TDR For research on diseases of poverty

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TDR Results 2024 Report

Measuring for improvement

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TDR results

2024 report

List of figures and tables

Abbreviations

ADP	The Access and Delivery Partnership
AMR	Antimicrobial resistance
CERCLE	Coalition for Equitable ResearCh in Low-resource sEttings
CIDEIM	Centro Internacional de Entrenamiento e Investigaciones Médicas
CRL	Clinical research leadership fellowship
DEC	Disease endemic countriy: Low- and middle-income countries in which infectious diseases contribute to the overall burden of disease or mortality and/or represent a major public health problem.
ESSENCE	ESSENCE on Health Research Initiative
FERCAP	Forum for ethical Review Committees in the Asian and Western Pacific Region
Fiocruz	Fundação Oswaldo Cruz
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GPW14	WHO's Fourteenth General Programme of Work
HIC	High income countries according to the World Bank
HRP	UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
IDDO	Infectious Diseases Data Observatory
IR	Implementation research
JCB	Joint Coordinating Board, top governing body of TDR coordinating the interests and responsibilities of all parties cooperating with TDR.
LMICs	Low- and middle-income countries according to the World Bank
PABIN	Pan-African Bioethics Initiative
RTC	Regional training centre
SC	Standing Committee, governance body overseeing the management and financing of TDR
SDG	Sustainable Development Goal
SEARN-TB	Southern and East Africa for TB control
SIDA	Swedish International Development Cooperation Agency
SIDCER	Strategic Initiative for Developing Capacity in Ethical Review
SIHI	Social Innovation in Health Initiative
SIT	Sterile insect technology
SORT IT	Structured Operational Training IniTiative
STAC	Scientific and Technical Advisory Committee, governance body providing external scientific and technical input in the planning, prioritization and review of TDR's activities.
TDA4Child	WHO treatment decision algorithm for childhood TB
TDR	UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
WARN/CARN-TB	West and Central African Regional Networks for TB control

1. Summary

The 2024 results report marks the first year of measuring TDR's performance based on the revised performance framework in which indicators have been adapted to the new strategy, including its focus on four major global health challenges affecting vulnerable populations and using a One-health approach. As before, the annual report describes technical results (outputs and outcomes) and the application social and gender equity, underpinning TDR's contribution towards translating innovation to health impact in disease endemic countries for the benefit of those most burdened by infectious diseases of poverty. The report also reports on TDR's managerial performance in 2024.

One major milestone in 2024 relates to TDRs past long-term involvement with the development of drugs for neglected diseases which resulted in the announcement by the Medicines Development for Global Health that the Ghana Food and Drugs Authority had approved its marketing authorization application for moxidectin for the treatment of onchocerciasis in adults and children aged 4 years and older. This marks a new milestone in the fight against river blindness and paves the way for a TDR-supported pilot implementation programme.

In terms of outcomes, national policy changes resulted in all oral shorter treatment regimens being adopted for multidrug resistant TB patients in two additional countries based on ShoRRT study results. In Ghana, 9 out of 12 research studies of the antimicrobial resistance program assessed through the 2024 annual metrics survey demonstrated influence on policy or practice. Research packages developed with TDR were applied in three countries to evaluate the WHO recommended treatment decision algorithm for childhood TB and in four countries for research on TB disability.

TDR tools and reports were used in 2024 to inform global and regional stakeholders: module 1 on Tuberculosis Preventive Treatment of the WHO Operational Handbook, the WHO policy on TB-associated disability and, although no longer available, the USAID global TB strategy. TDR tools were also shown to be widely used: the Global Health Matters podcasts regularly disseminated to senior leadership in the WHO European Regional Office and the new open space training repository used by TDR regional training centers in their collaborations with stakeholders to disseminate courses, tools and guidance to inform implementation research.

In terms of outputs, in 2024, a considerable number of disease-endemic country institutions demonstrated expanded scope of activities, notably the regional training centers who extended their network to include disease control programmes, WHO country offices and regional offices in their research capacity strengthening activities specifically related to the strategic global health challenges, as well as universities in the second phase of TDR's supported postgraduate training programme who actively disseminated the implementation research curriculum in their respective regions. Strengthened leadership was also demonstrated in institutions in Guinea, Kenya, Nepal and Sierra-Leone with the SORT IT program and in French Polynesia and Cook Islands with the expanded program for sterile insect technology (SIT) releases.

The proportion of outputs and publications addressing at least one of the global health challenges outlined in the strategy was measured formally for the first time after the baseline in 2023 and showed that this was confirmed for all outputs and eighty percent of the TDR supported peer reviewed publications in 2024.

TDR continued to build institutional and individual research capacity, developing a range of training options in close collaboration with seven regional training centers and eight universities in low- and middle-income countries. Massive open online courses were delivered in Arabic, English, French, Russian and Spanish; self-paced modules and other tools were made available and a mentoring programme for leadership was piloted. In 2024, 50 fellows representing 29 countries, including 6 fellows from French speaking west African countries, started a postgraduate training and 41 students completed their MPH degree focusing on IR. The first cohort of 20 students of the clinical research leadership scheme were

placed with hosts, and 16 students of the second cohort were identified. TDR SORT IT courses allowed to train 205 individuals, and 10 impact grant studies in the South-East Asian Region were supported.

Regarding application of core values, socio economic equity indicators are well within the target range for the proportion of experts from disease endemic countries on TDR external advisory committees or as first authors of peer-reviewed publications supported by TDR. However, other indicators need more attention, and notably the proportion of last authors from disease endemic countries. Gender equity has significantly progressed on some indicators during the last decade, such as the proportion of grants awarded to women which now has for three years consistently been within the defined target range or, more strikingly even, women, and notably women from disease endemic countries, now represent the vast majority of experts on TDR external advisory committees reflecting TDR's efforts to involve women in higher advisory roles. However, other indicators have not seen such a favorable evolution, despite TDRs continuous efforts to despite TDR's continuous efforts to support women in science, such as authorship in peer reviewed publications.

Finally, in terms of managerial performance, at the end of the first year of the new strategy, expected results are overall on track to achieve the targets defined in TDR's Programme Budget and Workplan for 2024-2025.

2. Expected results and overview of progress on key performance indicators

The 2024 results report measures a set of performance indicators against targets, in line with TDR's 2024–2029 Strategy and the TDR performance framework 2024–2029, for planning, monitoring and evaluation. This is the first year of a new 6-year strategic period, where the report will not only show the achievements made on various indicators related to three overarching categories: technical expected results, application of organizational core values and managerial performance, but also the alignment of TDR's activities with four global health challenges outlined in the strategy[1]. Ultimately, TDR's outputs and outcomes contribute to health impact, measured through the achievement of Sustainable Development Goal (SDG) targets, and are anchored in the World Health Organization's (WHO) commitment to health equity, gender equality, and the right to health.

Given the adoption of the SDGs by the global community in 2015, TDR developed its 2018–2023 Strategy to highlight the Programme's unique contribution, through research, capacity strengthening and global engagement, to improved health, quality education, enhanced partnerships and other relevant SDG targets guiding international development work until 2030. The current performance framework has been revised to align with TDR's 2024–2029 strategy, the WHO Fourteenth General Programme of Work (GPW14) strategic objectives and selected SDG targets (Figure 1).

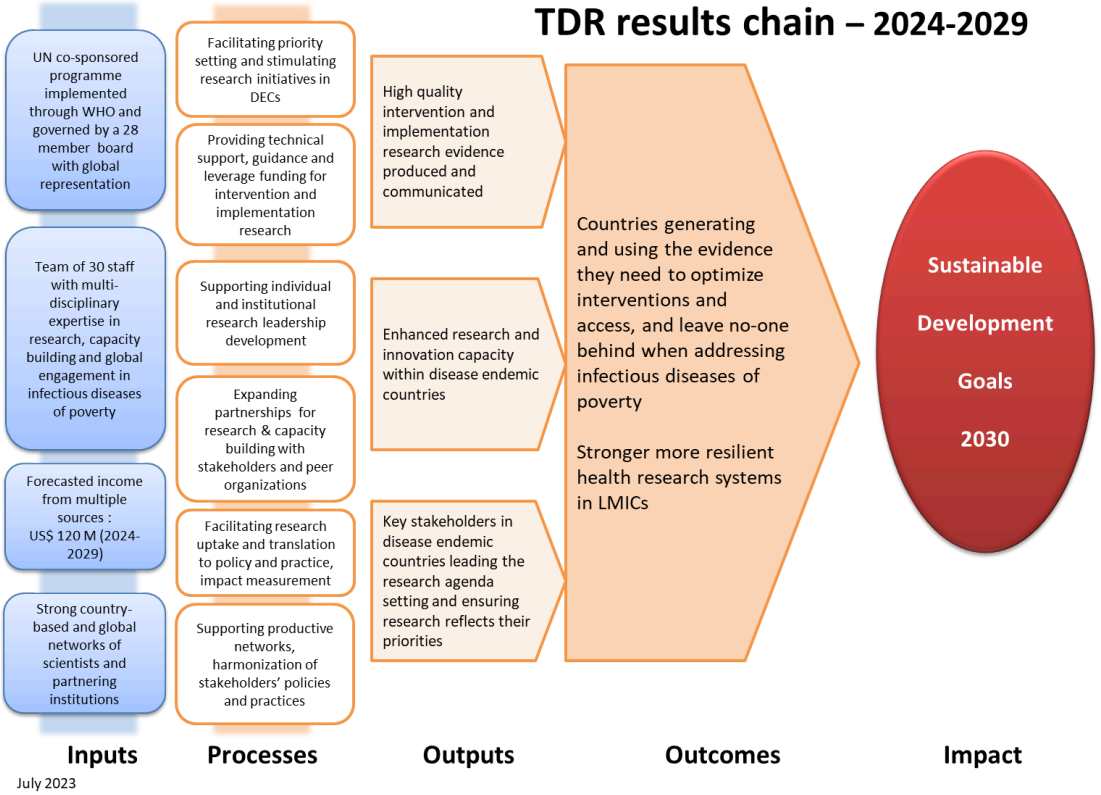
Figure 1. TDR contribution to Sustainable Development Goals

TDR aims for a global impact to reduce the burden of infectious diseases of poverty and its contribution is made possible by the overall outcome of the Programme, which is the translation of new knowledge, solutions and tools into policy and practice in disease endemic countries. These in turn are the result of three feeder outputs that support and complement each other, with the sustainability of research outputs being enhanced by the engagement of stakeholders and by the capacity built in countries.

[1] Global health challenges outlined in TDR's 2024-2029 strategy 1) Preparedness for epidemics and outbreaks 2) Control and elimination of diseases of poverty 3) Resilience to climate change's impact on health 4) Resistance to treatment and control agents.

Aligned with TDR's 2024-2029 Strategy, the performance framework further demonstrates TDR's focus on health impact and value for money throughout the whole results chain (Figure 2), from using resources economically to building efficient processes, to quality of outputs and to partnering to enhance the sustainability of outcomes.

Figure SEQ Figure * ARABIC 2. TDR results chain



TDR's work is contributing to the research accelerator of the Global Action Plan for Healthy Lives and Well-being for All that aims to speed up progress towards the targets of SDG3 through a three-pronged approach: align, accelerate and account.

An overview of the progress made on each of TDR's key performance indicators is presented in the monitoring and evaluation matrix below (Table 1), with further details being provided in the body of this report.

Table 1. TDR key performance indicators 2024-2029

Expected results	Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*	Frequency of measurement
Technical expected results					
Impact: **Countries generating and using the research evidence they need to leave no one behind when acting to reduce the burden of infectious diseases of poverty.** *SDG3-Good health and wellbeing* *SDG4-Quality education* *SDG5-Gender equality* *SDG6-Clean water and sanitation* *SDG9-Industry, innovation and infrastructure* *SDG10-Reduce inequalities* *SDG11-Sustainable cities and communities* *SDG13-Climate action* *SDG17-Partnerships for the goals*	i. SDG3 Goal 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases. ii. SDG 3 Goal 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all. iii. SDG3 Goal 3b: Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines (…) iv. SDG3 Goal 3d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks. v. SDG9 Goal 9.5: Enhance scientific research, (…) encouraging innovation and substantially increasing the number of research and development workers per one million people (…) vi. SDG10 Goal 10.2: Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.			Evaluation demonstrating the link between outcomes and the progress made towards achieving the relevant SDG goals	

Expected results	Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*	Frequency of measurement
Outcome: **Infectious disease knowledge, solutions and implementation strategies translated into policy and practice in disease endemic countries**[2]	1. Number and evidence when innovative knowledge or new/improved solutions/tools developed with TDR support are applied in disease endemic countries[3]	0	100	21	Measured annually, cumulative over 6 years
	2. Number and evidence when tools and reports are used to inform policy and/or practice of global/ regional stakeholders or major funding agencies	0	15	6	Measured annually, cumulative over 6 years
	3. Evidence demonstrating the benefits of research on gender, on equity or on vulnerable groups, including people with disabilities, used to inform policy and/or practice	N/A	N/A	Evidence provided	Measured annually
Research outputs: **High quality intervention and implementation research evidence produced in response to global and country needs**	4. Number and evidence of innovative knowledge, new/improved solutions or implementation strategies developed in response to requests from WHO control programmes and/or diseases endemic countries and engaging disease endemic country stakeholders	0	40	10	Measured annually, cumulative over 6 years
	5. Proportion of outputs (innovative knowledge, new/improved solutions, implementation strategies) and publications addressing at least one of the global health challenges outlined in the strategy[4]	>90%	>90%	Outputs: 100% Publications: 80%	Measured annually, cumulative over 6 years
Capacity strengthening outputs: **Enhanced research and knowledge transfer capacity within disease endemic countries**	6. Number and evidence of disease endemic institutions and networks demonstrating expanded scope of activities or increased funding from alternative sources, or that have influenced research agenda, policy and practice, as a result of or related to TDR support[5]	0	10	27	Measured annually, cumulative over 6 years
	7. Number of TDR trainees and fellows disaggregated by gender and WHO region: i. long courses and postgraduate education; ii. proportion demonstrating career progression and/or increased scientific productivity; and iii. short courses and MOOC[6]	0	i. 900 ii. ≥80% iii. 9000 W 45-55%	i. 281 W 53%	Number (i. and iii.) measured annually. Proportion (ii.) on cohorts 3-5 years after training ended

[2] Disease endemic countries: low- and middle-income countries in which infectious diseases contribute to the overall burden of disease or mortality and/or represent a major public health problem.
[3] Counts the instances when countries apply these tools, solutions or knowledge in policy and/or practice.
[4] Preparedness for epidemics and outbreaks, control and elimination of diseases of poverty, resilience to climate change's impact on health, resistance to treatment and control agents.
[5] TDR support may include financial, in kind, facilitation and/or expert types of support.
[6] Counting trainees and recipients of individual training grants. Long courses (Post graduate training scheme, Clinical research and leadership scheme, SORT IT trainees, impact grants for regional priorities). Short courses (MOOC, TDR regional training center trainees and other TDR grantees).

Expected results	Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*	Frequency of measurement
Global engagement outputs: **Key stakeholders engaged in harmonizing agenda and practices and in new initiatives**	8. Number and evidence of research-related agendas, recommendations and practices agreed by stakeholders at global, regional or country level and facilitated by TDR	0	6	1	Measured annually, cumulative over 6 years
	9. Evidence of stakeholder engagement in TDR joint initiatives aligned with TDR strategic objectives	N/A	N/A	Evidence provided	Measured annually
Application of core values					
Equity *Social and economic equity:*	10. Proportion of TDR grants/contracts awarded to institutions or individuals in disease endemic countries (total count and total amount) disaggregated by region.	85% (count) 88% (amount)	67-90%	66% (amount)	Measured annually
	11. Proportion of experts from disease endemic countries on TDR external advisory committees	57%	50-75%	60%	Measured annually
	12. Proportion of peer-reviewed publications supported by TDR with authors from disease endemic country institutions (first author - FA, last author - LA, corresponding authors - CA) disaggregated by region.	FA: 77% LA: 57% CA: 72%	≥67%	FA: 72% LA: 58% CA:67%	Measured annually
	13. Number of peer-reviewed publications supported by TDR and percentage published in open/free access	179 97%	100/y (600) >90%	119[7] 92%	Measured annually and cumulative over 6 years
Gender equity:	14. Proportion of women among grantees/contract recipients (total count and total amount)	47% (count) 49% (amount)	45-55%	50% (amount)	Measured annually
	15. Proportion of women on TDR external advisory committees	67%	45-55%	71%	Measured annually
	16. Proportion of women authors of peer-reviewed publications supported by TDR (first author - FA, last author – LA, corresponding author - CA)	FA 42% LA: 31% CA: 36%	45-55%	FA: 44% LA: 42% CA: 37%	Measured annually
	17. Number and proportion of peer-reviewed publications explicitly considering: gender and women issues, vulnerable groups or people with disabilities	62%	>75%	Total: 64% Gender: 8% Vulnerable: 64%	Measured annually

[7] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

Expected results	Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*	Frequency of measurement
				Disabilities: 14%	
Effective multisectoral partnerships	18. Resources leveraged as direct contributions (co-funding, services or in-kind) to TDR projects (examples)	$ 1:1 ($ TDR: $ partners) People 1:50	≥50%	NA	Measured at the end of biennium
Value-for-money	19. Evidence demonstrating value-for-money, cost savings and/or enhanced efficiency or effectiveness	N/A	N/A	NA	Measured at the end of biennium
Quality of work	20. Proportion of project reports evaluated as satisfactory by external advisory committees	100%	>80%	NA	Measured at the end of biennium
Sustainability of outcomes	21. Number of effective public health tools and strategies developed which have been in use for at least two years	0	40	NA	Measured at the end of biennium
Management performance					
Effective resource mobilization	22. Percentage of approved biennial budget successfully funded	*96% of the US$ 40M budget scenario*	≥100%	NA	Measured at the end of biennium
	23. Percentage of income received from multi-year, unconditional donor agreements	*35%*	≥25%	NA	Measured at the end of biennium
Effective management	24. Percentage of staff workplans and performance reviews (including personal development plan) completed on time	96%	≥90%	96%	Measured annually
	25. Proportion of expected results on track	84%	≥80%	96%	Measured annually
	26. Proportion of significant risk management action plans that are on track	100%	≥80%	100%	Measured annually

3. Achieving TDR's scientific and technical objectives

TDR's achievement of expected results as highlighted in this annual Results Report is aligned with TDR's Performance Framework 2024-2029 and focuses on the outcome level as well as the outputs generated which, once translated into policy and practice, will have an impact on the burden of disease in countries, aligning with the SDGs and contributing to the WHO GPW14 and global health targets.

TDR's achievements of expected results are also reported in the technical teams' annual reports and measured against biennial targets approved by the Joint Coordinating Board in the year preceding each WHO biennium (e.g. approved in 2023 for the biennium 2024–2025).

3.1 Impact: Countries generating and using the research evidence they need to leave no one behind when acting to reduce the burden of infectious diseases of poverty

TDR's Strategy 2024–2029 shows how activities and results are expected to contribute to the SDGs, particularly to SDG3, but also to others. The outcomes we plan to achieve are aligned with the strategic plans of our co-sponsors: the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the World Bank and WHO, all of which aim to advance sustainable development work. TDR's expected results contribute, either jointly or individually, to all these strategic objectives including the six strategic objectives underpinning WHO's GPW14 overarching mission to promote, provide and protect health and well-being for all people, everywhere.

The SDG indicators, together with baseline measures and targets, are measured by WHO and other United Nations family agencies. Contributions that TDR outcomes are making towards achieving SDG and GPW14 targets are assessed through external review of the Programme (every 5 or 6 years), and through evaluation of the strategic work areas of TDR, or of specific long-term projects, as appropriate.

3.2 Outcome: Infectious disease knowledge, solutions and implementation strategies translated into policy and practice in disease endemic countries

TDR works with partners in disease endemic countries to generate essential knowledge and evidence for the prevention and control of infectious diseases of poverty, and to facilitate translation of the solutions into policy and improved health care in countries. TDR's approach leads to strengthening health systems operations and research systems in these countries, ultimately reducing the burden of infectious diseases of poverty.

This is done through three key mechanisms – the generation of new evidence and knowledge products, strengthening capacity in disease endemic countries to conduct good quality research, and building close working relationships with key policymakers and programme staff to ensure the country priorities are guiding research, and thus the translation of new knowledge into effective disease control efforts, is facilitated.

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contribution 2024)*
1. Number and evidence when innovative knowledge or new/improved solutions/tools developed with TDR support are applied in disease endemic countries[8]	0	100	21
2. Number and evidence when tools and reports are used to inform policy and/or practice of global/regional stakeholders or major funding agencies	0	15	6
3. Evidence demonstrating the benefits of research on gender, on equity or on vulnerable groups, including people with	N/A	N/A	Evidence provided

[8] Counts the instances when countries apply these tools, solutions or knowledge in policy and/or practice

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contribution 2024)*
disabilities, used to inform policy and/or practice			

Indicator 1 - Number and evidence when innovative knowledge or new/improved solutions/tools developed with TDR support are applied in disease endemic countries

- ✔ **Moxidectin approved for river blindness in Ghana:** TDR's long-term involvement with the development of drugs for neglected diseases resulted in a positive step forward as Medicines Development for Global Health (MDGH) announced on 5 December 2024 that the Ghana Food and Drugs Authority approved its marketing authorization application for moxidectin for the treatment of onchocerciasis in adults and children aged 4 years and older. This marks a new milestone in the fight against river blindness and paves the way for a TDR-supported pilot implementation programme.
- ✔ **The ShoRRT[9] study results enable policy change in two new countries** (Dominican Republic and Ecuador): based on results of the study[10], the national policy was changed, and all oral shorter treatment regimens have been adopted for multidrug resistant TB patients. The ShoRRT study is based on a standardized package developed by TDR, and continues to run in 27 countries, with technical and financial support from TDR in Nigeria and the Democratic Republic of the Congo.
- ✔ **A research package for evaluating the effectiveness, feasibility and impact of using the WHO recommended treatment decision algorithm for childhood TB was developed and used by three countries** (Burkina Faso, the Democratic Republic of the Congo and Nigeria)[11]. Results were presented at the World TB conference in November 2024 and are expected to contribute to updating the WHO Global recommendations on the management of TB in children.
- ✔ **A plan to scale up the introduction of the sterile insect technique (SIT) in French Polynesia and Cook Islands was approved by both governments**. This plan was the result of capacity strengthening and research supported by TDR.
- ✔ **The antimicrobial resistance (AMR) program continues to be a successful and impactful initiative.** In Ghana, 9 out of 12 research studies (75%) assessed through the 2024 annual metrics survey demonstrated influence on policy or practice. Brief summaries of these studies are provided below.
    - **Cleaner waters: cutting bacterial contamination in seafood processing effluents**[12]: The Environmental Protection Agency enhanced effluent treatment in seafood processing units by promoting Polyacrylamide for better sludge removal, implementing regular reassessments to monitor quality, and expanding AMR monitoring to additional units thereby ensuring compliance and mitigating environmental and public health risks.
    - **What's in your salad? Resistant E. coli found in farm-grown lettuce**[13]: Agricultural and food safety were enhanced through advocacy for use of personal protective wear by farmers, adoption of cleaner irrigation methods (drip and furrow) in bigger farms, country-wide water contamination assessments in public water supply systems used for irrigation, and formulation of leafy vegetable food safety standards.
    - **Saving newborns: enhancing sepsis care with better laboratory use in a teaching hospital**[14]: The paediatrics department enhanced clinical practice by ensuring timely access to antibiotic resistance patterns for guiding therapy: a WhatsApp group was created to streamline communication between laboratory personnel and paediatricians, accelerating laboratory results sharing; intercom facilities were expanded to improve hospital-wide coordination and more direct dissemination of laboratory results to clinicians.

[9] Short, all-Oral Regimens For Rifampicin-resistant Tuberculosis
[10] Rodríguez et al. BMC Infectious Diseases (2025) 25:196 https://doi.org/10.1186/s12879-024-10417-w
[11] the-tda4child-initiative
[12] https://www.mdpi.com/1660-4601/19/17/10823
[13] https://www.mdpi.com/1660-4601/19/19/12722
[14] https://www.mdpi.com/1660-4601/19/19/12968

- **Curbing unnecessary antibiotic prescriptions in outpatient care**[15]: The hospital customized the electronic medical records system to restrict second and third-line antibiotic (Watch and Reserve) prescriptions to senior prescribers in consultation with pharmacists. Outpatient clinics were integrated into the antimicrobial stewardship program, with a six-monthly audit and feedback system for prescriptions. Additionally, a draft hospital-wide antibiotic prescribing policy was developed.
- **Keeping an eye on antibiotic prescriptions for eye infections**[16]: Prescribers and pharmacists were trained on rational antibiotic use, emphasizing limits on Watch category antibiotics (second line antibiotics). The prescription monitoring team was reactivated, including a pharmacist and internal auditor, with compulsory biannual reporting on antibiotic use.
- **Hidden threat: antibiotic resistant Enterobacteriaceae in healthy pigs of greater Accra**[17]: Farmers from greater Accra were trained on AMR, One Health, and responsible antibiotic use. Institutional support grew, with endorsements for continued research and collaborations with Noguchi Memorial Institute and the University of Ghana. The SORT IT AMR paper was featured on the institute's website, and Animal Health Division scientists were compelled to integrate AMR research into their studies. The Veterinary Services Directorate also established closer collaboration with the Animal Research Institute.
- **Sticking to the script: following antibiotic guidelines for urinary tract infections in primary care**[18]: An audit team was established to routinely assess compliance with treatment guidelines for common conditions, expanding beyond urinary infections to include malaria management. Audit activities were also integrated into the resident induction training program. The standard treatment guidelines are being updated.
- **Superbugs in the tap: antibiotic-resistant bacteria in greater Accra's drinking water**[19]: The National Technical Working Group on Water leveraged research findings for evidence-based advocacy, engaging stakeholders to scale up the Water Safety Plan and ensure clean water from source to user. Originally drafted and piloted in 2015, the plan was moved to full implementation. A National Water Safety Campaign is being launched.
- **Blood culture challenges at Ho teaching hospital: gaps, delays, contamination, and long turnaround times**[20]**:** Interventions put in place included training physicians and nurses on proper sample collection, introducing automated incubation systems, and improving laboratory consumables. Additionally, hospital and laboratory information systems were strengthened to enhance data capture on AMR and patient outcomes.

According to TDR's annual metrics surveys, of the 75 research studies conducted through SORT IT over the past four years across Asia, Africa, and Latin America, 79% have resulted in tangible changes in policy or practice. The program has also played a key role in strengthening leadership in health research, delivering measurable benefits to health systems. Notably, 92% of SORT IT trainees have applied their skills to combat antimicrobial resistance, 50% have contributed to mitigating emerging infectious threats, 64% have completed new research studies, and 38% have assumed mentoring roles to support others in operational research.

More on operational research tackling AMR: Studies published in 2023 demonstrating impact on policy or practice in countries.

✔ **SORT IT generic protocol for research on TB disability adapted and applied in 4 countries** (Kenya, Zambia, Zimbabwe, and Uganda).

[15] https://www.mdpi.com/1660-4601/19/16/10286
[16] https://www.mdpi.com/1660-4601/19/18/11723
[17] https://www.mdpi.com/1660-4601/19/16/10449
[18] https://www.mdpi.com/1660-4601/19/19/12413
[19] https://www.mdpi.com/1660-4601/19/19/12300
[20] https://www.mdpi.com/1660-4601/20/17/6631

Indicator 2 - Number and evidence when tools and reports are used to inform policy and/or practice of global/regional stakeholders or major funding agencies

- ✔ **Collaborative implementation research on contact investigation for TB cases (concept of 7-1-7)** contributes to the WHO Operational Handbook 2024, module 1 on Tuberculosis Preventive Treatment[21].
- ✔ **SORT IT Implementation Research on TB Disability Informs Policy:** Research from Kenya, Zambia, Zimbabwe, and Uganda on TB disability, directly contributed to the WHO policy on TB-associated disability[22].
- ✔ **The ShoRRT research package and** the implementation research for digital technologies and tuberculosis **(IR4DTB) toolkit** [23] considered potential support to the advancement of USAID global TB strategy (USAID Global TB Strategy, 2023-2030 - Implementation Approach, February 2024)[24].
- ✔ **New open space course and IR training repository**[25] used by TDR regional training centres in their collaborations with stakeholders including researchers, disease control programmes, WHO country and regional offices globally, to disseminate training courses, tools and guidance to inform implementation research.
- ✔ **Global Health Matters podcasts:** a highlight in rapid insights updates sent to senior management of WHO EURO.

Indicator 3 - Evidence demonstrating the benefits of research on gender, on equity or on vulnerable groups, including people with disabilities, used to inform policy and/or practice

- ✔ Evidence from Nepal assesses gender and equity considerations in key health related national policies and the Health Management Information System of National Tuberculosis Programme for more inclusive health systems[26].
- ✔ Intersectional gender analysis generates evidence from four health facilities in central Uganda that identifies challenges and bottlenecks in TB care and most at-risk population[27].
- ✔ SORT IT research from Kenya, Zambia, Zimbabwe, and Uganda on TB disability has directly contributed to WHO policy on TB-associated disability[19.]

[21] https://iris.who.int/bitstream/handle/10665/378535/9789240097773-eng.pdf?sequence=1
[22] https://iris.who.int/bitstream/handle/10665/373679/9789240077799-eng.pdf?sequence=1
[23] https://ir4dtb.org/en/
[24] No longer available online.
[25] https://tdr.who.int/home/our-work/strengthening-research-capacity/implementation-research-training-materials
[26] Parajuli A; Kakchapati S; Arjyal A; Joshi D; Kharel C; Otmani del Barrio M; C Baral S. (2024). Assessing intersectional gender analysis in Nepal's health management information system: A case study on tuberculosis for inclusive health systems. Infect Dis Poverty. IDOP-D-23-00700R3.
[27] Muttamba, W., Omongot, S., Najjingo, I. et al. (2024). Using intersectional gender analysis to identify challenges in tuberculosis care at four health care facilities in Uganda. Infect Dis Poverty 13, 2.

3.3 Research outputs: High quality intervention and implementation research evidence produced in response to global and country needs

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
4. Number and evidence of innovative knowledge, new/improved solutions or implementation strategies developed in response to requests from WHO control programmes and/or diseases endemic countries and engaging disease endemic country stakeholders	0	40	10
5. Proportion of outputs (innovative knowledge, new/improved solutions, implementation strategies) and publications addressing at least one of the global health challenges outlined in the strategy[28]	>90%	>90%	Outputs: 100% Publications: 80%

Indicator 4 - Number and evidence of innovative knowledge, new/improved solutions or implementation strategies developed in response to requests from WHO control programmes and/or diseases endemic countries and engaging disease endemic country stakeholders

- ✔ **New research toolkit for evaluating the impact of social protection programmes among TB patients and their households**: launched at the Union conference in November 2024. The toolkit complements the financial and technical support TDR has provided to eight teams from national TB programmes across West and Central Africa since 2023 in the design and conduct of IR studies to evaluate local social protection schemes for TB.
- ✔ **Global Urban health consultation and research priority setting exercise** conducted to identify research gaps on infectious diseases of poverty and IR with an intersectional gender lens.
- ✔ **New open space course and IR training repository**[29] developed for open sharing and easy accessibility
- ✔ **Massive online open courses (MOOC)**[30]
  - Module to support the implementation of the multisectoral approach to prevent and control vector-borne diseases;
  - Module on One Health approaches in IR (French);
  - IR toolkit module on One Health approaches in IR (English)[31].
- ✔ **IR Lecture series** [32] made available and accessible.
- ✔ **Pilot mentoring programme for leadership successfully implemented in 2024**, including the first cohort of mentors and mentees from research capacity strengthening networks.
- ✔ **Second, expanded edition of the TDR Women in Science compendium**[33] **published**. Four new profiles of recognized women scientists that worked with TDR were added to the existing fifteen profiles, which have been updated with new information. The revision strengthens the geographical and linguistic diversity of role models.

[28] Preparedness for epidemics and outbreaks, control and elimination of diseases of poverty, resilience to climate change's impact on health, resistance to treatment and control agents.
[29] https://tdr.who.int/training-resources
[30] https://tdrmooc.org/
[31] https://adphealth.org/irtoolkit/integrating-a-one-health-approach-into-ir/
[32] https://irconnect.net/lecture-series/
[33] https://tdr.who.int/publications/i/item/9789240100039

✔ **"Principles and Practice of Emergency Research Response"[34]: Chapter 7:** Research, Sample, and Data Sharing During Outbreaks, Pandemics, and Beyond, co-authored by TDR staff Robert Fraser Terry. Introduction to the book by Anthony Fauci and Tedros Adhanom Ghebreyesus.

Indicator 5 - Proportion of outputs (innovative knowledge, new/improved solutions, implementation strategies) and publications addressing at least one of the global health challenges outlined in the strategy

✔ **All 10 outputs in 2024 were aligned with at least one of the global health challenges.**

- Three primarily address climate change impact on health (Global urban health consultation and research priority setting exercise, the One Health MOOC module (French) and IR toolkit module on approaches in IR (English).
- Two primarily address control and elimination of diseases of poverty (the new research toolkit for evaluating the impact of social protection programmes among TB patients and the MOOC module on multisectoral approach to prevent and control vector borne diseases)
- One output addressed epidemics and outbreaks (Chapter 7 in the textbook "Principles and Practice of Emergency Research Response")
- The remaining 4 outputs, contribute to the capacity and leadership of disease endemic countries to address any of the global health challenges.

✔ **Eighty percent of the TDR supported peer reviewed publications in 2024 addressed at least one of the global health challenges.** The alignment was estimated based on a word search on the title and abstract. Of the 116 publications in 2024[35]:

- Diseases of poverty were addressed in 81 publications (70%)
- Epidemics and outbreaks in 20 (17%)
- Resistance to treatment and control agents in 11 (9%)
- Climate change's impact on health in 5 (4%)
- At least one of the global health challenges in 93 (80%)
- A One Health approach was mentioned in 5 (4%).

The proportion of outputs as well as publications aligned with at least one of the global health challenges is similar to last year (2023: 100% of outputs and 82% of publications).

However, while the order is the same, the proportion of publications addressing the control and elimination of diseases of poverty is higher compared to 2023 (70% versus 58%), while epidemics and outbreaks (17% versus 30%), resistance to treatment and control agents (9% versus 25%) and One Health (4% versus 13%) are less frequently cited in 2024. The proportion of publications addressing climate change's impact on health remains the same.

These metrics will continue to be monitored but will need more than one year to draw any meaningful conclusions.

[34] https://tdr.who.int/newsroom/news/item/09-09-2024-new-publication-principles-and-practice-of-emergency-research-response

[35] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

3.4 Capacity strengthening outputs: Enhanced research and knowledge transfer capacity within disease endemic countries

The generation of new research evidence comes as a result of research and capacity strengthening projects and grants, as well as convening and priority setting activities that TDR funds.

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
6. Number and evidence of disease endemic country institutions and networks demonstrating expanded scope of activities or increased funding from alternative sources, or that have influenced research agenda, policy and practice, as a result or related to TDR support[36]	0	10	27
7. Number of TDR trainees and fellows disaggregated by gender and WHO region: i. long courses and postgraduate education; ii. proportion demonstrating career progression and/or increased scientific productivity; and iii. short courses and MOOC[37].	0	i.900 W 45-55% ii. ≥80% iii. 9000	i. 281 W 53%

Indicator 6 - Number and evidence of disease-endemic country institutions and networks demonstrating expanded scope of activities or increased funding from alternative sources, or that have influenced research agenda, policy and practice, as a result or related to TDR support

✔ **The seven TDR Regional training centres (RTCs) expand their network to include disease control programmes, WHO country offices and regional offices in their research capacity strengthening activities specifically related to the strategic global health challenges.**

- All RTCs mandated to initiate calls and new scope linked to award course associated competitive small grants calls.
- The RTC of the Eastern Mediterranean Region, Institut Pasteur, Tunis: competitively re-selected, initiated a collaboration with the WHO Regional Office running IR courses in Cairo.
- The RTC of the Southeast Asian Region, Gadja Madha, Indonesia: organised results focused workshops targeting evidence to policy, with MoH and disease control programmes, including participants from the Western Pacific RTC
- The RTC of the Region of the Americas, Cali, Columbia: organised networking meetings and communities of practice across the region with various stakeholders, including the Pan American Health Organisation (PAHO).
- RTCs of the African Region, University of Ghana and UCAD Senegal: coordinated global MOOC platform activities including online experiences reaching participants in the thousands.
- The RTC of the Western Pacific Region, Kuala Lumpur, Malaysia: engaged with MoH, WHO country offices and national disease programs in Vietnam and Malaysia.

[36] TDR support may include financial, in kind, facilitation and/or expert types of support.
[37] Counting trainees and recipients of individual training grants. Long courses (Post graduate training scheme, Clinical research and leadership scheme, SORT IT trainees, impact grants for regional priorities). Short courses (MOOC, TDR regional training center trainees and other TDR grantees).

✔ **The eight universities in the second phase of TDR's supported postgraduate training programme have been active in disseminating the IR curriculum in their respective regions**. They have also developed a cadre of faculty trained and recognized in IR in their countries and regions.

- The University Gadja Madha (Indonesia) and BRAC (Bangladesh) developed partnerships with USAID and UNICEF to conduct in-country IR projects.
- The Indian Institute of Health Management Research (IIHMR) signed a Memorandum of Understanding to collaborate with the National Implementation Research Centre.
- The University of the Witwatersrand (South-Africa) received an NIH D43 grant for a PhD in Implementation Research.
- The University of Ghana started a partnership with the University of Washington, Seattle, for IR in non-communicable diseases.
- The University of Mali received an NIH D43 grant for an IR leadership fellowship
- ISED (Canada) / UCAD (Senegal) received a Gates grant for malaria research.
- The University of Antioquia (Columbia) in partnership with Peru, is promoting IR in the region.

✔ **Strengthened capacity and expanded research scope to conduct infectious disease research incorporating an intersectional gender lens**

- Bangladesh: BRAC James P. Grant School of Public Health, BRAC University, Dhaka;
- Bhutan: Institute of Health Partners, Thimphu.
- Ethiopia: Jimma University.
- India: Partnership for Research, Opportunity, Planning, Upskilling and Leadership (PROPUL), Chennai.
- Iran (Islamic Republic of): Mazandaran University of Medical Sciences.
- Philippines: Alliance for improving health outcomes, Quezon City.

✔ **SORT IT: strengthened leadership in Guinea, Kenya, Nepal and Sierra-Leone**

- Capacity to implement the entire course including application of established SOPs:
  - Guinea: Université Gamal Abdel Nasser de Conakry (UGANC)
  - Kenya: University of Nairobi Department of Obstetrics and Gynaecology
- Nepal successfully received the pandemic grant of 20 million US$ to use the model for capacity building.
- Sierra Leone secured Canadian funding to launch a program with local partners. Trainees leading a TDR-supported initiative to enhance HIV, TB, and malaria programs using Global Fund grants.

✔ **Research teams in French Polynesia and Cook Islands develop the plan for an expanded program for sterile insect technology (SIT) releases to cover larger territories.** The plan was requested by their respective governments following a TDR workshop and was approved by both governments in the late 2024.

Indicator 7 - Number of TDR trainees and fellows disaggregated by gender and WHO region.

The growing demand for IR training conceptualized and implemented by LMICs has inspired TDR to develop a range of training options, from workshops and short training courses, implemented by the seven RTCs, to fully accredited programmes in the TDR postgraduate training scheme, developed in partnership with eight universities in LMICs. This training goes beyond academia-based researchers and includes communities, implementation programmes, decision- and policymakers

i. long courses and postgraduate education

- Post graduate training scheme:

In 2024, 50 new master's students (22 men and 28 women) from 29 countries were enrolled, of which 6 were from French speaking west African countries and 41 students (20 men and 21 women) completed their MPH degree focusing on IR.

Moreover, a literature search revealed that TDR supported postgraduate grantees had signed 197 publications in peer reviewed journals.

- Clinical research and leadership scheme:

The first cohort of clinical research leadership scheme, 6 men and 14 women, were placed with hosts, and the second cohort, 8 men and 8 women, were identified together with partner hosts.

Overall, 128 fellows (89 men and 39 women) have finalized the earlier clinical research and development fellowship and in 2024 the last two fellows started re-entry programs with their home institutions.

- SORT IT trainees

A total of 205 individuals were trained through TDR SORT IT courses, including 108 women (53%).

Training sessions covered diverse topics: TB Disability Training, Manuscript Writing & Outbreak Communication, Manuscript Writing (3 courses), Protocol Development (2 courses).

Participants from 16 countries were trained: Burkina Faso (3), DRC (1), Ghana (9), Guinea (11), India (15), Iran (2), Kenya (48), Liberia (3), Senegal (1), Sierra Leone (13), Tunisia (4), Uganda (26), UAE (2), UK (12), Zambia (25), Zimbabwe (29).

- Impact grants for regional priorities:

Impact grant calls were developed and implemented in the Eastern Mediterranean Region and in the European Region in 2024. Selected grants from these regions will be supported in 2025. Ten impact grant studies from the 2023 call in the South-East Asian Region were supported in 2024.

ii. proportion demonstrating career progression and/or increased scientific productivity

- Postgraduate Alumni Survey: Conducted to track the career progress of TDR postgraduate training alumni from 2015 to 2024. Key findings include:
  - → Most respondents are employed in universities, non-profits, or government roles.
  - → High appreciation for TDR support, with many alumni pursuing further education or training.
- TDR Global Membership Survey: Surveyed the entire TDR Global community to assess the impact of TDR support on their careers. Key findings include:
  - → High appreciation for TDR support, especially among younger and LMIC respondents.
  - → Low brain drains, with 93% still working in their country of nationality.

iii. short courses and MOOC

TDR supports a network of RTCs, of which the first were selected on a competitive basis in 2009, and in 2024 the Eastern Mediterranean RTC was competitively re-selected. All RTCs conduct and disseminate training courses relevant to the TDR Strategy. In 2024:

- ✔ The RTC institutions organized 9 in-person TDR training courses for 345 researchers, health professionals, decision makers and other stakeholders on topics covering the end-to-end process of IR in infectious diseases of poverty.
- ✔ Over 7,300 participants registered for 9 sessions of the principles/basic IR MOOC held throughout the year – delivered in Arabic, English, French, Russian and Spanish.
- ✔ Self-paced MOOC modules, lecture series and YouTube videos engaged learners in the thousands.
- ✔ More than 200 students were trained to incorporate an intersectional gender approach in IR, following the TDR IR MOOC module on gender and intersectionality in 2024 and 97 participants (46.0%) completed the MOOC session with a passing grade of ≥80%.

3.5 Global engagement outputs: Key stakeholders engaged in harmonizing agenda and practices and in new initiatives

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
8. Number and evidence of research-related agendas, recommendations and practices agreed by stakeholders at global, regional or country level and facilitated by TDR	0	6	1
9. Evidence of stakeholder engagement in TDR joint initiatives aligned with TDR strategic objectives	N/A	N/A	Evidence provided

Indicator 8 - Number and evidence of research-related agendas, recommendations and practices agreed by stakeholders at global, regional or country level and facilitated by TDR

- ✔ In 2024, TDR has continued to effectively engage with WHO and other partners to create research agenda. These activities are ongoing and planned for publication in 2025:
  - o Knowledge Translation,
  - o NTDs as part of the NTD Roadmap 2030
  - o Traditional, Complementary and Integrated Medicine
- ✔ **TDR's contribution to a chapter on research and data sharing during health emergencies**[38] to a new open access eBook entitled Principles and practice of emergency research response.
- ✔ TDR has continued to be a major contributor to the COVID-19 Clinical Research Coalition, specifically contributing to the Data Sharing Working Group.
- ✔ In 2024, TDR contributed to Guidance development for diagnosis of Schistosomiasis haematobium, specifically the Ultrasound protocol.

Indicator 9 - Evidence of stakeholder engagement in TDR joint initiatives aligned with TDR strategic objectives

In 2024, TDR engaged with many stakeholders, partners, and project implementers (grantees and trainees). We worked closely with WHO special programmes and the Science Division, with disease control and other departments, to address strategic priorities, needs, and gaps at global, regional, and country levels.

We worked with ministries of health and disease control programmes in countries to strengthen their capacity for conducting implementation and operational research, to support multisectoral approaches for the prevention and control of vector-borne diseases and to help build resilience to climate change, to mitigate the impact of climate change on health systems via One Health approaches.

We worked through regional training centres, universities in LMICs, networks such as the ESSENCE on Health Research Initiative, SIHI, the Caribbean Public Health Agency, Global Vector Hub, TDR Global, SIDCER-FERCAP, Pan-African Bioethics Initiative (PABIN), One-Health Network, etc., to promote LMIC leadership in health research, innovation and good practices. Details of collaboration can be found in the annual report published for each TDR strategic priority area – Research for implementation, Research capacity strengthening and Global engagement.

[38] https://tdr.who.int/newsroom/news/item/09-09-2024-new-publication-principles-and-practice-of-emergency-research-response

4. Application of core values

4.1 Socio-economic and gender equity

TDR is a Research Fairness Initiative (RFI) reporting organization and has been externally evaluated as an organization that can use the RFI logo, demonstrating its fairness in:

- **Opportunities**: involvement of all stakeholders in our work to ensure impact at country level.
- **Processes**: measures our commitment to equity in how our programmes are implemented.
- **Benefits**: fairness in the sharing of costs and outcomes in our research and seeking to apply best practices in our research collaborations and partnerships.

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
10. Proportion of TDR grants/contracts awarded to institutions or individuals in disease endemic countries (total count and total amount)	85% (count) 88% (amount)	67-90%	66% (amount)
11. Proportion of experts from DECs on TDR external advisory committees	57%	50-75%	60%
12. Proportion of peer-reviewed publications supported by TDR with authors from DEC institutions (first author - FA, last author - LA, corresponding author - CA)	FA: 77% LA: 57% CA: 72%	≥67%	FA: 72% LA: 58% CA:67%
13. Number of peer-reviewed publications supported by TDR and percentage published in open/free access	179 97%	100/y (600) >90%	119[39] 92%
14. Proportion of women among grantees/contract recipients (total count and total amount)	47% (count) 49% (amount)	45-55%	50% (amount)
15. Proportion of women on TDR external advisory committees	67%	45-55%	71%
16. Proportion of women authors of peer-reviewed publications supported by TDR (first author - FA, last author – LA, corresponding author - CA)	FA: 42% LA: 31% CA: 36%	45-55%	FA: 44% LA: 42% CA: 37%
17. Number and proportion of peer-reviewed publications explicitly considering: gender and women issues, vulnerable groups or people with disabilities	62%	>75%	Total: 64% Gender: 8% Vulnerable: 64% Disabilities: 14%

[39] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

Indicator 10 - Proportion of TDR grants/contracts awarded to institutions or individuals in disease endemic countries (total count and total amount)

In 2024, 354 grants and contracts for a total amount of US$ 7 million were awarded to institutions and researchers from 52 countries (38 DEC, 14 non-DEC). Of those, 196 awards, representing 66% of the amount, went to DECs.

Figure 3. Grants/contracts awarded to disease endemic countries, 2024 (US$ and % amount)

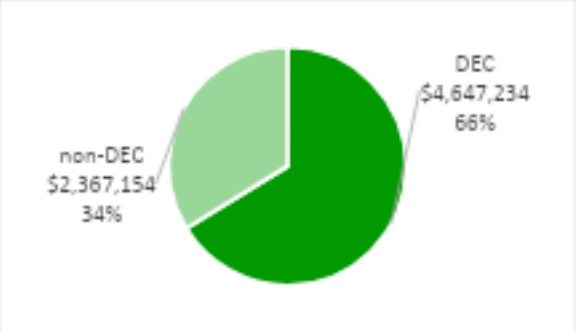
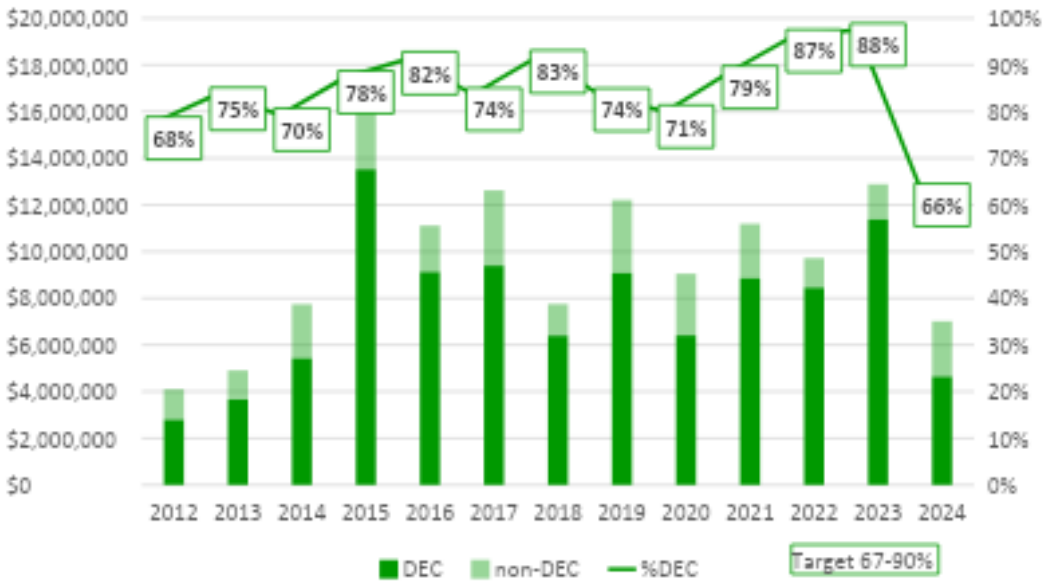


Figure 4. Grants/contracts awarded to disease endemic countries, 2012-2024 (US$ and %)

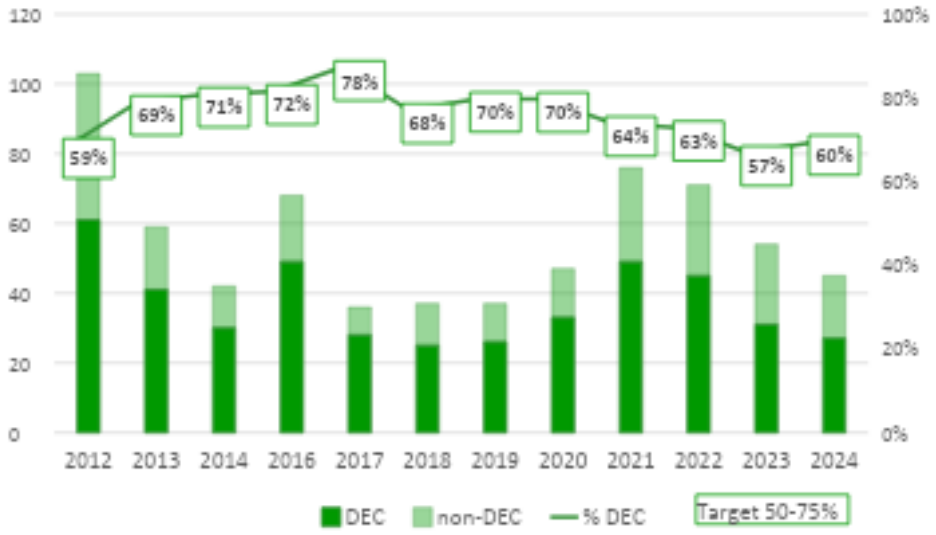


The proportion of grants awarded to disease endemic countries has in recent years been higher within the target range. Close monitoring in 2025 will allow to estimate if the apparent drop in 2024 is an outlier or a trend that needs to be investigated and acted upon.

Indicator 11 - Proportion of experts from disease endemic countries on TDR external advisory committees

Of the 45 TDR expert advisers in 2024, 27 originate from a DEC. While the proportion has been higher in the past, overall, the secretariat consistently remains aligned with the 60% target.

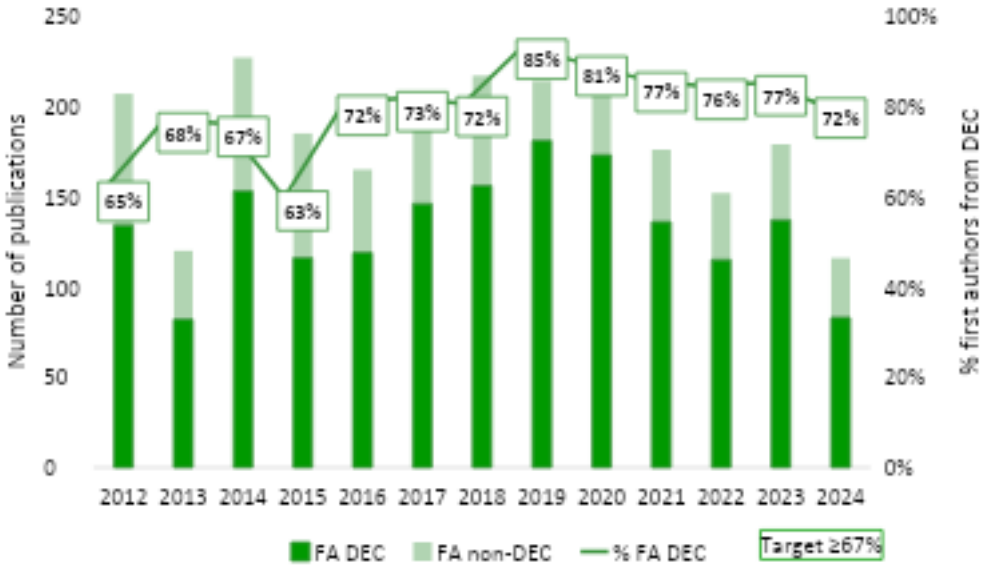
Figure 5. External expert advisers from disease endemic countries, 2012-2024



Indicator 12 - Proportion of peer-reviewed publications supported by TDR with authors from disease endemic country institutions (first author, last author, corresponding author)[40]

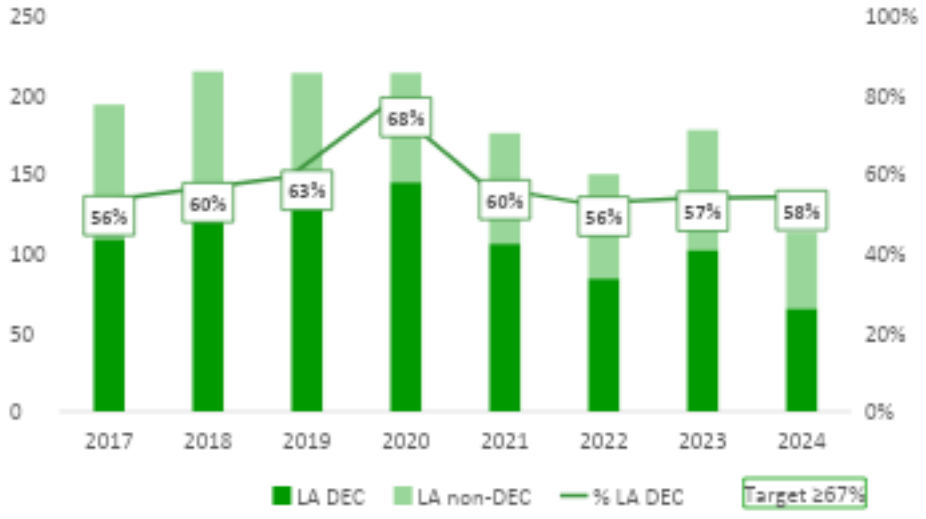
Out of the 116 TDR-supported peer reviewed publications in 2024, 83 (72%) had a first author from a disease endemic country, remaining well above the 67% target. In the past 12 years, the target has been systematically achieved except in 2012 and 2015, with the highest proportion in 2019 (Figure 7).

Figure 6. Publications: first authors from disease endemic countries, 2012–2024



Looking at the proportion of last authors from disease endemic countries, the target of ≥ 67% has been more challenging to achieve. With 58% in 2024 (Figure 8), the proportion remains above the 56% baseline established in 2017.

Figure 7. Publications: last authors from disease endemic countries, 2017-2024



[40] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

Of the 83 publications with a first author from a disease endemic country, 64 (77%) also have a last author from a disease endemic country. Conversely, of the 30 publications that have first author from a non-disease endemic country, only 1 has a last author from a disease endemic country.

Finally, the proportion of corresponding authors from a disease endemic country remains at the target, although it has progressively dropped from its highest at 83% in 2019, to 67% in 2024.

Figure 8. Publications: corresponding authors from disease endemic countries, 2019-2024

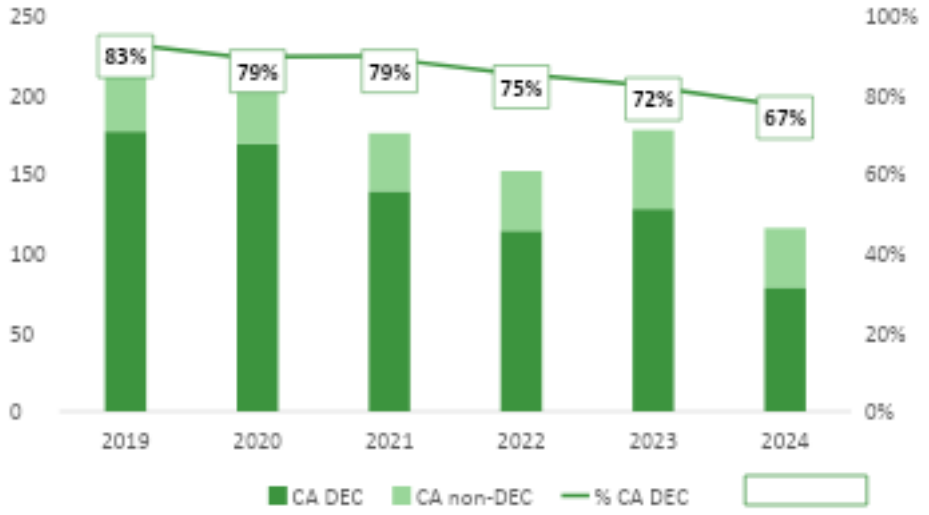
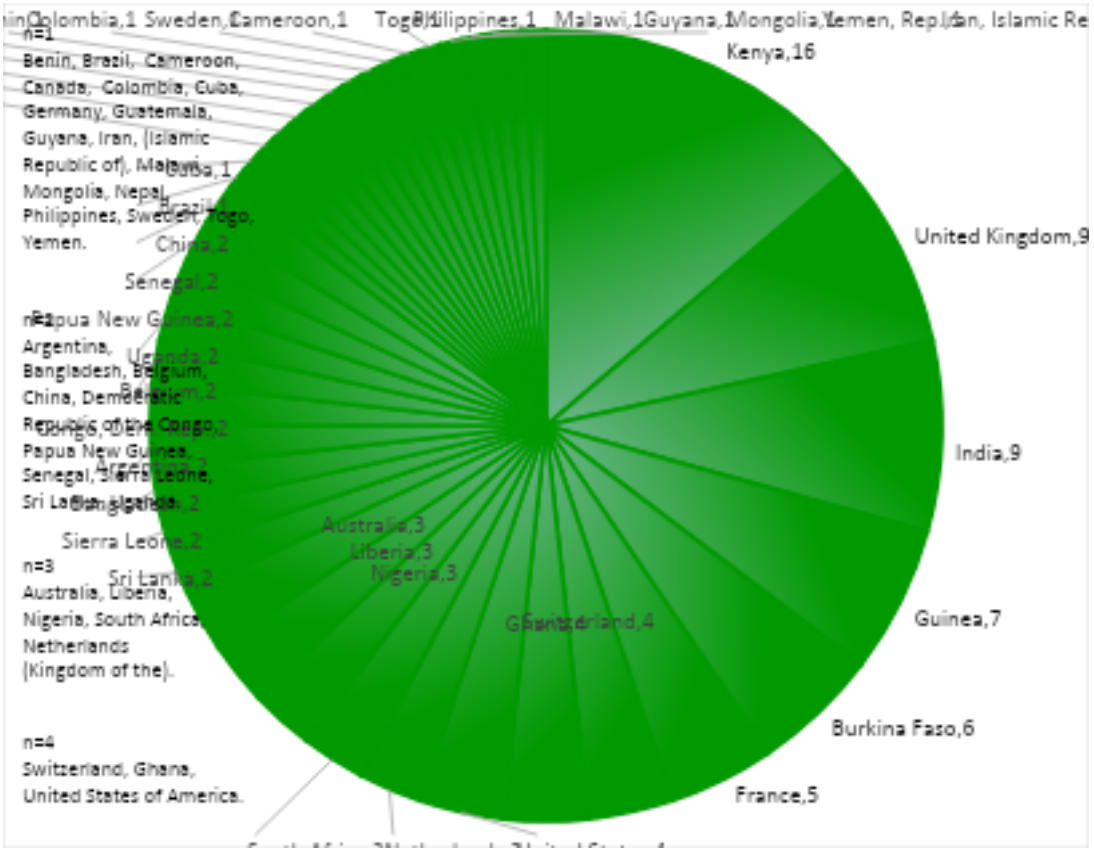


Figure 9. Publications: first authors by country, 2024



In 2024, first authors of TDR supported publications originated from 41 countries of which 31 are disease endemic countries. Kenya alone had 16 publications with 13 different first authors from their country.

In previous years the countries with most TDR supported publications with first authors were:

- Columbia (14) and Ghana (12) in 2023
- Ghana (18), Sierra Leone (14) and Columbia (12) in 2022
- Nepal (16) in 2021
- India (28), Switzerland (14) and the United Kingdom (13) in 2020.

Indicator 13 - Number of peer-reviewed publications supported by TDR and percentage published in open/free access[41]

A complete list of TDR supported publications in 2024 is included in Annex 1 with the names of the author(s), the publication title and the peer-reviewed journal in which the article or publication appears.

Five examples showing how TDR-supported research has contributed to changes in policy or practice are highlighted below.

Harries AD, et al.[42] Applying 'timeliness' to the screening and prevention of TB in household contacts of pulmonary TB patients. Implementation research conducted in India, Kenya and Pakistan on the adaptation of the 7-1-7 timeliness metrics to the TB context is driving policy change. The metrics usually used to improve the early detection and rapid control of suspected infectious disease outbreaks and pandemics, were adapted to improve the management of household contacts, including TB preventive therapy, of people with TB. Using 7-1-7 metrics, the uptake of TB preventive therapy increased as well as speed of delivery. The key findings were featured in the 2024 WHO Operational Handbook on TB Preventive Therapy and influenced WHO policy.

Kenya, Uganda, Zambia, and Zimbabwe TB Disability Study Group[43] Disability, comorbidities and risk determinants at end of TB treatment in Kenya, Uganda, Zambia and Zimbabwe. This research provided the WHO Global TB Programme with key new evidence, directly contributing to WHO policy on TB-associated disability.

Magassouba, A.S., et al.[44] Tuberculosis screening among cough suppressant buyers in pharmacies and drug outlets in Guinea: a cross-sectional study. This publication shows how the national TB programme of Guinea used research evidence to improve national practice for screening for TB by expanding screening among cough suppressant buyers in pharmacies and drug outlets outside of Conakry in regions where there are gaps in TB notification.

Kilonzo, C., et al.[45]. Assessing capacity in surveillance and response, resource availability and readiness score for malaria elimination in four counties and their sub-counties; Kenya, 2023. The transition from malaria control to elimination is complex and context specific, and often requires more resources, including rigorous monitoring. This article identified key implementation gaps hindering the roll out of malaria elimination policy/strategy in the selected counties. The "Not ready" findings have clear negative health impact (delayed implementation) but at the same time they provided a baseline status on which to measure progress and inform policy revision.

Penkunas, M., et al. [46]Barriers to Applying Knowledge Gained Through an Implementation Research Massive Open Online Course: An Explanatory Qualitative Study. This work provides important

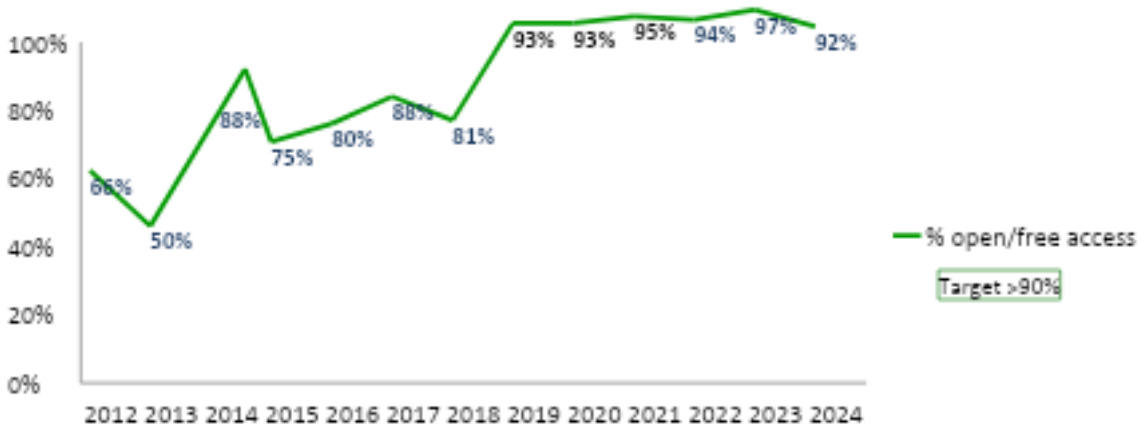
[41] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed
[42] See reference 33
[43] See reference 41
[44] See reference 59
[45] See reference 44
[46] See reference 84

information on how to maximize benefit from MOOC context when building IR capacity on the pathway to health impact.

Open access

Of the 116 TDR-supported peer-reviewed publications in 2024, 92% were published in open or free access. Of the 9 publications that were not open access, 6 had a last author and 4 a first and last author from a non-disease endemic country.

Figure 10. Publications: open/free access 2012-2024

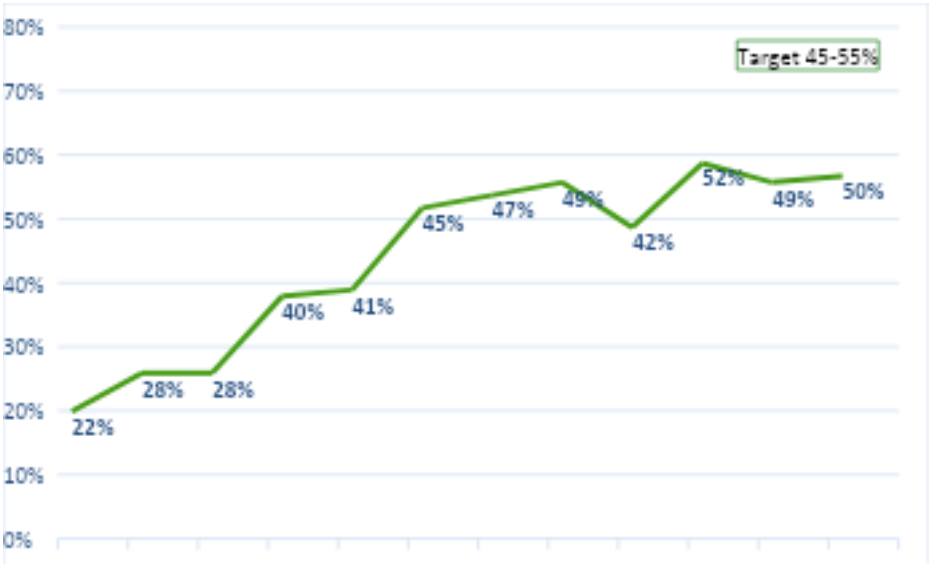


Indicator 14 - Proportion of women among grantees/contract recipients (total count and total amount)

In 2024, the amount of grants awarded to women remained at 50% (Figure 11). This is remarkable, when looking at the progression since 2012 (Figure 12).

Figure 11. Grants/contracts awarded to women (amount and % US$), 2024

Figure 12. Grants/contracts awarded to women, 2012 to 2024 (% US$)



Indicator 15 - Proportion of women on TDR external advisory committees

In 2024, 36 individual experts were involved in TDR's external advisory committees. As some experts sit on more than one committee, they represented 45 expert seats. The proportion of women amongst them was 69%, representing 71% of the expert adviser seats.

The progression of women advisers since 2012 reflects TDR's efforts to involve women in higher advisory roles (Figure 13).

Of note, 47% of all individual experts advising TDR in 2024, were women from DEC (Figure 14).

Figure 13. External expert advisers: gender 2012-2024

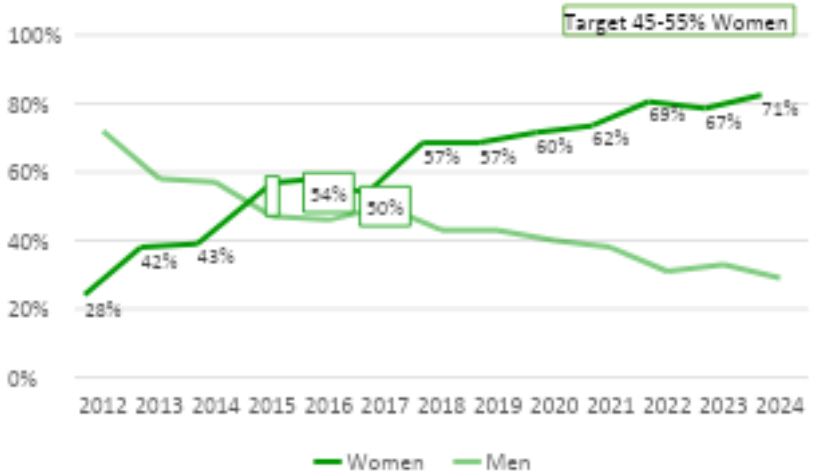
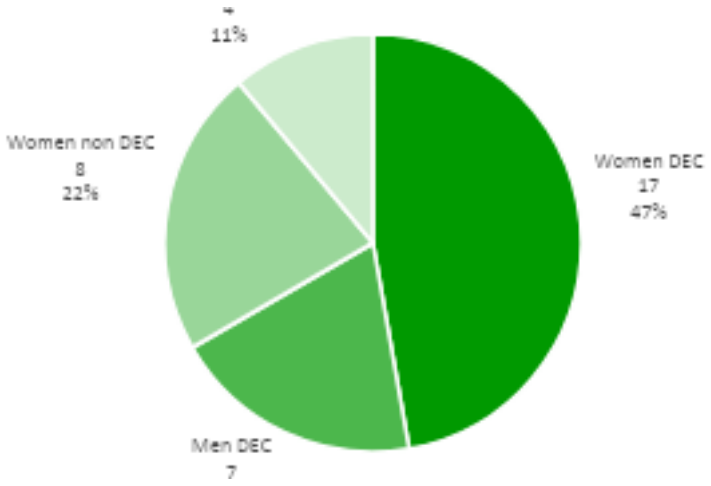


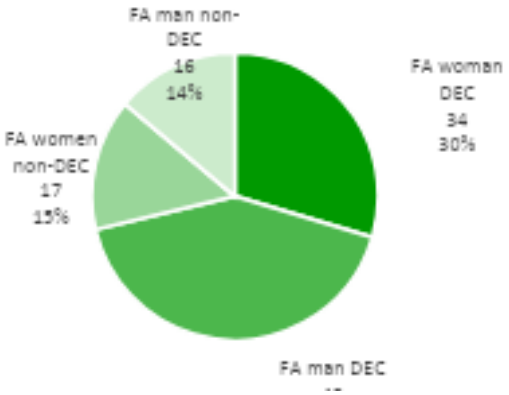
Figure 14. External expert advisers: gender and country, 2024



Indicator 16 - Proportion of women authors of peer-reviewed publications supported by TDR (first author, last author, corresponding author)[47].

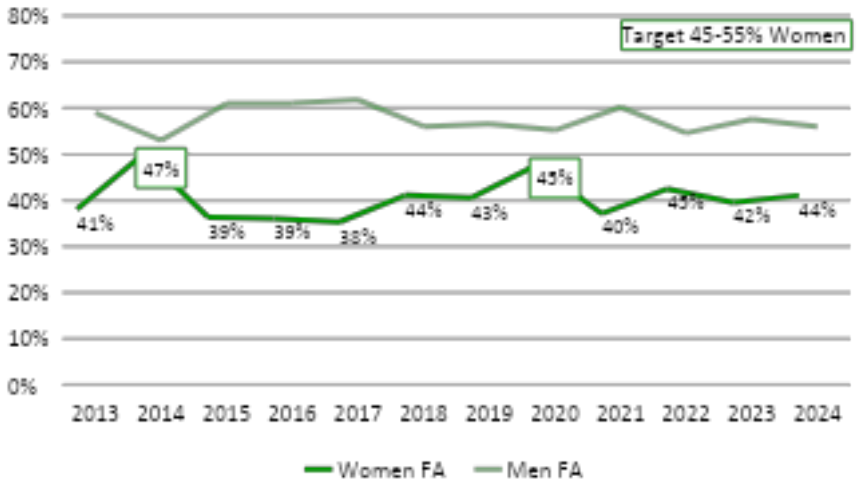
In 2024, 44% of first authors of TDR-supported publications were women: 29% from disease endemic and 15% from non-diseased endemic countries (Figure 15). This remains just below the 45-55% target range and has not evolved significantly over more than a decade (Figure 16) despite TDR's continuous efforts to support women in science.

Figure 15. Publications: first authors by gender and country, 2024



[47] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

Figure 16. Publications: gender distribution of first authors, 2013-2024



The proportion of women among last authors of TDR-supported publications was overall 42% in 2024. While this is below the target range, a positive trend seems to emerge over longer periods (Figure 18).

Figure 17. Publications: last authors by gender and country, 2024

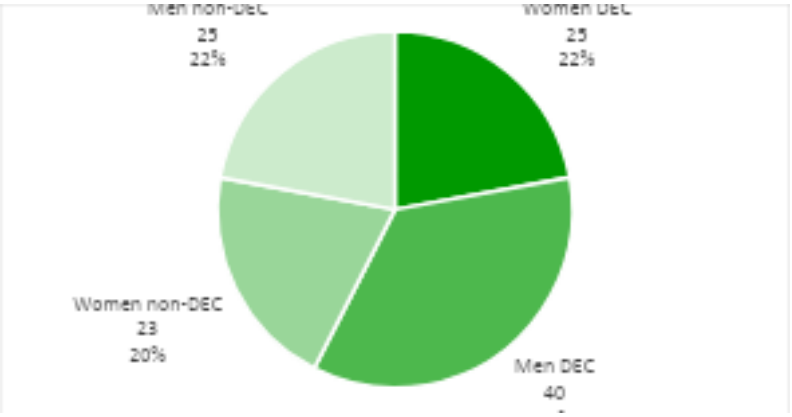
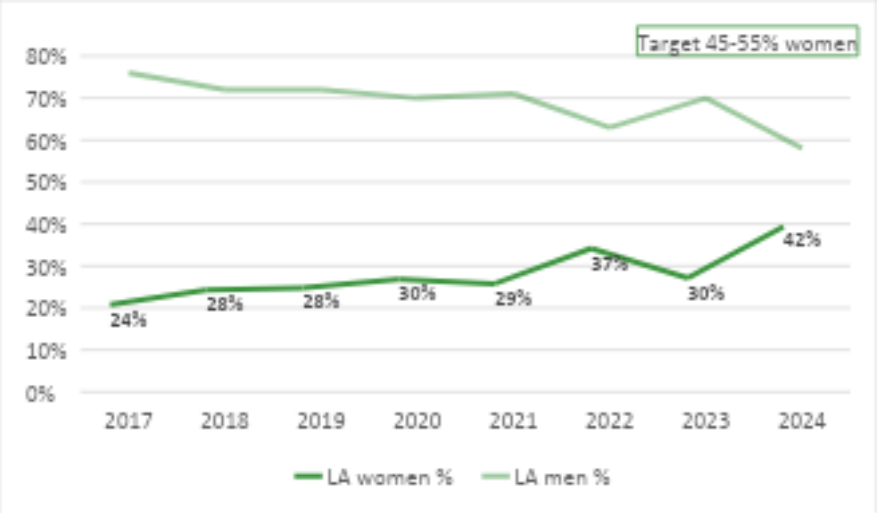


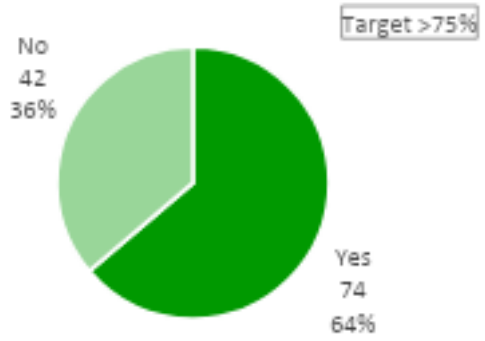
Figure 18. Publications: gender distribution of last authors, 2017-2024



Since measuring the gender distribution of corresponding authors at the request of TDR's Scientific and Technical Advisory Committee (STAC) in 2021, the overall proportion of women corresponding authors increased from 35% to 44% in 2022 but dropped again to 37% in 2024.

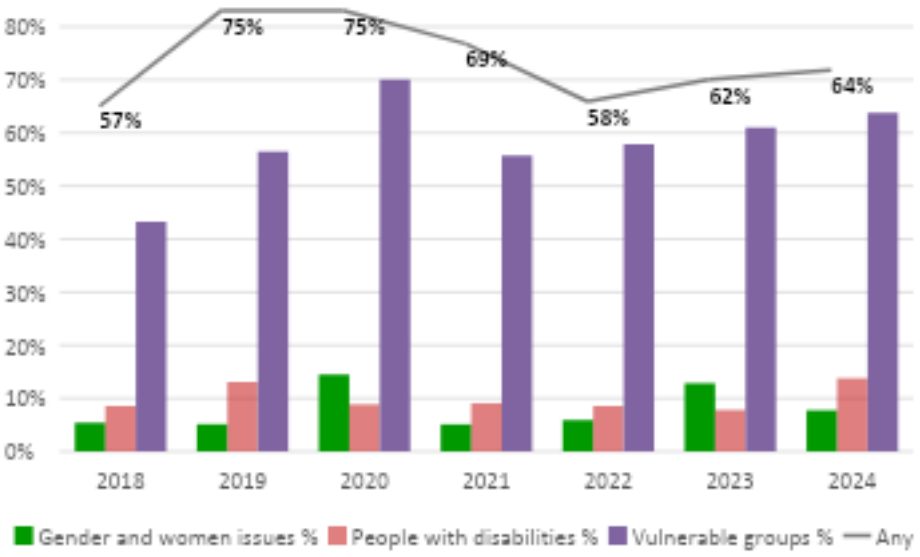
Indicator 17 - Number and proportion of peer-reviewed publications explicitly considering gender and women issues, vulnerable groups or people with disabilities.

Figure 19. Publications explicitly considering vulnerable groups



Overall, 74 (64%) of the 116 TDR supported publications in 2024[48] explicitly considered vulnerable groups.
Specifically, Gender and women issues were addressed in 9 publications, people with disabilities in 16, and vulnerable groups in 74.

Figure 20. Publications explicitly considering vulnerable groups, 2018-2024



[48] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed.

4.2 Effective multisectoral partnerships

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024*
18. Resources leveraged as direct contributions (co--funding, services or in-kind) to TDR projects (examples)	$ 1:1 ($ TDR: $ partners) People 1:50	≥50%	NA

Indicator 18 - Resources leveraged as direct contributions (co-funding, services or in-kind) to TDR projects (examples).

Will be measured at the end of the biennium.

4.3 Value for money

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
19. Evidence demonstrating value-for-money, cost savings and/or enhanced efficiency or effectiveness	N/A	N/A	NA

Indicator 19 - Evidence demonstrating value-for-money, cost savings and/or enhanced efficiency or effectiveness.

Will be measured at the end of the biennium.

4.4 Quality of work

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
20. Proportion of project reports evaluated as satisfactory by external advisory committees	100%	>80%	NA

Indicator 20 - Proportion of project reports evaluated as satisfactory by external advisory committees.

Will be measured at the end of the biennium.

4.5 Sustainability of outcomes

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
21. Number of effective public health tools and strategies developed which have been in use for at least two years	0	40	NA

Indicator 21 - Number of effective public health tools and strategies developed which have been in use for at least two years.

Will be measured at the end of the biennium.

5. Management performance

5.1 Effective resource mobilization

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
22. Percentage of approved biennial budget successfully funded	*96% of the US$ 40M budget scenario*	≥100%	NA
23. Percentage of income received from multi-year, unconditional donor agreements	*35%*	25%	NA

Indicator 22 - Percentage of approved biennial budget successfully funded.

Will be measured at the end of the biennium.

Indicator 23 – Percentage of income received from multi-year, unconditional donor agreements.

Will be measured at the end of the biennium.

5.2 Effective management

Key performance indicators	Baseline (2023)	Target (2029)	Progress *(contrib. 2024)*
24. Percentage of staff workplans and performance reviews (including personal development plan) completed on time	96%	≥90%	96%
25. Proportion of expected results on track	84%	≥80%	96%
26. Proportion of significant risk management action plans that are on track	100%	≥80%	100%

Indicator 24 – Percentage of staff workplans and performance reviews (including personal development plan) completed on time.

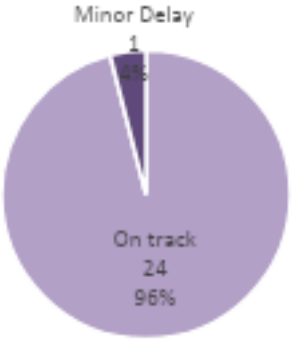
TDR's compliance rate with staff workplans and performance reviews done before WHO's deadline was 96% in 2024. The only non-compliant case was beyond TDR's control.

Indicator 25 – Proportion of expected results that are on track.

The list by TDR expected result is shown in Annex 3. The summary status of expected results at 31 December 2024 was:

- 24 on track
- One ER had minor delays.

Figure 21. Expected results: status 31 December 2024



Indicator 26 – Proportion of significant risk management action plans that are on track.

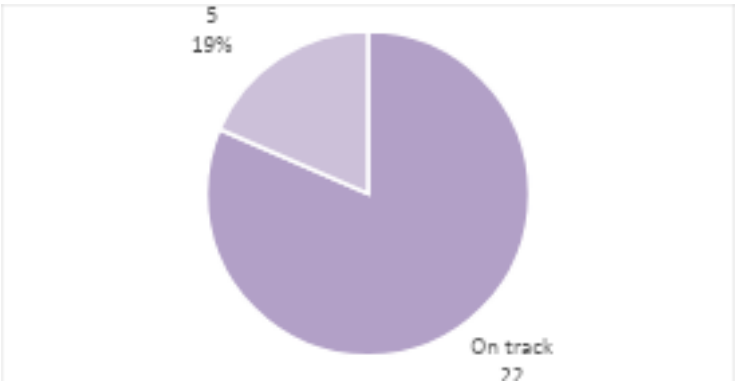
At the end of 2024, the following six Programme-level risks were open:

- Risk 1 (Portfolio alignment with TDR strategy)
- Risk 2 (TDR income)
- Risk 9 (Communication of TDRs unique value)
- Risk 10 (Appropriate and timely translation of research evidence to inform policy and practice)
- Risk 18 (TDR's visibility within collaboration and partnerships)
- Risk 20 (Replacement of TDR key personnel).

Twenty-seven action items, including two that were added to address Risk 2 (TDR income), were monitored in 2024. Of those:

- 22 were on track,
- 5 were completed,
- no action was delayed

Figure 22. Risk management: status of action items 31 December 2024



6. Lessons learnt

Aligning indicators with the four TDR global health challenges. The year 2024 was the first year in the TDR strategy 2024-2029. The Performance Framework 2024-2029[49] guides how TDR plans, monitors and reports on the progress made towards achieving the key performance indicator targets approved by the Joint Coordinating Board. The new indicators measuring alignment with the four TDR global health challenges necessitated baseline measurements, which were retrospective, and discussion around defining what constitutes alignment. One aspect that required clarification was how to report outputs that, by their nature and broad design, are intended to address all the global health challenges. These include (for example) numerous deliverables from the research capacity strengthening strategic area, which builds institutional capacity for research in LMICs through courses and targeted grants. The agreement was for these outputs to be categorized as crosscutting and counted towards the target. Another aspect that will require monitoring is how to best utilize key performance indicators target ranges, which has been implemented at the recommendation of the Seventh External Review of the Programme.

Developing TDR's first Investment Case. At the request of the Standing Committee, TDR proceeded with developing its first Investment Case[50]. The work was mainly conducted by an external health economist who, together with the technical teams in TDR, identified several areas of impact where TDR's contribution could be estimated with less effort. The analysis by the health economist[51] illustrated some notable contributions to reducing the burden of infectious diseases of poverty and highlighted the important role of the Special Programme's independence in being able to pioneer novel and very impactful approaches and technologies. A lesson to be applied in the future is that more of these analyses are needed, and TDR to include from the outset in large research projects an end-of-project evaluation of the health and economic impact.

Planning cautiously, forecasting conservatively for financial stability. The year 2024 had its share of global and regional events that overall led to a more difficult fundraising environment for health research and capacity strengthening. The current biennium's income flow has been within the expected range, allowing us to implement at full speed the US$ 40 million (base) budget scenario. The Standing Committee requested TDR that any savings in undesignated funds (flexible funding) be re-programmed to the following biennium rather than scaling up to the higher scenario, as the uncertainty in the global situation is likely to continue.

Delays in the appointment of the next Director. In line with TDR's succession planning policy, and as Professor John Reeder's appointment would come to an end in May 2025 through age-limit retirement, we started the recruitment of the next Director two years in advance, to compensate for any potential delays encountered in the process. We followed the best practices used in the past by TDR and HRP, hired an executive search firm and, together with HR, organized a Special Panel for the selection that included the standard WHO membership plus members of TDR's governing bodies, including co-sponsors of the Special Programme. Despite the Special Panel making its recommendation in November 2024, due to a hiring freeze imposed by WHO as part of the response measures to the financial situation of WHO, the appointment has been delayed. New risk management actions have been implemented since to speed up the appointment and cover for any interim period.

[49] See the Performance Framework here: https://tdr.who.int/publications/i/item/tdr-performance-framework-(2024-2029)
[50] See the Investment Case here: https://tdr.who.int/publications/m/item/tdr-investment-case
[51] The full analysis is available upon request.

7. Annexes

Annex 1. List of TDR-supported peer-reviewed publications 2024[52]

1. Abdul-Ghani, R., Al-Awadi, A., Al-aghbari, N., Al-Mikhlafy, A., Abdulmoghni, S., Al-dobai, S., & Nauman, N. (2024). Latent tuberculosis infection and diagnostic performance of the tuberculin skin test among type 2 diabetics in Sana'a city, Yemen [Article]. BMC INFECTIOUS DISEASES, 24(1), Article 1005. https://doi.org/10.1186/s12879-024-09931-8
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5. Alves, Y., Berra, T., de Jezus, S., Araújo, V., Pinheiro, J., de Assis, L.,…Arcêncio, R. (2024). Adherence to Short-Duration Treatment (3HP) for Latent Tuberculosis among International Migrants in Manaus, Amazonas: Evaluation of the Efficacy of Different Treatment Modalities [Article]. MICROORGANISMS, 12(8), Article 1629. https://doi.org/10.3390/microorganisms12081629
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9. Aslanyan, G., Sheikh, k., Feletto, M., Launois, M., Vahedi, M., Brizuela, V., Thorson, A., Begg, S., Crossman, S., Bates, I., - The process of developing a joint theory of change across three global entities: can this help to make their efforts to strengthen capacity for implementation research more effective?: (2024) BMJ Public Health;2:e000029
10. Bita, S., Kelebi, T., Holmes, A., Vaccher, S., Majumdar, S., & Greig, J. (2024). TB burden and diagnostic challenges at Sandaun Provincial Hospital in West Sepik Province of PNG, 2016-2021 [Editorial Material]. PUBLIC HEALTH ACTION, 14(3). https://doi.org/10.5588/pha.24.0016
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12. Bouyer J. (2024). Current status of the sterile insect technique for the suppression of mosquito populations on a global scale. Infectious diseases of poverty, 13(1), 68. https://doi.org/10.1186/s40249-024-01242-z
13. Broban, A., van den Bergh, R., Russell, W., Benedetti, G., Caluwaerts, S., Owiti, P.,…De Plecker, E. (2024). Assault and care characteristics of victims of sexual violence in eleven Médecins Sans Frontières programs in Africa. What about men and boys? [Correction]. PLOS ONE, 19(2), Article e0299409. https://doi.org/10.1371/journal.pone.0299409
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[52] Three of the 119 references (Ref 9, Ref 45 and Ref 85) were added after analyses had been performed

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Annex 2. Progress on the TDR's current portfolio of expected results status update

Expected Result Title	*ER Status 31 Dec 2024*
ER 1.1.1. Country preparedness for disease outbreaks	On track
ER 1.1.4. Country resilience to the threat of drug-resistant infections	On track
ER 1.1.5. Optimised methodologies	On track
ER 1.1.7. Maximized utilization of data for public health decision making	On track
ER 1.2.1. Strategies to achieve and sustain disease elimination	On track
ER 1.2.6. Optimized approaches for effective delivery and impact assessment of public health interventions	On track
ER 1.2.8. Digital solutions for improved public health	On track
ER 1.3.3. Climate change and vector-borne diseases	On track
ER 1.3.5. Research on social innovation to enhance healthcare delivery	On track
ER 1.3.10. Urban health interventions for the prevention and control of vector-borne and other infectious diseases of poverty.	On track
ER 1.3.12. Gender-responsive health interventions	On track
ER 1.3.14. Innovative strategies for vector control	On track
ER 1.3.15. VBD prevention and control for vulnerable and hard to reach population	On track
ER 2.1.1.1. Strategic support to WHO regional activities: the regional training centres	On track
ER 2.1.1.2. WHO regional office collaboration and Impact grants for regional priorities	On track
ER 2.1.2. Targeted research training grants in low-and middle-income countries	On track
ER 2.1.4. Advanced training in Clinical Product Development (Career Research and Development Fellowship grants)	On track
ER 2.1.6. Structured capacity building in Implementation Research to improve access and delivery of health technologies in LMICs	On track
ER 2.1.7. Strengthening operational research capacity in Global Fund supported programmes	On track
ER 2.2.1. Knowledge Management shaping the research agenda	On track
ER 2.2.2. Capacity strengthening to bring research evidence into policy	On track
ER 2.3.1. Collaborative networks (ESSENCE on Health Research) and engagement with global health initiatives collaborative networks and Global Health Initiatives	On track
ER 2.3.3. TDR Global - the community of former trainees, grantees and experts	On track
ER 2.3.4. Effective engagement in gender and equity	On track
ER 2.3.5. Community engagement and ethics	Minor delay

Annex 3. TDR 2024 revenue

CONTRIBUTOR	
Core contributors	**Amount (US$)**
Belgium	681 044
Germany	426 894
India	55 000
Japan [1]	50 000
Luxembourg	1 185 379
Malaysia	25 000
Mexico	10 000
Nigeria [1]	200 000
Norway	277 367
Panama	7 000
Spain [1]	105 042
Sweden	2 408 196
Switzerland	2 035 928
Thailand	40 772
World Health Organization [2]	900 000
Subtotal	**8 407 622**
Contributors providing project-specific funding	**Amount (US$)**
Centers for Disease Control and Prevention (CDC), United States of America [3]	294 945
Expertise France	277 043
Gates Foundation	1 538 499
Luxembourg	413 341
Sweden	199 587
United Nations Development Programme (UNDP)	480 000
United States Agency for International Development (USAID) [3]	1 479 499
Subtotal	**4 682 914**
Total contributions	**13 090 536**

1. Contributions from the governments of Japan, Spain and the Federal Republic of Nigeria for the year 2024 will be reported in the certified financial statement in 2025, due to the timing of their receipt.
2. The contribution from the World Health Organization reflects the first year of their 2024–2025 contribution, which will be reported in full in the certified financial statement in 2025.
3. Contributions from the Government of the United States of America reflect legally binding agreements in place. In January 2025, the Government of the United States of America froze these grants preventing further expenditures. There is significant risk for partial or total loss of these contributions. The reduction will be reflected in the year that the decision is finalized.

Thank you to our core contributors who provided **overall Programme** support in 2024.

Japan

Thailand

Thanks also to the contributors who provided support to **specific projects** in 2024.

** Listed in order of level of contribution*

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