Start Date : 10/09/2024 **Project End Date :** 31/10/2015

Project ID : P24-01330 **PI Name :** Chris Rixson

ER Project Title : Maintenance of the Global Atlas of Medical Entomology Schooling (GAMES) on the Global Vector Hub and consultancy of the use of GBIF data on vectors into policies.

Project Start Date : 24/06/2024 **Project End Date :** 31/10/2025

Project ID : P22-00836 **PI Name :** Moses Chimbari

ER Project Title : Application of One Health approach for reducing the burden of vector-borne diseases in vulnerable communities in the context of climate change

Project Start Date : 01/10/2022 **Project End Date :** 31/12/2023

Project ID : P22-00835 **PI Name :** Cheikh Talla

ER Project Title : Enhancing One-health Surveillance and Control of Vector-borne Diseases related to Climate Change in the West Africa region

Project Start Date : 01/09/2022 **Project End Date :** 31/12/2023

Project ID : P22-00834 **PI Name :** AbdulHamid Lukambagire

ER Project Title : One health approach to control and understanding the dynamics of fascioliasis and schistosomiasis in the context of climate change in Rwanda and Tanzania

Project Start Date : 01/10/2022 **Project End Date :** 31/12/2023

Project ID : P22-00833 **PI Name :** Charles Drago Kato

ER Project Title : Strengthening Surveillance of Leishmaniasis in Uganda and Kenya through a Collaborative Multisectoral One Health Capacity Building Approach in Endemic foci.

Project Start Date : 01/09/2022 **Project End Date :** 31/12/2023

Project ID : P22-00751 **PI Name :** Nadisha Sidhu

ER Project Title : Consultant contract to support One Health and Climate Change activities

Project Start Date : 15/09/2022 **Project End Date :** 31/12/2023

Project ID : P21-00360 **PI Name :** Nabil Haddad

ER Project Title : Consultant for landscape analysis, joint SDF on VBDs and pockets of poverty

Project Start Date : 01/07/2021 **Project End Date :** 30/11/2021

Project ID : P21-00277 **PI Name :** Paul Gwakisa

ER Project Title : Provide technical support and expertise for piloting the Draft Plan for Operationalizing One Health.

Project Start Date : 01/09/2020 **Project End Date :** 28/02/2022

Project ID : P21-00278 **PI Name :** Moses John Chimbari

ER Project Title : Provide technical support and expertise for piloting the Draft Plan for Operationalizing One Health.

Project Start Date : 01/09/2020 **Project End Date :** 31/03/2022

Project ID : P21-00279 **PI Name :** Brama Koné

ER Project Title : Provide technical support and expertise for piloting the Draft Plan for Operationalizing One Health

Project Start Date : 01/09/2020 **Project End Date :** 28/02/2022

Project ID : P21-00280 **PI Name :** Benson B. A. Estambale

ER Project Title : Provide technical support and expertise for piloting the Draft Plan for Operationalizing One Health.

Project Start Date : 01/09/2020 **Project End Date :** 28/02/2022

Project ID : C00038 **PI Name :** Bruce Wilcox

ER Project Title : (ER 1.3.3) Technical support in the delivery of products relevant to Operationalizing One Health for Vector Borne Diseases and Climate Change

Project Start Date : 01/06/2020 **Project End Date :** 28/02/2022

ER Country Links

Country:	Côte d'Ivoire	**WHO Region :**	AFRO	**World Bank Income Group :**	Lower middle income
Country:	Kenya	**WHO Region :**	AFRO	**World Bank Income Group :**	Lower middle income
Country:	South Africa	**WHO Region :**	AFRO	**World Bank Income Group :**	Upper middle income
Country:	Tanzania	**WHO Region :**	AFRO	**World Bank Income Group :**	Low income
Country:	Senegal	**WHO Region :**	AFRO	**World Bank Income Group :**	Lower middle income
Country:	Nigeria	**WHO Region :**	AFRO	**World Bank Income Group :**	Lower middle income

Country:	Rwanda	**WHO Region :**	AFRO	**World Bank : Income Group**	Low income
Country:	Tanzania	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income

Expected Result: 1.3.10

Title: Urban health interventions for the prevention and control of vector-borne and other infectious diseases of poverty

Strategic Work Area: Research for implementation **Workstream:** Research for delivery and access

ER type:	Continuing	**Funding type:**	UD
Start date:	01/01/2020	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	Previous project under this expected result was finalized last year and following SWG 2019 recommendations, in 2020 a new call for proposals was launched.

WHO region: Global

Partners: Research teams (icddr,b and ICMR) in Bangladesh and India respectively who have worked with Ministry of Health and Family Welfare, NGOs,iNGOs, academic /research institutions, civil society organisations, UN organisations,World Bank and local communities.

Diseases: Vector-borne diseases;Not Disease-Specific

Review mechanism: Scientific working group and ad hoc expert reviewers

ER manager: Mariam OTMANI DEL BARRIO

Team: Mariam Otmani

Number of people working on projects: 12

FENSA clearance obtained for all Non-State Actors? Yes

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	
Roles complimentary:	Yes	The complementary roles of the partners have been established.
Coordination transparent:	Yes	
Visibility:	Yes	Visibility of TDR has increased due to dissemination activities with national and international stakeholders (e.g: MOH, DOHS, academia, UN organisations, civil societies and local communities).

Objectives and results chain

Approach to ensure uptake: Evidence generated will also inform the development of information briefs for policy and practice. Local decision-makers will be part of the community engagement strategy in the implementation phase. In addition to oversight by an expert committee, quality assurance mechanisms include fact checking, peer review of concept paper, technical and copy editing.

Up-take/Use Indicator: Increased national, regional and international attention triggered through research results; number of reports and publications generated; number of meetings with decision-makers at local level.

Gender and geographic equity:	Sex parity and geographic diversity will be ensured when establishing external review panels, convening meetings of experts, issuing contracts, and in general within all of our collaborations. Intersectional gender analysis will be applied and tools facilitated by the TDR team for local researchers to ensure disaggregated data.
Publication plan:	From the systematic reviews, 1 manuscript entitled 'Effective community-based interventions to prevent and control infectious diseases in urban informal settlements in low-and middle-income countries: a systematic review' has been accepted for publication in September 2024 in 'Systematic Reviews'. 5 articles have already been published in peer reviewed journals in 2022 and 2023.
Up-take/use indicator target date:	31/12/2025

Sustainable Development Goals

Gender Equality;Reduced Inequality;Sustainable Cities and Communities

Concept and approach

Rationale:

Urban health is influenced by several factors, including governance, population features, urban planning and socioeconomic development and health services, among others, which in turn have major implications for social and environmental determinants of health. Vector-borne diseases, whose agents (parasites, viruses etc) are transmitted by insect vectors such as mosquitoes, flies and triatomine bugs, occur in more than 100 countries worldwide and affect about half of the world's population. The incidence and distribution of infectious diseases is consequently influenced by social, demographic and environmental factors that interact under a changing climate and affect pathogen transmission patterns, especially increasing risk of infection in urban areas.

Accurate, consistent and evidence-based interventions for prevention and control of infectious diseases of poverty in urban settings are urgently needed to implement cost- effective public health policy and to promote inclusive, equitable and sustainable urban health systems and services. Understanding the social dynamics, including the gender dynamics that take place in the urban context, is needed to address bottlenecks in the implementation of effective interventions and strategies and to better understand the differentiated impacts of infectious diseases on various population subgroups and how gender intersects with other social stratifiers to better understand different experience of disease.

TDR has a history of supporting research on the impact of gender dynamics and inequalities that influence prevention and control efforts of infectious diseases of poverty in LMICs, including in urban settings. In response to TDR's call for proposals, the two multidisciplinary research teams from Bangladesh (Health System and Population Studies Division (HSPSD), (icddr,b) and India (ICMR-Regional Medical Research Centre, Bhubaneswar) that conducted literature reviews in 2022/2023 have identified a number of research gaps that will in turn inform the research priority setting exercise being conducted in 2024, which informs TDR's research agenda on urban health, infectious disease and gender research, including in COVID-19 and post-COVID-19 scenarios to the extent possible.

Design and methodology:

This ER is designed to conduct urban health research incorporating gender analysis with an intersectional lens, within infectious diseases of poverty using concrete qualitative and quantitative research methodologies. All the research studies are aligned to the TDR's strategy on intersectional gender research which focuses on strengthening research capacities on intersectional gender analysis in research on infectious diseases, generating evidence on gender intersecting inequalities in access to health services, supporting intersectional gender analysis in research for implementation and promoting an inclusive infectious disease research agenda. TDR's toolkit on intersectional gender analysis in research on infectious diseases of poverty is often used as a reference during the study design process.

Approach to ensure quality:	Continuous engagement with various ministries, policy makers, relevant stakeholders (civil societies, local communities, academia, non- governmental organisations) and public health services at all stages of the research cycle/ project implementation.

ER Objectives

ERObj-0014 : To generate new knowledge and evidence generated on effectiveness of interventions to prevent and control vector-borne diseases by addressing socioeconomic determinants in health in urban settings

ERObj-0059 : 2024/2025 To generate new knowledge and evidence to prevent and control vector-borne diseases by addressing socioeconomic determinants in health in urban settings

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 150000	USD 250000
Designated funds	USD 100000	USD 200000
Total	USD 250000	USD 450000

Planned Budget

Undesignated funds	USD 150000
Designated funds	USD 100000
Total	USD 250000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0272: Weak capacities at country level to effectively apply an intersectional gender approach in the research processes.

Actions To Mitigate Risk: Ensuring interdisciplinary teams, with social scientists and biomedical scientists and entomologists

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0341: Number of research studies implemented following findings resulting from the systematic evidence reviews conducted in the previous biennium

Output Indicator: Evidence informed policy and practice at urban level.

Output Target Date: 30/11/2025

Output Progress Status: On Track

Output Progress Description: This output has not started yet, it is for 24/25 and so at planning stages. By end of 2025, 2 research studies following research from systematic reviews conducted in previous biennium (3 under 50M Scenario).

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0089: Evidence generated to inform policy and practice on control of infectious diseases in urban settings in low- and middle-income countries with an intersectional gender lens

Progress made towards outcome : Both the study teams in India and Bangladesh completed the systematic reviews in 2023 and undertook various activities to disseminate the results from such reviews, including stakeholders meeting at national levels.

Following the results of the systematic reviews, we see the need to identify and prioritize research areas that address the most pressing and impactful questions in the context of urban health issues and the diverse needs of urban and peri urban populations. We are conducting a research priority setting exercise, which includes a virtual consultation with global and regional experts. The aim of this consultationis to present identified research gaps following the systematic literature reviews recently completed and identify additional research areasthat address critical gaps for the delivery of effective urban health interventions and strategies with an intersectional gender perspective. Furthermore, the exercise will consider the principles of implementation science to ensure that the identified research priorities can be effectively translated into actionable policies and effective delivery of interventions, particularly in emergency and epidemic contexts/scenarios.

We expect to achieve two outcomes from this exercise:

1. A consensus-driven list of research priorities through the systematic identification of implementation research gaps in the field of urban health and infectious diseases from an intersectional gender lens.

2. A comprehensive Research Agenda to inform TDR's subsequent call for research proposals and strategic pathway in the area of urban health, gender and implementation research. The primary research funded through this call will contribute to a deeper understanding of the application of an intersectional gender approach in infectious disease research and address evidence gaps in urban health, ultimately leading to more accessible and equitable health interventions and policies. This research will be critical in developing data-driven, context-specific solutions that can be implemented in urban settings.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 125000	USD 350000

Designated funds	USD 150000	USD 400000
Total	USD 275000	USD 750000

Planned Budget

Undesignated funds	USD 125000
Designated funds	USD 150000
Total	USD 275000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0341: Weak capacities at country level to effectively apply an intersectional gender approach in the research processes.

Actions To Mitigate Risk: Ensuring interdisciplinary teams, with social scientists and biomedical scientists and entomologists

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0421: Number of research studies implemented following findings resulting from the systematic evidence reviews conducted in the previous biennium (Target: Two research studies in urban or peri urban settings, four for the US$ 50 million scenario)

Output Indicator: Evidence generated to inform policy and practice on control of infectious diseases in urban settings in low- and middle-income countries with an intersectional gender lens.

Output Target Date: 30/11/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0145: Evidence informed policy and practice at urban level.

Progress made towards outcome :

ER Project Links

Project ID : P22-00718 **PI Name :** Chandani Kharel

ER Project Title : Consultant - Gender and infectious disease research and its operationalization in Low and Middle-Income Countries (LMICs)

Project Start Date : 15/08/2022 **Project End Date :** 15/11/2024

Project ID : P22-00706 **PI Name :** Sanghamitra Pati

ER Project Title : Workshop and dissemination activities following systematic literature reviews and related activities to understand gender related aspects in infectious disease epidemiology, prevention and control, including gender-based violence

Project Start Date : 15/07/2022 **Project End Date :** 31/01/2023

Project ID : P22-00707 **PI Name :** Sohana Shafique

ER Project Title : Workshop and dissemination activities following systematic literature reviews and related activities to understand the social determinants of health and identifying effective community-based interventions to prevent and control infectious diseases

Project Start Date : 15/07/2022 **Project End Date :** 31/10/2023

Project ID : P23-00989 **PI Name :** Sanghamitra Pati

ER Project Title : Survey activities to explore gender-dimensions of Water, Sanitation, and Hygiene, and Soil-Transmitted Helminth infection among urban poor children and pregnant women in Odisha, India

Project Start Date : 15/06/2023 **Project End Date :** 31/12/2023

Project ID : P21-00316 **PI Name :** Joanne Brown

ER Project Title : Open access - Unpredictability and risks of health systems disruptions due to the impact of climate change on vectors and vector-borne diseases

Project Start Date : **Project End Date :**

Project ID : P20-00115 **PI Name :** Sohana Shafique

ER Project Title : Understanding the social determinants of health and identifying effective community-based interventions to prevent and control infectious diseases during COVID-19 pandemic in urban informal settlements in low and middle income countries: an evidence gap a

Project Start Date : 14/01/2021 **Project End Date :** 31/03/2022

Project ID : P20-00116 **PI Name :** Sanghamitra Pati

ER Project Title : Literature reviews and research gap analysis on social determinants of urban health: how social and gender dynamics in a COVID- 19 context affect the prevention and control of infectious diseases of poverty

Project Start Date : 17/02/2021 **Project End Date :** 31/03/2022

ER Country Links

Expected Result: 1.3.12

Title: Strategies to promote gender-responsive health interventions on prevention and control of infectious diseases of poverty

Strategic Work Area: Research for implementation **Workstream:** Research for delivery and access

ER type:	Continuing	**Funding type:**	UD
Start date:	01/01/2018	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	
WHO region:	Global		
Partners:	Research teams in Bangladesh, Bhutan, Ethiopia, India, Iran, Kenya,Malawi, South Africa, Philippines, Nepal, Uganda; MOH, CSO etc WHO and other entities working on gender and public health (e.g. WHO/GER, WHO/HRP)		
Diseases:	Vector-borne diseases;Not Disease-Specific		
Review mechanism:	Scientific working group plus ad hoc review group(s) dealing with specific calls		

ER manager: Mariam OTMANI DEL BARRIO
Team: Christine Halleux
Number of people working on projects: 53

FENSA clearance obtained for all Non-State Actors? No
Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Completed
Roles complimentary:	Yes	The complementary roles of the partners have been established.
Coordination transparent:	Yes	Completed
Visibility:	Yes	Visibility of TDR has increased due to dissemination activities with national and international stakeholders (e.g: MOH, DOHS, academia, UN organisations, civil societies and local communities).Also publications in peer reviewed journal.

Objectives and results chain

Approach to ensure uptake:	Continuous engagement with various ministries, policy makers, relevant stakeholders (civil societies, local communities, academia, non- governmental organisations) and public health services at all stages of the research cycle/ project implementation.
Up-take/Use Indicator:	Consultative meetings/ dissemination workshops with ministry officials, including MoH, health departments and relevant stakeholders (civil societies, local communities, academia, non- governmental organisations).

Gender and geographic equity: Sex parity and geographic diversity will be ensured when establishing external review panels, convening meetings of experts, issuing contracts, and in general within all of our collaborations.

Publication plan: Publication of original research articles generated by research funded by TDR in peer reviewed journals. There are 14 manuscripts currently being developed within this ER which will be submitted to peer reviewed journals after clearance from WHO.

- 7 from the systematic reviews conducted on gender, climate change, AMR and infectious diseases by the research teams in India (2), Philippines (1) and South Africa (4).
- 3 from the research team from Ethiopia who conducted Implementation research on gender and intersectionality and infectious diseases.
- 1 from the research team from Bhutan and 3 from the consortium from Africa (Kenya, Malawi and South Africa) who conducted research on infectious diseases and gender and intersectionality.

A. Two research teams from Nepal and Uganda piloted in 2021 and 2022 the TDR Toolkit to incorporate intersectional gender analysis in infectious diseases of poverty, notably schistosomiasis and tuberculosis (TB) in Uganda and lymphatic filariasis (LF) and TB in Nepal. 4 original research articles have been published as a result; 2 in 2023 (1 each in first and last quarter) and 2 in 2024. They are enlisted below and citations are provided in the publication list in Annex 1.Understanding gender and its intersection with social stratifiers on prevention and care seeking behavior of lymphatic filariasis in Nepal. Published in Journal of Infectious Diseases of Poverty (IDP) in August 2023.

2. Gendered Lives, Gendered Vulnerabilities: An Intersectional Gender Analysis of Vulnerability to and Treatment of Schistosomiasis in West Nile Region, Uganda. Published in PLOS Neglected Tropical Disease in November 2023.

3. Using intersectional gender analysis to identify challenges in Tuberculosis care at four health care facilities in Uganda. Published in Journal of IDP in January 2024.

4. Intersectional gender analysis for inclusive health system in Nepal; taking Tuberculosis as a case example – Where we are and what can be done? Published in Journal of IDP in April 2024.

Up-take/use indicator target date: 31/12/2025

Sustainable Development Goals

Good Health and Well-being;Gender Equality;Reduced Inequality

Concept and approach

Rationale: Great progress has been made towards combatting infectious diseases of poverty (IDPs). However, considerable public health challenges remain, including gender and intersecting inequalities that affect health conditions associated with infectious diseases. This ER focuses on gender intersecting inequalities that influence differentials in vulnerability to, and the impact of, particular health conditions associated with infectious diseases in low- and middle-income countries. This expected result recognizes that gender norms, roles and relations influence people's susceptibility to different health conditions and they also have a bearing on people's access to and uptake of health services, and on the health outcomes they experience throughout the life-course. It also acknowledges that WHO has recently recognized the importance of being sensitive to different identities that do not necessarily fit into binary male or female sex categories. In this context, delivery and access to prevention and control approaches and products to prevent and control infectious diseases should not be one-size-fits all but instead should benefit from approaches that take into account the complex interaction of several social stratifiers, and their influence in health outcomes. There is growing recognition that gender roles, gender identity, gender relations, apart from institutionalized gender inequality influence the way in which an implementation strategy works (e.g. for whom, how and why). There is also emerging evidence that programmes may operate differently within and across sexes, gender identities and other intersectional characteristics under different circumstances and contexts. Research should inform implementation strategies to avoid ignoring gender-related dynamics that influence if and how an implementation strategy works. Therefore scientists, including those focusing on research for implementation, would benefit from adequately considering sex and gender intersecting social dimensions within their research programmes, by

strengthening both the practice and science of implementation, and by contributing to improved health outcomes and reduction of gender and health inequalities.

Design and methodology:

This ER is designed to conduct implementation research incorporating a gender analysis with an intersectional lens, fo diseases of poverty using concrete qualitative and quantitative research methodologies. All the research studies are a intersectional gender research strategy which focuses on strengthening research capacities on intersectional gender infectious diseases, generating evidence on gender and intersecting inequalities in access to health services, supporti analysis in research for implementation and promoting an inclusive infectious disease research agenda. TDR's toolkit analysis in research on infectious diseases of poverty is often used as a reference and methodological guidance mater and implementation process.

Approach to ensure quality:

Oversight by expert committee and quality assurance through fact checking, peer review of documentation, technical and copy editing.

ER Objectives

ERObj-0017 : Strengthen research capacities and provide innovative tools to generate evidence that informs the design and implementation of gender responsive health interventions to control and prevent infectious diseases of poverty.

ERObj-0050 : from 2021: Utilize research capacities and innovative tools built to generate evidence that informs the design and implementation of gender responsive health interventions to control and prevent infectious diseases of poverty.

ERObj-0060 : 2024/2025 Strengthen implementation research capacities that incorporate intersectional gender analyses within their projects and generate evidence that informs the design and implementation of gender responsive health interventions to control and prevent infectious diseases of poverty with an intersectional gender lens.

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 300000	USD 500000
Designated funds	USD 100000	USD 200000
Total	USD 400000	USD 700000

Planned Budget

Undesignated funds	USD 362000
Designated funds	USD 100000
Total	USD 462000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0273: Knowledge translation outcomes on gender equality are usually beyond the control or influence of projects. Research teams working in silos with limited collaboration between biomedical and social science communities.

Actions To Mitigate Risk: Continuous engagement with relevant stakeholders and policy makers to make evidence informed decisions based on evidence generated from the research conducted by the research teams adopting an intersectional gender lens.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0342: Implementation Research Studies and Research uptake initiatives

Output Indicator: New knowledge & evidence generated from intersectional gender analyses in IR to address marginalization & disadvantages in access to health systems and services, health impacts, prevention/control of IDPs.

Output Target Date: 31/12/2026

Output Progress Status: On Track

Output Progress Description: This activity is ongoing for the 24/25 biennium and beyond. By the end of 2025 two to four research studies and two to four research uptake initiatives (6 under 50M Scenario).In 2024, of 2 IR projects on gender, intersectionality and infectious diseases, 1 project in Ethiopia has been completed whereas data collection has been completed with data analysis ongoing in the second project in Bangladesh. 3 research teams from India, Philippines and South Africa have completed systematic reviews on gender, intersectionality, climate change and anti-microbial resistance (AMR).

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0090: Strengthened implementation research capacities that incorporate intersectional gender analyses within their projects and generated evidence to strengthen equitable health systems and inform the design and implementation of gender responsive health interventions to control and prevent infectious diseases of poverty with an intersectional gender lens.

Progress made towards outcome : This is ongoing for the 24/25 biennium and into the 26/27 biennium.

Capacity strengthening activities included embedded research training through the supported projects and provision of online courses for increased knowledge on the concepts of gender and intersectionality:

As integration of sex and gender considerations into health research is critical to achieving gender equality and health equity, TDR in collaboration with the UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP) developed and launched a ‘Sex and gender in health research’ virtual resource hub. This resource hub is a curated repository of resources to strengthen researchers’ capacity to consider sex, gender, and their intersections with other axes of inequality and discrimination throughout the research cascade, from conception to design, data collection, analysis, interpretation and reporting. This inventory includes toolkits, guides, research articles, training and audio-visual materials that are readily available in English, French, Portuguese and Spanish. The resources are categorized by type of resource, intended audience, topics covered and creators/developers. It is available online at

https://genderinhealthresearch.org/

In June 2022, TDR launched a new module of the Massive Open Online Course (MOOC) on Incorporating an intersectional gender perspective in implementation research. The content was developed in collaboration with TDR's research capacity strengthening unit. Till date, the course has been offered X times and X have enrolled in the course. This course is facilitated by the University of Ghana.

A module on gender entitled 'Integrating an intersectional gender lens in Implementation Research' gender for TDR's implementation Research Toolkit' was updated in the second edition of the IR toolkit in collaboration with TDR's research capacity strengthening unit in 2022. It is available online at https://www.adphealth.org/irtoolkit/intersectional-gender-lens/.

A. In the last quarter of 2023, TDR launched a call for applicants from LMICs entitled 'on gender, antimicrobial resistance (AMR) and climate change threat to human health in the context of infectious diseases of poverty'. The aim of this call was to strengthen an intersectional gender lens in implementation research to contribute to the implementation of TDR's Intersectional Gender Research Strategy. Four research teams from India, Philippines, South Africa and Iran were competitively selected to conduct systematic reviews of existing evidence and research gap analysis on gender and related intersectional inequities associated with antimicrobial resistance (AMR) and climate variability and change. Three project teams have completed the systematic reviews, conducted stakeholder mapping, analysed the findings to identify research gaps and held multiple rounds of stakeholder consultations in their respective countries (5 in India, 3 in Philippines and 3 in South Africa).

Key gaps uncovered:

- There is very little work on interaction of AMR and climate, and even less when considering gender and other social determinants of health.
- Most articles consider sex but have missed the opportunity to analyze and produce sex disaggregated data.
- There is a need to sensitize people to understand the term 'gender' as disparities found between authors with conflation of terminologies related to sex, gender and gender identity.
- There exists a paucity of resources for researchers to conduct intersectional gender analysis. Hence, training of researchers to build their capacity to conduct intersectional gender analysis is required.
- Most of the studies have a positivist, quantitative approach and miss the qualitative approach to understand the depth of the problem.
- Baseline knowledge about AMR, climate change, gender and its impact on health is very low.

Key recommendations:

- Need more advocacy to generate interest to understand the interactions AMR, climate change, gender and its impact on health and healthcare. Provide capacity enhancement opportunities for policy makers and researchers to understand these complex interactions.
- Foster cross-sector collaborative partnerships between specialists working on climate, AMR and gender within ministries and institutions.
- Advocacy for the use of the intersectional gender lens in research within current and future research agenda is required.
- Start collecting disaggregated data considering sex and other social stratifiers for all surveillance systems, including for AMR.
- Promote Gender-Sensitive Adaptation Strategies in climate change adaptation and mitigation policies to ensure equitable health outcomes.

Following the results generated from the systematic reviews, TDR launched a call in July 2024 for applicants from low- or middle-income country (LMICs) to conduct implementation research studies to generate evidence that helps to identify enablers and bottlenecks that impact the delivery of health interventions in the face of two major global health threats; climate variability and change and resistance to treatment and control agents, including but beyond antibiotic resistance, such as insecticidal resistance. This call contributes to the implementation of TDR's Intersectional gender research strategy (https://tdr.who.int/publications/i/item/2020-06-05-tdr-intersectional-gender-research-strategy). Out of the 30 proposals received,

2 will be selected through a competitive process. The research which is expected to start from October 2024, will last for 18 months and the results are expected by 2027.

B. In 2022, TDR launched a call for proposals for 'Implementation research and gender: A contribution to implement TDR's Intersectional Gender Research Strategy'. Two research teams from Bangladesh and Ethiopia were selected.

1. In Bangladesh, the study entitled 'Facilitators and Barriers of management of Multidrug Resistant Tuberculosis in Bangladesh: An Implementation Research through Gender Lens' received ethics approval in 2023 and is being conducted by BRAC James P. Grant School of Public Health, BRAC University. The objective of this implementation research is to generate evidence to identify the enablers and bottlenecks that impact the delivery of current management of multidrug-resistant tuberculosis (MDR-TB) in Bangladesh and see how gender intersects with other social variables influenced by specific contextual and structural determinants potentially leading to different gendered experiences and thus gender inequality.

This mixed method study conducted at five tertiary specialised TB hospitals across the country employed quantitative (record review from hospital and TB registry, household and phone surveys) and qualitative (document review, in-depth interviews (IDI), key informant interviews (KII), focus group discussion (FGD) and observation) methods. Till date, data collection has been completed (shown in Table below) and analysis is ongoing.

2. In Ethiopia, the study entitled 'Uncovering intersectional gender inequalities influencing vulnerabilities, access to and uptake of malaria services, and developing a participatory gender-responsive framework toward malaria elimination in Ethiopia' is being conducted by Jimma University also started in 2023 following ethics approval from WHO. This study aimed to examine intersecting gender inequalities and underlying factors influencing malaria vulnerabilities, care-seeking behaviors, and access to and uptake of preventive and curative services.

This mixed-method sequential study conducted in two urban and four rural areas from two malaria-endemic districts of Jimma zone, Ethiopia involved qualitative (11 FGDs, 12 KIIs, and nominal group discussions (NGDs) and quantitative (desk reviews, review of malaria surveillance data from 2018-2023, household survey with 2,198 respondents) data collection.

The findings below reveal substantial gender inequalities in malaria burden, treatment access, and preventive practices, shaped by social roles, age, marital status, poverty, and geographical location.

Finding 1: Social Roles and Activities Social expectations and roles assigned to men and women significantly contribute to gender inequalities in malaria risk and morbidity. Men are more likely to engage in outdoor activities that increase exposure to malaria.

- Gender differences in malaria risk reveal that males are more prone to exposure due to their engagement in outdoor and nocturnal activities such as farming, security work, and staying awake late or waking up early (Male Mean Score: 19.6/23 vs. Female: 18.5/23, $F=39.9$, $P<0.05$). Conversely, females exhibit slightly higher vulnerability during early waking hours (7.17/8 vs. 6.82/8 for males, p-value <0.05). These activities often coincide with peak mosquito biting times, increasing malaria exposure among males. Contributing to male vulnerability are factors like improper use of insecticide-treated nets (ITNs), which are less available or utilized by night-shift workers or security personnel. This heightened exposure contributes to more severe malaria cases and poorer treatment outcomes among males. In contrast, females, despite facing delays in seeking treatment due to their household roles and lower decision-making autonomy, tend to have better treatment outcomes upon hospitalization.

Finding 2: Healthcare Seeking Behavior

- Men are more likely to seek treatment for uncomplicated malaria early, whereas women tend to seek care at later, more complicated stages due to household responsibilities and decision-making dynamics. Despite presenting later, women experience better treatment outcomes.

- More males (16.4%) report fever and malaria compared to females (13.6%) ($p < 0.05$), with DHIS-2 data confirming higher male malaria cases (54.9%) from 2018 to 2023. Rural men (46.7%) are more likely to seek early treatment within 24 hours compared to rural women (44.5%). Young boys (<5 years) exhibit better timely care-seeking (60.3%) than adults (37.7%), with a 7.7% higher rate favoring males. Men typically access local health facilities due to control over resources, resulting in shorter hospital stays

(57.9% < 3 days) but poorer treatment outcomes (12.7% referral/death). Conversely, females delay care, managing household duties until illness worsens, leading to hospitalizations for complicated malaria (62.0%), yet with higher recovery rates (90.7%). men are more likely to seek early treatment from local clinics, while women prefer public health facilities. These findings underscore gender-specific challenges in malaria prevention and treatment access.

Finding 3: Inequalities in malaria preventive service uptake were present between males and females-making the women more adherent to preventive services (ITNs) that are already within their control or accessible.

- ITN utilization by sex, age, and education: More females (54.6% versus 50.6%, X2=19.23, p-value <0.05) slept under ITN than males in the same household and were more adherent to using preventive services. Age (Adult) and education (attended secondary school) were found to intersect with sex (females) in the utilization of ITN.
- Malaria services that do not account for sex-specific risks and social gender norms worsen transmission among men.

Finding 4: Sex-disparities are observed in knowledge about malaria.

- Men have higher knowledge about malaria due to greater access to broadcast media. Women, despite community communication opportunities, have less access to such media and thus less knowledge.
- Rural, educated men aged 25-44 years exhibit greater knowledge compared to urban, less educated women over 65 years. Men benefit more from broadcast media exposure (Male=288, Female=185, p < 0.001), contributing to their higher knowledge. Despite similar community communication opportunities, rural males surpass urban females in malaria knowledge by 5.2%.

Finding 5: Intersectional Inequalities

- Gender inequalities in malaria burden and service access intersect with other social factors like occupation, age, education, and residence. Adult men have higher malaria cases, while adult women experience more complications but better recovery outcomes. Access to ITNs and malaria knowledge varies significantly by age, education, and location.

Finding 6: Resource Control and Decision-Making

- Men's higher control over resources and decision-making results in earlier treatment seeking. Women often require approval from male family members to seek care, affecting their health outcomes. Men's lack of approval of the women's sickness, the required financial expenses, and travel time and place determined women's health outcome including complications. This is especially true in rural areas where traditional norms are stronger.

Based on the results and consultations with relevant stakeholders (Malaria program personnel at all levels (MOH, Zonal Health Offices, WHOs), frontline malaria service providers, malaria program partners, gender and health focal persons, policy makers, researchers, community advisory groups), following policy implications and recommendations are suggested:

1. For National Malaria Prevention and Control Programs:

Revise policies, strategies, and routine data analysis to ensure gender-equitable services.

Develop a clear roadmap for integrating gender-responsive strategies into national malaria control policies, outlining objectives, timelines, and responsibilities.

Program implementers should incorporate intersectional gender dimensions during resource mobilization and distribution to ensure gender-equitable services, considering specific needs and contextual gender norms.

Promote multi-sectoral collaboration for malaria prevention.

Strengthen capacity of program personnel on gender dimensions, providing skills for delivering locally tailored social and behavior change communication (SBCC) to address gender inequalities.

Create training manuals tailored for malaria program focal points, coordinators, and implementers to lead gender-responsive activities and foster societal shifts towards gender equality in malaria interventions.

Design and deliver training on gender mainstreaming in malaria for healthcare providers, program managers, and policy makers.

2. Strengthening Gender and Health Units:

Strengthen gender units within health departments to plan, implement, and evaluate gender-responsive activities.

Strengthen reporting mechanisms to incorporated gender and intersectionality indicators during data collection.

Promote regular gender analysis of DHIS-2 and hospital data to support investigations and planning.

3. Community engagement:

Co-design culturally sensitive interventions and social policies with community leaders, women's groups, and youth organizations.

Develop social and behavior change communication (SBCC) materials and strategies that integrate gender dimensions into malaria elimination efforts.

Allocate adequate financial, temporal, human, and material resources to support SBCC, community dialogues, and the delivery of gender-equitable services.

4. Workplace Malaria Protection:

Enhance protective services for individuals at occupational risk, ensuring institutions provide necessary items like ITNs and repellents.

C. In 2021, two projects were selected following a TDR Call for Proposals on ‘Generating evidence to strengthen intersectionality and gender research efforts in infectious disease prevention and control’. Awards were given to a research team in Bhutan and a multi-country consortium with research teams from Kenya, Malawi and South Africa. Both the projects have been completed and research teams are currently developing manuscripts to be submitted to peer reviewed journals.

Project 1 from Bhutan: ‘Studying the intersections of sex and gender dimensions with other social stratifies in accessing TB & Dengue health care services of Transgender Men, Transgender Women, MSM, WSW in Bhutan’.

Project 2 from Africa Consortium: "An assessment of Gender and intersectionality in disease exposure, care seeking behaviour and treatment pathways in Malaria and Tuberculosis prevention and control in Kenya, Malawi and South Africa”.

- The study in Migori County, Kenya and Chikwawa district in southern Malawi focused on gender and intersectionality in disease exposure, care seeking behaviour and treatment pathways in malaria prevention and control.

The study in Eastern Cape Province, South Africa conducted gender and intersectionality analysis of Tuberculosis pre-treatment loss to follow up.

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Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 245000	USD 450000
Designated funds	USD 300000	USD 350000
Total	USD 545000	USD 800000

Planned Budget

Undesignated funds	USD 245000
Designated funds	USD 300000
Total	USD 545000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0342: Knowledge translation outcomes on gender equality are usually beyond the control or influence of projects. Research teams working in silos with limited collaboration between biomedical and social science communities.

Actions To Mitigate Risk: Continuous engagement with relevant stakeholders and policy makers to make evidence informed decisions based on evidence generated from the research conducted by the research teams adopting an intersectional gender lens.

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0425: Implementation Research Studies and Research uptake initiatives (Target: Two studies focusing on AMR, climate and gender to inform implementation research objectives and research uptake initiatives (with four each for the US$ 50 million scenario).

Output Indicator: New knowledge & evidence generated from intersectional gender analyses in IR to address marginalization & disadvantages in access to health systems and services, health impacts, prevention/control of IDPs.

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

Biennium: 2026-2027

EROutp-0426: Implementation Research Studies and Research uptake initiatives

Output Indicator: New knowledge & evidence generated from intersectional gender analyses in IR to address marginalization & disadvantages in access to health systems and services, health impacts, prevention/control of IDPs.

Output Target Date: 31/12/2027

Output Progress Status:

Output Progress Description:

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0149: Strengthened implementation research capacities that incorporate intersectional gender analyses within their projects and generated evidence to strengthen equitable health systems and inform the design and implementation of gender responsive health interventions to control and prevent infectious diseases of poverty with an intersectional gender lens.

Progress made towards outcome :

ER Project Links

Project ID : P24-01511 **PI Name :** Abigail Mier

ER Project Title : Support TDR with the implementation of Equity component of TDR Strategy and TDR Intersectional gender research strategy - 2025

Project Start Date : 15/01/2025 **Project End Date :** 15/06/2025

Project ID : P22-00718 **PI Name :** Chandani Kharel

ER Project Title : Consultant - Gender and infectious disease research and its operationalization in Low and Middle-Income Countries (LMICs)

Project Start Date : 15/08/2022 **Project End Date :** 15/11/2024

Project ID : P22-00614 **PI Name :** Annechien Helsdingen

ER Project Title : Production and diffusion of 1 additional course module for the TDR IR MOOC Module on gender

Project Start Date : 21/03/2022 **Project End Date :** 30/11/2022

Project ID : P21-00360 **PI Name :** Nabil Haddad

ER Project Title : Consultant for landscape analysis, joint SDF on VBDs and pockets of poverty

Project Start Date : 01/07/2021 **Project End Date :** 30/11/2021

Project ID : P20-00106 **PI Name :** Salome R. A. Bukachi

ER Project Title : An assessment of Gender and intersectionality in disease exposure, care seeking behaviour and treatment pathways in Malaria and Tuberculosis prevention and control in Kenya, South Africa and Malawi.

Project Start Date : 01/03/2021 **Project End Date :** 31/10/2023

Project ID : P20-00105 **PI Name :** Tshokey Tshokey

ER Project Title : Studying the intersection of sex and gender and other social stratifiers to understand marginalization and disadvantaged (MSM, TG, and other sexual orientations in access to health services and interventions in regards to TB in Bhutan

Project Start Date : 07/01/2021 **Project End Date :** 31/10/2023

ER Country Links

Expected Result: 1.3.14

Title: Testing of innovative strategies for vector control

Strategic Work Area: Research for implementation **Workstream:** Research for innovation

ER type:	Continuing	**Funding type:**	UD and DF
Start date:	01/01/2020	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	After delays in the start of the ER, the contract with CDC for funding this activity was signed and the work on the research project has now well started. Other supporting activities are also well on track.

WHO region: Global

Partners: WHO/NTD; the International Atomic Energy Agency (IAEA); the US CDC Fort Collins

Diseases: Arboviral diseases;Chikungunya;Dengue;Neglected Tropical Diseases;Vector-borne diseases;Zika virus

Review mechanism: Through ad hoc expert review groups approved by TDR senior management, and through TDR advisory bodies, including the scientific working groups, STAC and JCB

ER manager: Florence FOUQUE

Team: Florence Fouque, Mary, Maier, Abdul Masoudi

Number of people working on projects: 50

FENSA clearance obtained for all Non-State Actors? No

Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Partnership well in place and objectives aligned with the respective strategies of the partners
Roles complimentary:	Yes	The complementary roles of the partners is established through the Grant Agreement between WHO and CDC, as follow: CDC the funder also provides technical support, TDR coordinates and manages the research projects
Coordination transparent:	Yes	The coordination mechanism is transparent and follow the rules of the partners.
Visibility:	Yes	The visibility of the partnership is achieved through the communication offices of all partners.

Objectives and results chain

Approach to ensure uptake: To ensure the uptake of the findings and their application into countries, the different activities performed through this ER are involving since the planning stage the relevant stakeholders. The partners of the ER, namely US-CDC, IAEA and NTD/WHO also have their own channels to provide recommendations to countries based on the findings.

Up-take/Use Indicator: The main indicator for uptake will be the number of countries in which innovative vector control activities or tools have been tested and/or will be used. Other uptake indicators can include number of countries where vector surveillance and control tools are improved through knew knowledge acquired during the development of this ER, as well as number of countries showing clear reduction in targeted mosquito vector populations and diseases transmission. Further dissemination will be made through scientific publications, flyers, technical documents, presentations within countries and at international events and advocacy pieces.

Gender and geographic equity: Gender and geographical equities are taken into account in all activities among which the building of the ad hoc review groups, the consultancies and in the selection criteria of the research teams. The outcomes and outputs of the projects will benefit to populations from LMICs some of them belonging to vulnerable and very poor populations. The impact of the innovation will affect equally all gender in respect to some arboviral diseases such as dengue and chikungunya, but will also have a stronger impact on the pregnant women and their babies affected by Zika virus.

Publication plan: Published:

Gato R, Menéndez Z, Rodríguez M, Gutiérrez-Bugallo G, Del Carmen Marquetti M. Advancing the art of mosquito control: the journey of the sterile insect technique against Aedes aegypti in Cuba. Infect Dis Poverty. 2024 Aug 29;13(1):61. doi: 10.1186/s40249-024-01224-1. PMID: 39198869; PMCID: PMC11360771.

Accepted:

Jérémy Bouyer. Current status of the Sterile Insect Technique against mosquitoes at the world scale. Infect Dis Poverty. 2024

Submitted:

Dheerasinghe D. S. A. F., Cader M., Hapugoda M., Samaraweera S., Amarasekera J. Case Study: Dengue Epidemiology and Programme for Dengue Control in Sri Lanka: current and future options for integrated vector control. Infect Dis Poverty. 2024

Wasi Ahmad Nazni, Guat-Ney Teoh, Mohd Adnan Nuradila, Shaikh Ismail Shaikh Norman Hakimi, Maheswaran Tanusshni, Mohd Azam Muhammad Arif, Achim Nurfarahin Hanini, Irfan Ahmad Shazia, Aik-Meng Tan, Hamzah Rabizah, Mohamad Dzomir Ahmad Zainuri, Asim Hasnor Hadi, Ahmad Norazah, Han-Lim Lee, Hamidou Maiga, Jeremy Bouyer, Yoon-Ling Cheong. Assessing the Impact of Sterile Ae. aegypti Males Releases on Vector Population Dynamics: Insights from Malaysian Field Trials. Infect Dis Poverty. 2024

Joel Aik, Hamidou Maiga, Florence Fouque, Jérémy Bouyer, Hannah E Clapham. Assessing the epidemiological impact of SIT and IIT mosquito technology interventions: Study design considerations for policymakers. Infect Dis Poverty. 2024

Arya Rahul, Daniel Reegan, A N Shriram, Manju Rahi. Advancements and Gaps in Epidemiological Trials of Sterile Insect Technique (SIT) for Enhanced Control of Aedes Mosquitoes: A Scoping Review. Infect Dis Poverty. 2024

Nicole Foley, Florence Fouque, Qingxia Zhong, Herve Bossin, Jeremy Bouyer, Raman Velayudhan, Randall Nett, Anna Drexler. Building capacity for testing Sterile Insect Technique (SIT) against Aedes-borne diseases in the Pacific: a training workshop and launch of SIT trials against Aedes aegypti and arboviral diseases. Infect Dis Poverty. 2024

Up-take/use indicator target date: 31/12/2025

Sustainable Development Goals

Good Health and Well-being;Industry, Innovation and Infrastructure;Climate Action;Partnerships to achieve the Goal

Concept and approach

Rationale: Causing more than one million deaths per year, with few new drugs or strategies to combat these emerging infectious pathogens, vector-borne diseases (VBDs) such as malaria, dengue, Zika, chikungunya, yellow fever and others account for 17% of the total morbidity from infectious diseases. The incidence of some VBDs has grown dramatically in recent decades, with about one third of the world population now at risk from *Aedes*-borne epidemics. This increase is due to global changes and has prompted WHO to state the urgent need for alternative vector control methods in its Global vector control response (GVCR)

2017–2030, which was approved at the World Health Assembly in 2017 by more than 190 Member States (WHO 2017).

The rationale of this expected results is to work with all partners to test innovative vector surveillance and control technologies, as well as to support access to relevant training and capacity building on these technologies:

One of these alternative technologies is the "Sterile Insect Technique" (SIT) a method of pest control using area-wide releases of sterile males to mate with wild females, which will then not produce offspring. This technique has been successfully implemented in agriculture against numerous insects since about 60 years, with no side effects and environmentally safe impact.

1)As a first step, a joint collaboration was established between the Department of Nuclear Sciences and Applications (NA), the Department of Technical Cooperation (TC) of the International Atomic Energy Agency (IAEA), and the UNICEF/UNDP/World Bank/ WHO Special Programme for Research and Training in Tropical Diseases (TDR) of the World Health Organization (WHO), in partnership with the WHO Department of Control of Neglected Tropical Diseases (NTD), to develop activities on providing guidance to countries and testing SIT against the *Aedes* mosquitoes, vectors of arboviral diseases.

2) The second step on the SIT testing was to raise funds to support LMICs countries to test SIT against diseases and this was achieved through the contract with US CDC for testing SIT in 2 to 3 Pacific countries. The testing is currently ongoing.

3) **The development and testing of other related tools will also be supported through this activity such as capacity building tools and vector surveillance tools**, to be able to provide a full package of innovative technologies for prevention and control of vectors and vector-borne diseases.

Design and methodology:

Design and Methodology for testing the Sterile Insect Technology, which are the core activities of this ER are described below through key activities and timelines. The methods include :

11. Phase 1: January 2019 to April 2020: Development and Production of a Guidance Document on how to test SIT for countries
12. Phase 2: July 2019 to December 2021: Resource mobilization, buildings of ad hoc review committees and Special Project Team, call for proposals and selection of research consortium(s) to test SIT into field conditions. Landscape analysis for new vector control technologies. Development of training and surveillance tools.
13. Phase 3: January 2022 to June 2024: Update of proposals, contracts and development of the rearing facilities as well as laboratory testing necessary such the irradiation dose, sterile male competitiveness and others. Presentation of the technologie to the WHO Vector Control Advisory Group for evaluation.
14. Phase 4: July 2024 to December 2025: Field testing of the technology with release of sterile males and epidemiological evaluation. Presentation of the results to the WHO VCAG and if satisfactory implementation of the results, policy recommendations and deployment of this new vector control technology at the country level.

Further activities such as the organization of training workshop on relevant items will be supported to improve capacity in countries to implement these new technologies of vector control.

Approach to ensure quality:

The following approaches were taken to ensure quality of the expected results:

6. The objectives, planning, activities and budget of the ER is aligned with TDR strategy and was approved by TDR governing bodies.
7. The groups of experts were invited based on their competencies and experience and approved as per TDR SoPs. All experts accepting to be part of a group completed their DOIs and COIs.
8. The Guidance Document was developed in phase 1 by a group of experts, with external and internal reviews, external editing, final check and WHO publication clearance system.
9. For the selection and following up of research proposals in phase 2, review and steering groups of external experts were established and approved accordingly.
10. The quality of the findings in phase 3 is reviewed by the selected experts groups through mid-term reports and published in open access peer review scientific journals.

11. The quality of the findings in phase 4 is reviewed by the selected experts groups through mid-term and final reports, published in open access peer review scientific journals, and submitted to the Vector Control Advisory Group (VCAG) of the WHO operational program (NTD/WHO) for policies development.

ER Objectives

ERObj-0018 : 1. Provide to countries and stakeholders up to date guidance on how to test new vector control technologies through different materials such as guidance document, training materials, workshop and in site evaluations.

ERObj-0019 : 2. Support research activities to test into field conditions the entomological outcomes of new vector control technologies.

ERObj-0020 : 3. Support research activities to test into field conditions the epidemiological outcomes of new vector control technologies.

ERObj-0021 : 4. Develop indicators to evaluate the impact on the vectors populations, the human health and the health systems of innovative vector control technology.

ERObj-0022 : 5. Provide to the WHO operational programs and the countries the required support to make new recommendations and policies on innovative vector control technologies, and allow full deployment of new validated vector control tools.

ERObj-0056 : 6. Provide to countries the knowledge and guidance on new vector surveillance tools needed for the implementation of the new vector control tools.

ERObj-0057 : 7. Provide to countries the required tools to improve training and capacity building on innovative vector surveillance and control.

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 200000	USD 300000
Designated funds	USD 700000	USD 1350000
Total	USD 900000	USD 1650000

Planned Budget

Undesignated funds	USD 200000
Designated funds	USD 800000
Total	USD 1000000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0310: The completion of all required tests SIT not completed before the end of the biennium

Actions To Mitigate Risk: Close follow up on the testing activities and engagement with the research team to mitigate the deadlines

Mitigation Status: On Track

Biennium: 2024-2025

ERRisk - 0311: Delays in building capacity for the countries in implementing the technology once the SIT efficiency on the diseases is proven.

Actions To Mitigate Risk: Development of training packages through MOOC or other materials

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0381: Document for guiding SIT implementation in countries and development of a training course (MOOC).

Output Indicator: Procedure for implementing SIT and integrating the technique into the vector control activities

Output Target Date: 31/10/2025

Output Progress Status: On Track

Output Progress Description: The writing of the document has started and will be completed as the field testing is progressing. The MOOC will be started by early 2025.

Biennium: 2024-2025

EROutp-0382: Procedures for evaluation developed and made available

Output Indicator: Evaluation of the vector control activities using SIT for prevention and control of arboviral diseases transmission

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description:

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0115: SIT technology against Aedes mosquitoes and arboviral diseases presented at the WHO Vector Control Advisory Group for advise and review

Progress made towards outcome : First presentation to VCAG in September 2023, with recommendations addressed by the research team in the second year of the project proposal. Second presentation to VCAG planned for September 2025.

Biennium: 2024-2025

EROutc-0116: Countries integrating the SIT into the integrated Vector control against Aedes mosquitoes and arboviral diseases.

Progress made towards outcome : Two countries from the Pacific Region will be testing SIT in 2024: French Polynesia and Cook Islands.

Further countries already interested both in the Pacific and American Regions.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 165000	USD 270000
Designated funds	USD 800000	USD 1200000
Total	USD 965000	USD 1470000

Planned Budget

Undesignated funds	USD 165000
Designated funds	USD 800000
Total	USD 965000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0331: Insufficient funding

Actions To Mitigate Risk: Raise awareness of potential donors; continue close collaboration with current donor(s)

Mitigation Status: On Track

Biennium: 2026-2027

ERRisk - 0332: Delays in the recognition of the efficiency of the methods, due to the uncertainty on VCAG (WHO vector Control Advisory Group) continuation

Actions To Mitigate Risk: Continue regular exchanges and engagement with VCAG and other regional groups for vector control

Mitigation Status: On Track

Biennium: 2026-2027

ERRisk - 0333: Delays in building capacity for the countries in implementing the technology once the SIT efficiency on the diseases is proven.

Actions To Mitigate Risk: Development of training packages through MOOC or other materials

Mitigation Status: Planning phase

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0414: SIT technology against Aedes mosquitoes and arboviral diseases presented at the WHO Vector Control Advisory Group for advise and review [1 for 40m], [1 for 50m]

Output Indicator: Generate field evidence on SIT for prevention and control of arboviral diseases transmission

Output Target Date: 31/10/2026

Output Progress Status: On Track

Output Progress Description: First SIT releases started in the field and data collection of entomological and epidemiological data ongoing

Biennium: 2026-2027

EROutp-0455: Number of training materials produced [2 for 40m], [3 for 50m]

Output Indicator: Generate training materials on SIT

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description: Not started yet

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0141: Guidelines, policy decisions and recommendations on vector control in low- and middle-income countries informed by TDR outputs

Progress made towards outcome : TDR outputs on track

ER Project Links

Project ID : P24-01320 **PI Name :** SAMUEL DADZIE

ER Project Title : Fourth West African Aedes Surveillance Network (WAASUN) Meeting Strengthening the capacity of West African countries to control arboviral diseases

Project Start Date : 03/06/2024 **Project End Date :** 31/08/2024

Project ID : P24-01299 **PI Name :** Eleonora Flacio

ER Project Title : Technical support for the finalization of SIT documentations including the Landscape Analysis for SIT within other vector control tools, the assessment of Caribbean capacities to test SIT against Aedes-borne diseases and the proceedings of the second Work

Project Start Date : 05/05/2024 **Project End Date :** 31/10/2025

Project ID : P24-01288 **PI Name :** Maggie Zhang

ER Project Title : Special issue for Publications of articles from the presentations delivered at the TDR Sterile Insect Technology Workshop, held 2 to 6 Mau 2023 in Papeete, French Polynesia.

Project Start Date : 01/05/2024 **Project End Date :** 31/12/2024

Project ID : P23-00985 **PI Name :** Herve Bossin

ER Project Title : PAcific Islands Consortium for the Evaluation of Aedes SIT (PAC-SIT).

Project Start Date : 15/06/2023 **Project End Date :** 31/12/2023

Project ID : P23-00983 **PI Name :** Sandra Gewehr

ER Project Title : Development of a Best Practices document for mosquito control in build areas.

Project Start Date : 30/05/2023 **Project End Date :** 31/12/2023

Project ID : P23-00960 **PI Name :** Chris Rixson

ER Project Title : Development of The Terms of References for Centres of Reference in Medical Entomology Through the organization of a side-event at the 18th International Course on Dengue and other emerging Arboviruses. August 14-25, 2023 IPK, Havana, Cuba, in partnership

Project Start Date : 01/05/2023 **Project End Date :** 30/10/2023

Project ID : P22-00725 **PI Name :** Maria Guadalupe Guzman

ER Project Title : Support to Capacity Building in Medical Entomology through the attendance to the First Edition of the Curso Internacional de Control Integrado de Vectores at Instituto Pedro Kouri, Cuba.

Project Start Date : 29/08/2022 **Project End Date :** 31/10/2022

Project ID : P21-00432 **PI Name :** Scott C. Edmunds

ER Project Title : Special issue on data on vector to share data for SIT

Project Start Date : 01/10/2021 **Project End Date :** 31/12/2021

Project ID : P21-00284 **PI Name :** Gildas Yahouedo

ER Project Title : Development of a landscape analysis of the potential innovative vector control tools including SIT, which are still at the development or testing phases with analysis of benefit/risks and comparative advantages and challenges.

Project Start Date : 16/05/2021 **Project End Date :** 31/12/2021

ER Country Links

Country:	Benin	**WHO Region :**	AFRO	**World Bank : Income Group**	Lower middle income
Country:	Mexico	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Brazil	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Cuba	**WHO Region :**	AMRO	**World Bank : Income Group**	Upper middle income
Country:	Chile	**WHO Region :**	AMRO	**World Bank : Income Group**	High income
Country:	Switzerland	**WHO Region :**	EURO	**World Bank : Income Group**	High income
Country:	United Kingdom	**WHO Region :**	EURO	**World Bank : Income Group**	High income
Country:	French Polynesia	**WHO Region :**	NULL	**World Bank : Income Group**	High income
Country:	Cook Islands	**WHO Region :**	WPRO	**World Bank : Income Group**	n/a

Expected Result: 1.3.15

Title: VBD prevention and control for vulnerable and hard to reach population

Strategic Work Area: Research for implementation **Workstream:** Research for integrated approaches

ER type:	New	**Funding type:**	UD and DF
Start date:	01/01/2024	**End date:**	31/12/2027
ER status:	On Track	**Comment:**	Activities started in 2022 through Strategic Development Funds in 2022
WHO region:	Global		
Partners:	NTD/WHO, CDC China, AFRO, PAHO		
Diseases:	Arboviral diseases;Malaria;Vector-borne diseases		
Review mechanism:	Through Ad Hoc Committee of experts and TDR SWG		

ER manager: Florence FOUQUE
Team: Florence Fouque, Mary, Maier, Abdul Masoudi, Mariam Otmani
Number of people working on projects: 25

FENSA clearance obtained for all Non-State Actors? No
Justification for no FENSA clearance: No

TDR partnership criteria

Add value:	Yes	Use resources:	Yes
Align goals:	Yes	Address knowledge gaps:	Yes
Integrate mandates:	Yes	Build strengths:	Yes
Reduce burden:	Yes	Foster networking:	Yes
Increase visibility:	Yes		

TDR partnership criteria indicators

Objectives aligned:	Yes	Partnership aligned
Roles complimentary:	Yes	Technical and geographical complementarity of the partners
Coordination transparent:	Yes	Coordination transparent through shared Teams folders
Visibility:	Yes	Visibility through joined workshops

Objectives and results chain

Approach to ensure uptake:	To ensure uptake of findings for more adequate tools and better access of the vulnerable populations to VBDs prevention and control, partnership will be established with stakeholders and communities and research and capacity building activities will be essential component of the ER.
Up-take/Use Indicator:	Document published on definition and factors of vulnerability. Number of countries hosting vulnerable populations having better information and access to VBDs prevention and control.
Gender and geographic equity:	Gender and geographical equity will be addressed and based on vulnerabilities according to the contexts.
Publication plan:	Documents on relationship between poverty and VBDs (on track). Document on vulnerabilities (definition and factors). Scientific publications

Up-take/use indicator target date:	31/12/2025

Sustainable Development Goals

No Poverty;Good Health and Well-being;Clean Water and Sanitation;Reduced Inequality;Partnerships to achieve the Goal

Concept and approach

Rationale:

Although there has been tremendous progress in the control of vector-borne diseases (VBDs), these diseases together with other infectious diseases are still causing enormous burden, especially to the more vulnerable populations already facing several challenges such as poverty and displacements. The complex interconnection between different socio-economic aspects and the determinants of health and vulnerability to VBDs require further extensive attention.

The proposed activity will address the challenges linked to vulnerabilities in VBD prevention and control through the following objectives:

1) **Better understand the relationships between VBDs and vulnerabilities** from poverty, mobility, and other social determinants.

2) **Investigate through case studies the vulnerabilities and which solutions can be implemented for VBDs** prevention and control.

3) **Address vulnerabilities through effective intervention and strategies** that can reach the underserved populations in LMICs in order to accelerate universal health coverage.

The project is aiming to develop knowledge and skills base and demonstrate how access to health care for vulnerable, hard-to-reach and underserved populations can be improved.

Design and methodology:

The first phase of the project will focus on definitions and factors of vulnerabilities in a range of different situation including but not limited to hard to reach populations, migrants, displaced population either for political unrest or climatic changes.

Based on the findings, the project will convey group(s) of experts to develop strategies to increase health care access and improve health outcomes according to context and specificities of the populations.

In a second phase of the project, approaches and strategies will be tested through case studies. The lessons learned from these interventions will then provide the basis for a good practice document for reaching the more vulnerable population and giving them better access to health.

Ultimately, the project will engage and empower communities, develop implementation research leadership capacity in local institutions and promote uptake of research findings into policy and practice in countries.

Approach to ensure quality:

Quality of the activities and project will be ensure through regular review process of activities, documentation and implementation.

The review will be performed at different level of the project and of the TDR structure by external experts, committees and representatives of Member States.

ER Objectives

ERObj-0065 : Document the definition and factors of vulnerabilities to deploy the adequate intervention for prevention and control of VBDs.

ERObj-0070 : Implement innovative approaches and tools to prevent and control VBDs in the most vulnerable

Biennium Budget

Biennium: 2024-2025

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 200000	USD 500000
Designated funds	USD 200000	USD 300000
Total	USD 400000	USD 800000

Planned Budget

Undesignated funds	USD 310000
Designated funds	USD 100000
Total	USD 410000

ER Biennium Risks

Biennium: 2024-2025

ERRisk - 0318: Funding not raised for full activities

Actions To Mitigate Risk: Engagement with funders having specific targets on vulnerabilities

Mitigation Status: On Track

Biennium: 2024-2025

ERRisk - 0319: Delays in the implementation of the activities

Actions To Mitigate Risk: Close follow up of the activities

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2024-2025

EROutp-0391: Description of the factors with qualitative and quantitative analysis

Output Indicator: Guidance document on factors of vulnerabilities and handling/strategies to mitigate them on prevention and control of VBDs.

Output Target Date: 31/12/2024

Output Progress Status: On Track

Output Progress Description: The landscape analysis on the factors of vulnerability has been completed and is now under review for publication.

Biennium: 2024-2025

EROutp-0392: Number of participants to the workshop and number of countries attending the workshop

Output Indicator: Organization of a workshop and publication of scientific articles on vulnerabilities against VBDs.

Output Target Date: 31/12/2025

Output Progress Status: On Track

Output Progress Description: Two research projects on vulnerable populations have started and one is completed. The 2 research projects are:

ER Biennium Outcomes

Biennium: 2024-2025

EROutc-0121: Better knowledge of the factors of vulnerability in prevention and control of VBDs

Progress made towards outcome : Collection of evidence is currently ongoing through one case studies is currently ongoing to study the relationships between VBDs and poverty and another research project for transfer of technologies to fight malaria in hard to reach populations will be contracted soon.

Biennium: 2024-2025

EROutc-0122: Improved access to VBDs prevention and control in vulnerable populations

Progress made towards outcome : Research is ongoing to provide the evidence needed to advance this outcome: the two case studies are currently on track

1) Access to malaria diagnostic and treatment for hard to reach population which are the illegal gold miners in the Amazon forest. This project called malakit has been completed and results are in publication.

2) Access to better prevention and control of dengue in the biggest open dump of Brasilia through improved sanitation and waste management.

A proposal has been received for a third research project, on the transfer of the malakit approach to vulnerable and hard to reach populations also working in gold mining in Senegal.

Biennium Budget

Biennium: 2026-2027

Low and Hight Budget Scenario

	Low Budget Scenario	High Budget Scenario
Undesignated funds	USD 165000	USD 350000
Designated funds	USD 150000	USD 400000
Total	USD 315000	USD 750000

Planned Budget

Undesignated funds	USD 165000
Designated funds	USD 150000
Total	USD 315000

ER Biennium Risks

Biennium: 2026-2027

ERRisk - 0329: Insufficient funding raised

Actions To Mitigate Risk: Engagement with funders having specific targets on vulnerabilities

Mitigation Status: On Track

Biennium: 2026-2027

ERRisk - 0330: Activities cannot be fully implemented or delayed because of the situations international, regional, national, local)

Actions To Mitigate Risk: Close follow up of the activities within specific contexts

Mitigation Status: On Track

ER Biennium Outputs

Biennium: 2026-2027

EROutp-0413: Number of field studies to generate the evidence [2 for 40m], [4 for 50m]

Output Indicator: Generate evidence on factors and determinants for the prevention and control of VBDs in vulnerable and hard to reach populations.

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description: One study contracted to be continued over the 2026-2027 biennium

Biennium: 2026-2027

EROutp-0456: Number of participants to the MSA MOOC, number of countries [over 200 participants, 10 countries for 40 m], [over 500 participants, 30 countries for 50 m]

Output Indicator: Implement training on multisectoral approaches (MSA) against VBDs through the TDR MOOC

Output Target Date: 31/12/2027

Output Progress Status: On Track

Output Progress Description: MSA MOOC launched in January 2025, over 100 participants in February 2025.

ER Biennium Outcomes

Biennium: 2026-2027

EROutc-0140: Guidelines, policy decisions and or practice to ensure improved access to VBDs prevention and control in vulnerable and hard to reach populations informed by TDR outputs

Progress made towards outcome : TDR outputs on track

ER Project Links

Project ID : P24-01472 **PI Name :** Vincent Corbel

ER Project Title : The implementation of the Worldwide Insecticide resistance Network in South American (WINSA) for the surveillance and control of insecticide resistance in arthropod vectors of infectious diseases

Project Start Date : 20/12/2024 **Project End Date :** 30/11/2025

Project ID : P24-01387 **PI Name :** Vanessa Cruvinel

ER Project Title : Support to training activity within the context of the research project entitled: Research Project entitled: Zika, Dengue and Chikungunya: multisectoral approach for developing solutions applicable in public health by exploring the link between Poverty

Project Start Date : 25/09/2024 **Project End Date :** 31/03/2025

Project ID : P24-01366 **PI Name :** Emmanuel Kaindoa

ER Project Title : Technical and logistics support for the organization and implementation of An International Conference on Advances in Surveillance and Control Methods for Aedes-Borne Diseases and Urban Vectors affecting the most vulnerable.

Project Start Date : 26/08/2024 **Project End Date :** 31/10/2024

Project ID : P24-01328 **PI Name :** Thomas Scalway

ER Project Title : Development of Communication materials in relation with the TDR activities on hard-to-reach and vulnerable populations

Project Start Date : 15/06/2024 **Project End Date :** 31/10/2024

ER Country Links