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Agenda item 3.4

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10 June 2024

TDR Results

2023 Report

Agenda item:	3.4
Action / Information:	JCB is invited to review and approve the report.
Purpose:	This document presents TDR's results during 2023.

TDR Results

2023 Report

List of figures and tables

Abbreviations

AFRO	WHO Regional Office for Africa
AFROHUN	Africa One Health University Network
AHPSR	Alliance for Health Policy and Systems Research
AMRO/PAHO	WHO Regional Office for the Americas/ Pan-American Health Organization
CARPHA	Caribbean Public Health Agency
CERCLE	Coalition for Equitable ResearCh in Low-resource sEttings
CIDEIM	Centro Internacional de Entrenamiento e Investigaciones Médicas
CRDF	Clinical Research and Development Fellowship
CRL	Clinical Research Leadership Fellowship
DAC	Data Access Committee
DAS	data availability statement
DEC	low- and middle-income countries where neglected diseases are prevalent / endemic
EDCTP	European and Developing Countries Clinical Trials Partnership
ESSENCE	ESSENCE on Health Research Initiative
EURO	WHO Regional Office for Europe
EYE	Eliminate Yellow fever Epidemics
FERCAP	Forum for Ethical Review Committees in the Asian and Western Pacific Region
Fiocruz	Fundação Oswaldo Cruz
GBIF	Global Biodiversity Information Facility
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GLAI	Global Arbovirus Initiative
GloPID-R	(global coalition of research funders)
GPW13	WHO's Thirteenth General Programme of Work
HIFA	Health Information for All
HRP	UNDP/UNFPA/UNICEF/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
IDDO	Infectious Diseases Data Observatory
IPC	infection prevention and control
ISARIC	International Severe Acute Respiratory and Emerging Infections Consortium
LMICs	low- and middle-income countries
LSHTM	London School of Hygiene and Tropical Medicine
P2I	Portfolio-to-impact
PABIN	Pan-African Bioethics Initiative
PKDL	post kala-azar dermal leishmaniasis

RDT	rapid diagnostics test
RFI	Research Fairness Initiative
RTC	regional training centre
SDG	Sustainable Development Goal
SEARN-TB	Southern and East Africa for TB control
SEARO	WHO Regional Office for South-East Asia
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
TB	tuberculosis
TDA4Child	WHO treatment decision algorithm for childhood TB
TDR	UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
UKCDR	UK Collaborative on Development Research
VCAG	Vector Control Advisory Group
VES	Research on vectors, environment and society team
VL	visceral leishmaniasis
WARN/CARN-TB	West and Central African Regional Networks for TB control
WHO	World Health Organization
WHO–ECH	WHO Environment, Climate Change and Health
WHO–GMP	WHO Global Malaria Programme
WHO–GTB	WHO Global Tuberculosis Programme
WHO–NTD	WHO Control of Neglected Tropical Diseases Department
WHO–PHE	WHO Public Health, Environmental and Social Determinants of Health Department
WPRO	WHO Regional Office for the Western Pacific

1. Summary

The 2023 results report marks the final year of a six-year strategic period, and thus allows not only reflection on how TDR has delivered on its commitments during the year, but also for the entire period. A revised performance framework has been developed to align with the 2024–2029 strategy, built on learnings from the previous framework as well as from extensive consultation with key stakeholders.

In 2023 and for the whole strategic period, all targets set in terms of technical results (outcomes and outputs) were achieved.

One major achievement for TDR in 2023 was the demonstrated impact of long-term collaboration with research institutions and control programmes. One of TDR's longest and most successful implementation research programmes contributed to the success of the VL elimination work in the Indian subcontinent, with Bangladesh becoming the first country in the world to be officially validated for having eliminated VL as a public health problem in 2023.

In terms of outcomes, the two key performance indicators measuring when innovative knowledge, solutions or tools developed with TDR support are applied in disease endemic countries[1], or are used to inform policy or practice of global or regional stakeholders, was shown respectively in seven and four instances in 2023, reaching a total of 122 and 27 respectively since 2017, both surpassing the agreed targets set for the strategic period.

Examples contributing to these numbers were more countries now having government approved multisectoral approach committees to control malaria, further evidence generated supporting visceral leishmaniasis elimination and several examples from AMR/SORT IT, showing the positive effect of operational research on health care practices to address antimicrobial resistance. In terms of tools and reports used to inform policy or practice of regional stakeholders, examples include notably one initiative allowing health workers from four countries in sub-Saharan Africa to access the Infectious Diseases Data Observatory and conduct operational research to improve emergency preparedness in West and Central Africa, and the new regional network in Southern and East Africa for TB control, leading to all sub-Saharan African countries now being linked through regional networks.

In 2023, TDR continued to build institutional and individual research capacity in low- and middle-income countries. Several institutions and networks demonstrated an expanded scope of activities and the capacity to leverage funds. Sustainability was one of the core topics for the Social Innovation in Health Initiative (SIHI), with one of the noteworthy results being the Nigerian hub inaugurating the Goodwill Medical Centre at the Pan African Community Initiative on Education and Health, dedicated to incubating social innovation in healthcare and facilitating related research. The TDR regional training centres (RTCs) were also able to leverage funding from alternative sources to enable expansion and sustainability of capacity building activities. The RTC in Senegal was notably able to amplify its fellowship and research programme with an outstanding financial leverage of > US$ 100 raised from external funders for each dollar TDR invested. This illustrates TDR's commitment to fostering the sustainability of institutions and networks. Moreover, the clinical research leadership network identified new partners for hosting fellows and new functionalities linked to the ADP community platform with institutional mentor-mentee pairings were implemented.

In 2023, 59 fellows representing 37 countries started a postgraduate training in four universities; 33 graduated and a TDR conducted survey of postgraduate grantees from 2015–2020 reflected on their career progression.

[1] Disease endemic countries (DECs) are low- and middle-income countries with a burden of infectious diseases of poverty.

In terms of global engagement, in 2023 TDR continued to provide technical assistance to several WHO-led priority setting exercises and to be a major contributor to the COVID-19 Clinical Research Coalition. Fourteen episodes of the *Global Health Matters* podcast were released, reaching a total of 50 000 downloads, inspiring the continued investment in global health and global health research.

Regarding application of core values, while the progress on socio economic equity was continuous for some indicators, surpassing the targets set for the strategic period, others hovered around the target. Similarly, for gender equity a continued progression was noted for most indicators, but authorship of TDR-sponsored studies remains lower than the target, particularly for last authors. Efforts made in 2023 to understand and act upon barriers to equity in authorship will continue in 2024.

Managerial performance indicators fared well in terms of budget funding, human resources, keeping implementation of expected results on track and managing risks, however, the proportion of funds coming from multi-year agreements remains low, reflecting the tough fundraising environment for undesignated funds.

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

The 2023 Results Report measures a set of performance indicators against targets, in line with TDR's 2018–2023 Strategy and the TDR Performance Framework 2018–2023, for planning, monitoring and evaluation. Now that we are at the end of the 6-year strategic period, this report shows the achievements made on various indicators related to three overarching categories: technical expected results, application of organizational core values and managerial performance. Ultimately, TDR's outputs and outcomes contribute to health impact, measured through the achievement of Sustainable Development Goal (SDG) targets and the World Health Organization's (WHO) Thirteenth General Programme of Work (GPW13) triple billion targets.

Given the adoption of the SDGs by the global community in 2015, TDR developed its 2018–2023 Strategy to showcase 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 Performance Framework which is aligned with TDR's 2018–2023 strategy, the GPW13 strategic objectives and some SDG targets, has been in place since 2018.

As shown in Figure 1, TDR aims for a global impact to reduce the burden of infectious diseases of poverty. TDR's 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.

Aligned with TDR's Strategy, the Performance Framework further demonstrates TDR's focus on health impact and value for money throughout the whole results chain, from using resources economically to building efficient processes, to quality of outputs and to partnering to enhance the sustainability of outcomes.

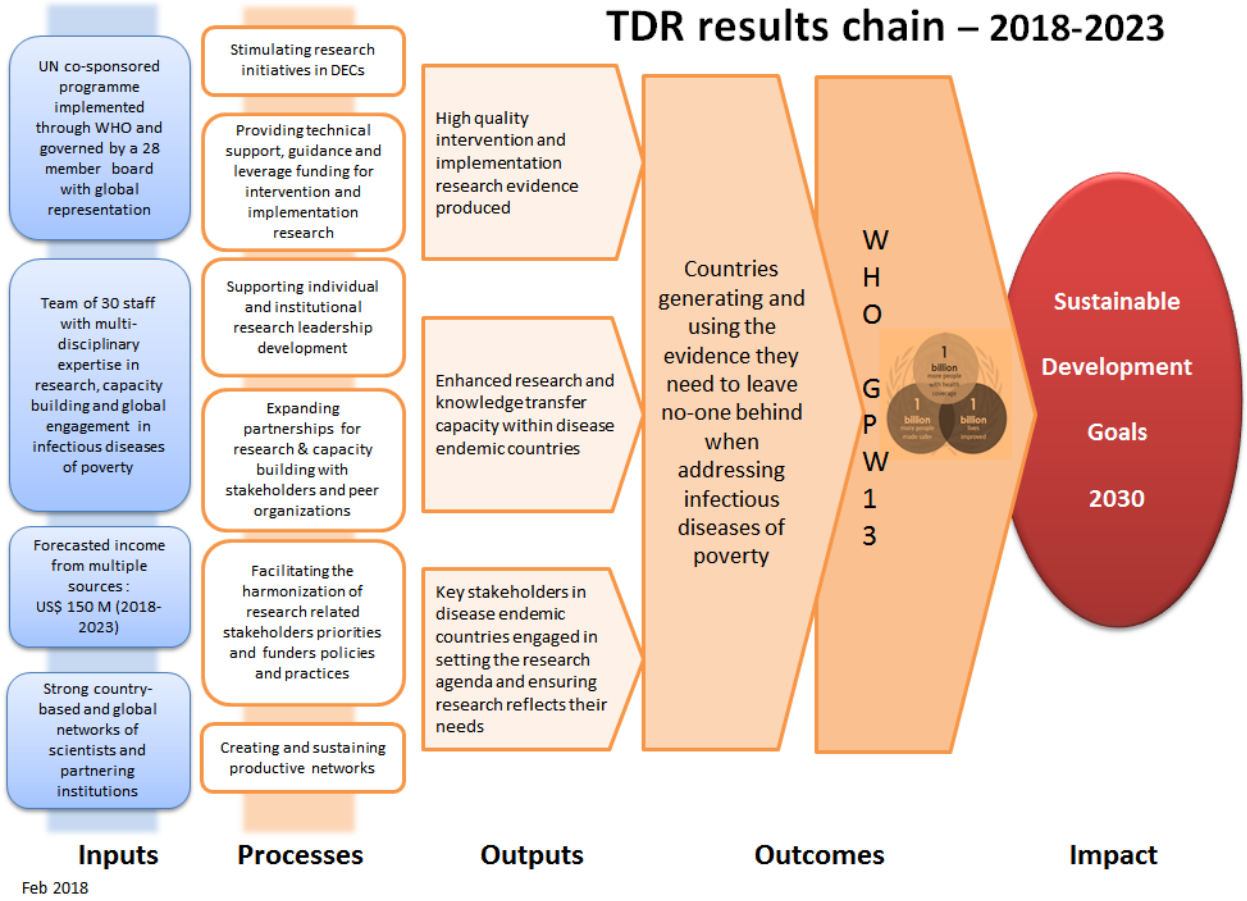

Figure 1. TDR results chain

TDR's work is contributing to the research accelerator of the Global Action Plan for Healthy Lives and Well-being for All[2] 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 (see Table 1), with further details being provided in the body of this report.

[2] See https://www.who.int/sdg/global-action-plan

Table 1- TDR's key performance indicators matrix 2018–2023

Expected results	Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*	Frequency of measurement
Technical expected results					
<u>Impact:</u> **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.			Evaluation demonstrating the link between outcomes and the progress made towards achieving the relevant SDG goals	
	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 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines (…)				
	iv. SDG3-Goal 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.				
	v. SDG13-Goal 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries				
	vi. SDG9-Goal 9.5: Enhance scientific research, (…) encouraging innovation and substantially increasing the number of research and development workers per 1 million people (…)				

Expected results	Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*	Frequency of measurement
Outcome: **Infectious disease knowledge, solutions and implementation strategies translated into policy and practice in disease endemic countries**[3]	1. Number and evidence when innovative knowledge or new/improved solutions/tools developed with TDR support are applied in disease endemic countries	0	100	122 *(+7)*	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	20	27 *(+4)*	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	25	69 *(+7)* 100%	Measured annually, cumulative over 6 years
	5. Number of research data sets/platforms that are i) open access or ii) with an access permission level	1	10	10 (i. 1, ii. 8) *(1)*	Measured annually, cumulative over 6 years
Capacity strengthening outputs: **Enhanced research and knowledge transfer capacity within disease endemic countries**	6. Number and evidence of DEC 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[4]	0	5	29 *(+9)*	Measured annually, cumulative over 6 years
	7. Number of TDR grantees/trainees per year and proportion demonstrating career progression and/or increased scientific productivity, disaggregated by gender	79 (2017) 85% (2014)	150 ≥80%	1128* *(+278*)* *TBC*	Measured on cohorts 3-5 years after training ended

*Only counting trainees and recipients of individual training grants, excluding MOOC and RTC trainees, and excluding other TDR grantees.

[3] DEC: low- and middle-income countries where neglected diseases are prevalent / endemic

[4] TDR support may include financial, in-kind, facilitation and/or expert types of support

Expected results	Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*	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	17 *(+4)*	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 DECs[3] (total count and total amount)	62% (count) 74% (amount)	75% DEC	85% DEC (count) 88% DEC (amount)	Measured annually
	11. Proportion of experts from DECs on TDR external advisory committees	78%	>60%	57%	Measured annually
	12. Proportion of peer-reviewed publications supported by TDR with authors from DEC institutions (first author - FA, last author - LA, all authors - AA)	FA: 73% LA: 56%	≥67%	FA: 77% LA: 57% CA: 72%	Measured annually
	13. Number of peer-reviewed publications supported by TDR and percentage published in open/free access	200 88%	≥150/year 100%	179 97%	Measured annually
Gender equity:	14. Proportion of women among grantees/contract recipients (total count and total amount)	40% (count) 29% (amount)	50%	47% (count) 49% (amount)	Measured annually
	15. Proportion of women on TDR external advisory committees	50%	50%	67%	Measured annually
	16. Proportion of women authors of peer-reviewed publications supported by TDR (first author - FA, last author - LA)	FA: 38% LA: 24%	50%	FA: 47% LA: 31%	Measured annually
	17. Number and proportion of peer-reviewed publications explicitly considering: gender and women issues, vulnerable groups or people with disabilities	N/A	80%	Total: 62% Gender: 13% Vulnerable: 61% Disabilities: 8%	Measured annually

Expected results	Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*	Frequency of measurement
Effective multisectoral partnerships	18. Resources leveraged as direct contributions (co-funding, services or in-kind) to TDR projects (examples)	$ 1:1 ($ TDR : $ partners) People 1:30 (TDR : in the field)	< $ 2:1	$ 1:1 ($ TDR : $ partners) People 1:52 (TDR : in the field)	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	Evidence provided	Measured at the end of biennium
Quality of work	20. Proportion of project reports evaluated as satisfactory by external advisory committees	100%	>80%	100%	Measured annually
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	67 *(+23)*	Measured at the end of biennium
Management performance					
Effective resource mobilization	22. Percentage of approved biennial budget successfully funded	*87.9%* *(US$ 39.5/ 45 million)*	≥100%	96% of the US$ 40 million budget scenario was funded	Measured at the end of biennium
	23. Percentage of income received from multi-year, unconditional donor agreements	*17.3%* *(US$ 6.8/ 39.5 million)*	70%	35%	Measured at the end of biennium
Effective management	24. Percentage of staff workplans and performance reviews (including personal development plan) completed on time	89%	≥90%	96%	Measured annually
	25. Proportion of expected results on track	89%	≥80%	84%	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

The indicators covering TDR's achievement of expected results measure 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, thus directly contributing to the Sustainable Development Goal targets and to WHO's GPW13 triple billion objectives. Achievements are 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 2021 for the biennium 2022–2023).

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 2018–2023 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, as illustrated in TDR's results chain. WHO's GPW13 prioritizes targets agreed at global level, with three areas taking centre stage: advancing universal health coverage, addressing health emergencies and promoting healthier populations. TDR's expected results contribute, either jointly or individually, to all of these strategic objectives.

The SDG indicators, together with baseline measures and targets, are being measured by WHO and other United Nations family agencies. Contributions that TDR outcomes are making towards achieving SDG and GPW13 targets are being 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.

In 2023, the contribution of TDR to reduce the burden of infectious diseases of poverty was demonstrated twice:

- **Bangladesh became the first country in the world to be officially validated for having eliminated visceral leishmaniasis as a public health problem**[5][6]

Implementation research on visceral leishmaniasis (VL) is a TDR-supported and country-led, long-term project that aims to generate the evidence base for policy uptake and rollout of approaches and interventions deployed by national programmes to promote VL elimination, continually seeking solutions to challenges emerging in the course of progress. As one of the longest and most successful implementation research programmes at TDR[7], these efforts have contributed to a sharp reduction of cases in three endemic countries on the Indian subcontinent, Bangladesh, India and Nepal.

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5 https://www.who.int/news/item/31-10-2023-bangladesh-achieves-historic-milestone-by-eliminating-kala-azar-as-a-public-health-problem

6 https://tdr.who.int/newsroom/news/item/01-11-2023-bangladesh-and-tdr-celebrate-elimination-of-visceral-leishmaniasis

7 Hirve, S., Kroeger, A., Matlashewski, G., Mondal, D., Banjara, M. R., Das, P., Be-Nazir, A., Arana, B., & Olliaro, P. (2017). Towards elimination of visceral leishmaniasis in the Indian subcontinent-Translating research to practice to public health. PLoS neglected tropical diseases, 11(10), e0005889. https://doi.org/10.1371/journal.pntd.0005889

TDR contributed to the historic milestone in Bangladesh by working for nearly two decades with research institutions and control programmes and played an important interface role, bringing together governments, medical practitioners, the academia, the private sector and global donors, to design new, innovative tools for diagnosing and treating this deadly disease. The learnings from the Indian subcontinent are now applied to East Africa (see Indicator 2)

- **Impact of national malaria programme in Suriname: no autochthonous cases in 2023**

The integration of a self-diagnosis and treatment kit for mobile and hard-to-reach communities (Malakit) supported by TDR contributed to this important milestone.

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 policy-makers 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 (2017)	Target (2023)	Progress *(contribution 2023)*
1. Number and evidence when innovative knowledge or new/improved solutions/tools developed with TDR support are applied in disease endemic countries	0	100	122 *(+7)*
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	20	27 *(+4)*
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

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

- **Government approved multisectoral approach committees to control malaria active in three additional countries.** (Senegal, United Republic of Tanzania, Zambia)
- **Evidence to support VL elimination informs policy**. Dissemination of data resulted in initiation of elimination activities in new foci in Bangladesh, including focal spraying as well as post kala-azar dermal leishmaniasis (PKDL) screening around households with VL cases in Bangladesh.

- **Further evidence was generated and disseminated in 2023 on the positive effect of operational research on health care practice**. Overall, of the first 60 AMR–SORT IT studies that were assessed for impact in 2023, 79% influenced policy and/or practice at national, regional and health facility levels. Regarding collateral benefits to the health system, 92% of trainees applied their SORT IT skills to AMR practice and 55% to tackling emerging infections. Furthermore, 62% of trainees completed a new research study and 28% of those trained became mentors, which is testament to the effectiveness of the SORT IT model and its legacy of empowering future leaders in health research. Specific examples from 2023 are:
    - Improved data quality on antibiotic use in a rural veterinary clinic following operational research in Ghana:[8] recording of the diagnosis of animal diseases improved from 47% to 90% and the type of antibiotics prescribed from 53% to 77% (Ghana).
    - Research evidence put into practice improves antibiotic use during surgery in Dhulikhel Hospital, Nepal:[9] a hospital guideline was developed and health workers were trained on improving antibiotic use during surgery. Overall compliance on antibiotic use increased from 75% to 85% (Nepal).
    - Improvement in infection prevention and control (IPC) performance following operational research in Sierra Leone:[10] IPC performance improved from intermediate (58%) to advanced (78%) levels in the national IPC unit and from basic (50%) to intermediate (59%) levels in hospitals (Sierra Leone).

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

- **Operational research and data sharing for emergency preparedness in West and Central Africa.** Following the 2014–2016 Ebola outbreak, the most affected countries in West Africa provided their Ebola data to the Infectious Diseases Data Observatory (IDDO, based at Oxford). In June 2023, a new SORT IT course was started, permitting health workers from the Democratic Republic of the Congo, Guinea, Liberia and Sierra Leone to use this initiative for data sharing, operational research and building partnerships at national, regional and global levels to strengthen health systems. Ten research projects were started involving surveillance, case-finding and clinical care – the pillars of outbreak management. This SORT IT acts as an exemplar for analysis of similar data in future outbreaks (see also Indicator 5).
- **New regional network in Southern and East Africa for TB control (SEARN-TB).**[11] Building on the success of the West and Central African Regional Networks for TB control (known as WARN/CARN-TB) established in 2015 and 2018 respectively, a similar network was officially launched in 2023 to build operational and implementation research capacity among national TB programmes in Southern and East Africa, targeting 24 countries in the region. All sub-Saharan African countries are now linked through regional networks, supporting South–South collaboration, evidence co-generation, training and webinars for experience sharing.

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8 Kubasari C, Adeapena W, Najjemba R, Hedidor GK, Adjei RL, Manu G, Timire C, Afari-Asiedu S, Asante KP. Quality of Data Recording and Antimicrobial Use in a Municipal Veterinary Clinic in Ghana. *Tropical Medicine and Infectious Disease*. 2023; 8(11):485. https://doi.org/10.3390/tropicalmed8110485

9 Shrestha I, Shrestha S, Vijayageetha M, Koju P, Shrestha S, Zachariah R, Khogali MA. (2023) 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. https://doi.org/10.3390/tropicalmed8080420

10 Margao S, Fofanah BD, Thekkur P, Kallon C, Ngauja RE, Kamara IF, Kamara RZ, Tengbe SM, Moiwo M, Musoke R, et al. (2023). 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. https://doi.org/10.3390/tropicalmed8070376

11 https://tdr.who.int/newsroom/news/item/05-06-2023-supporting-a-new-regional-network-in-southern-and-east-africa-for-tb-control

- **Lessons from the Indian subcontinent inform planning of a regional visceral leishmaniasis elimination programme in East Africa.** A broad stakeholder consultation recommends the launch of a regional VL elimination initiative. The meeting involved representatives of the ministries of health from the eight VL-endemic WHO Member States in East Africa (Chad, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda) and investigators from South-East Asia.
- **Rollout of new Massive Open Online Course (MOOC) module on incorporating an intersectional gender perspective in implementation research.** Supported by the regional training centre in Ghana, this open online training to inform policy and practice had > 500 registered participants (51.7% men, 47.5% women, 0.8% did not specify) from Africa and Asia. One third attempted the end assessment of which 88% got the certification.

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

- A qualitative study conducted in a lymphatic filariasis-endemic district in Nepal found that gender intersects with ethnicity, marital status and geographic location to influence an individual's ability to access preventive and curative services. Women's decision-making was influenced by patriarchal gender norms, often prioritising men and other family members over their own protection and healthcare needs.[12]
- A study undertaken in Uganda[13] looking at vulnerability to schistosomiasis and access to treatment to inform the implementation of health interventions, found that gender roles predisposed men and women differently to infection depending on economic activities they engaged in, as well as the division of labour within the fishing industry. Both vulnerability to schistosomiasis and treatment occurs within a complex web of gender relations, culture, poverty, limited economic opportunities and insufficient health services delivery, which together undermine efforts to eliminate schistosomiasis.

These examples highlight the importance of understanding contextual constraints and gender related dimensions to address infectious diseases associated with poverty and improve equitable access to health care for the most vulnerable populations.

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

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
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	25	69 *(+7)* 100%
5. Number of research data sets/platforms that are i) open access or ii) with an access permission level	1	10	10 (i. 1, ii. 8) *(1)*

[12] Arjyal, A., Parajuli, A., Kharel, C., Del Barrio, M. O., & Baral, S. C. (2023). Understanding gender and its intersection with social stratifiers on prevention and care seeking behavior of lymphatic filariasis in Nepal. *Infectious diseases of poverty*, *12*(1), 77. https://doi.org/10.1186/s40249-023-01126-8

[13] Ssali SN, Morgan R, Nakiranda S, Opio CK, Otmani del Barrio M (2023) Gendered lives, gendered Vulnerabilities: An intersectional gender analysis of exposure to and treatment of schistosomiasis in Pakwach district, Uganda. PLoS Negl Trop Dis 17(11): e0010639. https://doi.org/ 10.1371/journal.pntd.0010639

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

- **Progress on testing the sterile insect technology against arboviral diseases.** Preparations for testing are underway in two countries, with a third to follow in 2024. A preparatory training workshop was held in May 2023 in Tahiti, French Polynesia, with 20 countries from all WHO regions represented. Presentation of the sterile insect technology (SIT) as a new vector control tool was made at the Vector Control Advisory Group (VCAG19) in September 2023 for WHO recommendation.
- **Development of a generic research package in 2023 with the aim to:**
  - Conduct root cause analysis of yellow fever outbreaks in African countries in collaboration with Eliminate Yellow fever Epidemics (EYE);
  - Evaluate the impact of social protection schemes for TB patients and their families – piloting initiated in six African countries; and
  - Evaluate the WHO treatment decision algorithm for childhood TB (TDA4Child) to inform WHO guidelines.
- **A Guide on how to conduct a scoping review** was finalized and made available in English, French and Mandarin, with accompanying instructional videos in English and French.
- **New in-depth course materials were developed through partnership with RTCs,** including new MOOC IR modules, online courses, training documents and sensitization videos completed on the following topics: awareness raising in IR; Chagas disease in **Ecuador**; community engagement; COVID-19 vaccination in **Ghana**; ethics; social innovation; and trachoma in **Ethiopia**.
- **Development of an IR curriculum for Master students participating in TDR's postgraduate training programme.** Following a workshop in IIHMR University in Jaipur, India, this curriculum, based on the IR core competencies, was developed to address the IR competency gap in the postgraduate curriculum across the network of eight universities.

Indicator 5 - Number of research data sets/platforms that are: i) open access; or ii) with an access permission level

Safety first: TDR brings safety to the fore as an essential element of evidence-based decision-making. Two initiatives continue from previous years which will gradually be transitioned to be hosted and managed by other stakeholders:

- ✓ Database for countries to share **safety data on drug exposures during pregnancy** (in collaboration with the WHO HIV Department) (Gated access)
- ✓ The **TB-Platform for Aggregation of Clinical TB Studies** (TB-PACTS) is a partnership among the institutions providing data: TDR, the TB Alliance, and St. George's School of Medicine at the University of London, with the platform developed by the Critical Path Institute (C-Path) (Gated access)

These will generate evidence of drug safety in routine use that is needed to support treatment guidelines.

In 2022 TDR led a Science Division working group to develop a new WHO policy on the sharing and reuse of health data for research.[14] TDR continues to provide assistance to technical departments within WHO on the most appropriate mechanisms for sharing research data.

[14] https://apps.who.int/iris/handle/10665/352859

TDR is part of the steering group working with CERN (the European Organization for Nuclear Research) which developed the **Zenodo**[15] data sharing platform, to develop a bespoke directory for those research data directly under the responsibility of WHO.

TDR continues to work with **IDDO**[16] to develop secure platforms to share clinical data related to a number of diseases, including: malaria, schistosomiasis, leishmaniasis and, more recently, Ebola and COVID-19. TDR also accepted a request from the International Severe Acute Respiratory and Emerging Infections Consortium (ISARIC) and IDDO to provide the Chair for the Data Access Committee (DAC) for a **new COVID-19 data platform**.

A new Structured Operational Training IniTiative (SORT IT) course was started to support participants from the Democratic Republic of the Congo, Guinea, Liberia and Sierra Leone undertake research on pandemic diseases, choosing either to work on Ebola, Lassa fever or COVID-19. Data could be accessed either from within their own country or **TDR facilitated access to Ebola or COVID-19 data held within the IDDO**.

TDR continues to be a major contributor to the COVID-19 Clinical Research Coalition,[17] specifically contributing to the Data Sharing Working Group, and previously supported six research projects. In 2023 this group relaunched itself as **CERCLE**[18] (Coalition for Equitable ResearCh in Low-resource sEttings), a global research response to infectious diseases driven by the needs of people in low-resource settings. TDR funded and provided technical advice to undertake a **scoping review and cross-sectional survey of COVID-19 data sharing platforms and registries**.

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 (2017)	Target (2023)	Progress *(contrib. 2023)*
6. Number and evidence of DEC[3] 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	0	5	29 *(+9)*
7. Number of TDR grantees/trainees per year, and proportion demonstrating career progression and/or increased scientific productivity, disaggregated by gender	79* (2017) 85% (2014)	150* ≥80%	1128* *(+278*)* *TBC*

* *Only counting trainees and recipients of individual training grants, excluding MOOC and RTC trainees, and excluding other TDR grantees*

15 https://zenodo.org/

16 https://www.iddo.org/about-us/our-work

17 https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30798-4/fulltext

18 https://cerclecoalition.org/

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

- ✓ In 2023, Social Innovation in Health Initiative (SIHI) hubs expanded their scope of activities and increased funding from alternative sources to enhance the network's sustainability.
    - o **SIHI Uganda** amplified its Fellowship and Research Program with a remarkable financial leverage of US$ 9 raised from external funders for each dollar TDR invested.
    - o **Inauguration of the Goodwill Medical Centre in Nigeria** at the Pan African Community Initiative on Education and Health, dedicated to incubating social innovation in healthcare and facilitating related research.
    - o **Integration of an equitable and gender-transformative lens in social innovation research** in Latin America and the Caribbean, the Philippines and Uganda.

  Efforts to enhance the network's sustainability were coordinated by the SIHI secretariat and lessons learnt were shared at the November 2023 SIHI Global event in Cape Town, South Africa, where core elements of sustainability such as social, economic, equity and environment factors were addressed.
- ✓ In 2023 TDR regional training centres expanded their scope of activities and increased leveraged funding from alternative sources to enable expansion and sustainability of network activities in capacity building.
    - o **External leveraged funds secured by four RTCs**: **Cheik Anta Diop University in Senegal,** who amplified its Fellowship and Research Program with an outstanding financial leverage of > US$ 100 raised from external funders for each dollar TDR invested; **Ghana School of Public Health, CIDEIM Columbia** and the newest RTC in **Malaysia** all matched TDR contributions by raising external funds at an approximate 1:1 dollar ratio.
    - o All RTCs consolidated and included institutional partners from new institutions within low- and middle-income countries (LMICs) in respective regions, which will ensure sustainability and dissemination of training and courses to build capacity in IR.
- ✓ **The clinical research leadership network identified new partners for hosting fellows**, including BioNTech and Fiocruz. This represents an important achievement in leveraging partnerships and funds for supporting leadership in clinical trials research.
- ✓ **New functionalities linked to the ADP community platform with institutional mentor-mentee pairings** implemented in 2023. Participating institutions enhanced their grant management and reporting (technical and financial) capabilities, as well as publications from the country-led work relating to impact on policy and practice.

Indicator 7 - Number of TDR grantees/trainees per year, and proportion demonstrating career progression and/or increased scientific productivity, disaggregated by gender

The growing demand for implementation research 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 policy-makers.

- **TDR regional training centres:** TDR supports a network of RTCs, of which the first were selected on a competitive basis in 2009, to conduct and disseminate training courses relevant to the TDR Strategy. In 2023:
    - o over 4300 participants registered for eight sessions of the IR MOOC held throughout the year – delivered in English, French and Spanish; and

- over 40 in-person training courses within the RTC network were attended by 1257 individuals, 64% of whom identified as women. Courses on principles of IR, good clinical practice and good laboratory practice attracted the most students, followed by courses on good health research practice, effective project management and ethics in IR.

- **Postgraduate training for health workers and researchers on disease surveillance and relevant implementation research (case finding and management)**
  - In 2023, 59 Students started a scholarship:
    - 19 students (9 women and 10 men) from 15 French-speaking countries in West Africa started their MSc with the University of Sciences, Techniques and Technologies in Bamako, Mali.
    - 15 students (6 women and 9 men) from Afghanistan, Bangladesh, India, Nepal, Papa New Guinea, Pakistan and Yemen started their public health learning with the BRAC university in Bangladesh and are expected to graduate in January 2024
    - 14 students (8 women and 6 men) from Burundi, Cameroon, Gambia, Ghana, Malawi, Namibia, Nigeria, United Republic of Tanzania and Zambia started with the school of Public Health at the University of Ghana and are expected to graduate in January 2024.
    - 11 students (7 women and 4 men) from Bolivia, Colombia, Costa Rica, Dominica Republic, Haiti, Honduras, Mexico and Paraguay commenced their course with the University of Antioquia in Colombia. They are expected to graduate in October 2025.
  - In 2023, 33 students graduated:
    - Four women and four men from Afghanistan, Jordan, Pakistan, Palestine and Syria graduated from the American University of Beirut, Lebanon.
    - Six women and four men completed their programme at the University of the Witwatersrand, Johannesburg, South Africa.
    - Nine women and six men from the Democratic Republic of the Congo, Kenya, Malawi, Namibia, Uganda, United Republic of Tanzania and Zambia graduated in December 2023 at the School of Public Health, University of Zambia.
  - 56 students (27 women and 29 men) continue their master's fellowships with the BRAC University in Bangladesh, the Indian Institute of Health Management, the University of Ghana and the Gadjah Mada University in Indonesia.
  - **Career progression of former TDR grantees:** A TDR conducted survey of postgraduate grantees from 2015–2020 received 197 responses from 220 grantees. Among the respondents, 130 (66%) were graduated grantees and 67 (34%) were still in the programme. Employment status had 188 responses and reflected career progression beyond academia to include ministry of health (18.6%, 19 men and 16 women), international development agencies (14.4%, 16 men and 11 women), social science (10.6%, 7 men and 13 women) and public health sectors (10.6%, 10 men and 10 women). Other areas included community and social science occupation, management, life science, as well as office and administrative support.
- **Clinical Research Leadership Fellowship (CRL):** 18 fellows from the previous Clinical Research and Development Fellowship (CRDF) finished their placement at training partner organizations in 2023 and 20 new CRL fellows were selected out of 437 eligible applicants.

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

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
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	17 *(+4)*
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 2023, TDR used the guide for WHO staff managing research priority setting exercises, developed in 2020, to provide technical assistance to WHO-led priority setting exercises, including:
  - o A One Health priority research agenda for antimicrobial resistance in partnership with the United Nations Food and Agriculture Organization (FAO), the United Nations Environment Programme, the WHO AMR Division and the World Organisation for Animal Health.[19]
  - o Global research agenda for antimicrobial resistance in human health in partnership with the WHO AMR Division.[20]
  - o WHO's Global research agenda on health and migration: Driving research and strengthening knowledge translation into policy and practice. In partnership with the International Organization for Migration, the United Nations High Commission for Refugees and the WHO Migrant Health unit. This included moderating a consultation event at the Third global consultation on the health of refugees and migrants, held in Rabat, Morocco.[21]
- ✓ TDR has continued to be a major contributor to the COVID-19 Clinical Research Coalition, specifically contributing to the Data Sharing Working Group, and previously supported six research projects. In 2023 this group relaunched itself as CERCLE, a global research response to infectious diseases driven by the needs of people in low-resource settings. TDR funded and provided technical advice to undertake a scoping review and cross-sectional survey of COVID-19 data sharing platforms and registries. Published October 2023.[22]

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

In 2022–2023, TDR engaged with a large number of 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 ESSENCE, SIHI, CARPHA, Global Vector Hub, TDR Global, SIDCER-FERCAP, 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.

One example of TDR's broad stakeholder engagement is the *Global Health Matters* podcast. The podcast is intended for all those engaged in global health, global health research or overall development as part of achieving the SDGs. In 2023, 14 episodes were released reaching a total of 50 000 downloads. No other podcast focuses as broadly on global health or targets this audience. This makes TDR's podcast even more important, providing an opportunity to share experiences, learn from each other and be inspired to continue working in global health and global health research.

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19 https://www.who.int/publications/i/item/9789240075924

20 https://www.who.int/publications/m/item/global-research-agenda-for-antimicrobial-resistance-in-human-health

21 https://www.who.int/publications/i/item/9789240082397

22 https://www.thelancet.com/journals/landig/article/PIIS2589-7500(23)00129-2/fulltext

The AMR–SORT IT network was expanded to 73 implementing partners in 30 countries in Asia, Africa, the Americas and Europe, making it now **the largest partnership of AMR institutions in the world**. Eighty-one percent (81%) of these institutions are from the Global South. Close collaboration was maintained with WHO regional and country offices and AMR coordinating committees. Synergistic collaborations with the Fleming Fund projects were established in Ghana, Nepal and Sierra Leone. More on partner institutions at: SORT IT operational research and training (who.int) [23]

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 (2017)	Target (2023)	Progress *(contrib. 2023)*
10. Proportion of TDR grants/contracts awarded to institutions or individuals in DECs[3] (total count and total amount)	62% (count) 74% (amount)	75% DEC	85% DEC (count) 88% DEC (amount)
11. Proportion of experts from DECs on TDR external advisory committees	78%	>60%	57%
12. Proportion of peer-reviewed publications supported by TDR with authors from DEC institutions (first author - FA, last author - LA, all authors - AA)	FA: 73% LA: 56%	≥67%	FA: 77% LA: 57% CA: 72%
13. Number of peer-reviewed publications supported by TDR and percentage published in open/free access	200 88%	≥150/year 100%	179 97%
14. Proportion of women among grantees/contract recipients (total count and total amount)	40% (count) 29%(amount)	50%	47% (count) 49% (amount)
15. Proportion of women on TDR external advisory committees	50%	50%	67%
16. Proportion of women authors of peer-reviewed publications supported by TDR (first author - FA, last author - LA)	FA: 38% LA: 24%	50%	FA: 42% LA: 31% CA: 36%
17. Number and proportion of peer-reviewed publications explicitly considering: gender and women issues, vulnerable groups or people with disabilities	N/A	80%	Total: 62% Gender: 13% Vulnerable: 61% Disabilities: 8%

[23] https://tdr.who.int/activities/sort-it-operational-research-and-trainingwho.int

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

In 2023, a total of 479 grants and contracts for a total amount close to US$ 12.9 million were awarded to institutions and researchers from 98 countries (84 DEC, 11 non-DEC). Of those, 409 awards, representing 88% of the amount, went to DECs.

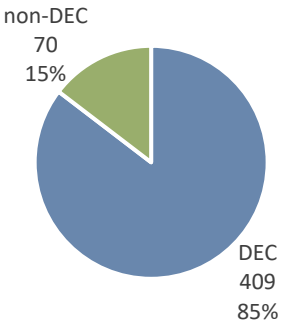


Figure 2. Equity – Grants/Contracts: Proportion awarded to disease endemic countries (% count) in 2023

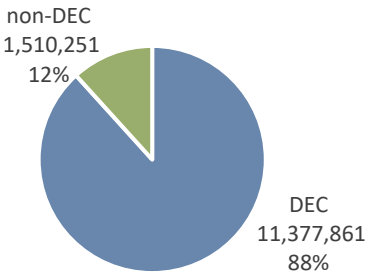


Figure 3. Equity – Grants/Contracts: Proportion awarded to disease endemic countries (% $ amount) in 2023

The proportion of grants/contracts awarded to DECs continued to progress in 2023, reaching 88%, the highest ever measured (Figure 4), an example of TDRs commitment to building capacity and leadership for health research in LMICs.

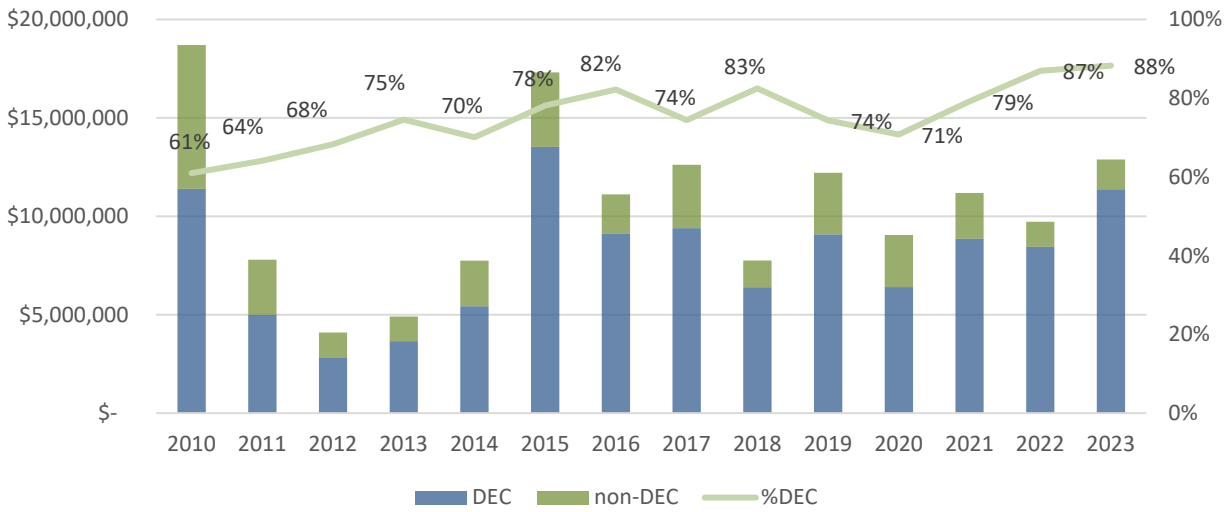


Figure 4. Equity - Grants/Contracts: Yearly progress in amounts and proportion awarded to DECs (US dollars)

Indicator 11 - Proportion of experts from DECs on TDR external advisory committees

In 2023, the proportion of TDR advisers originating from a DEC was 57%. This is lower than in previous years and for the first time slightly below the 60% target.

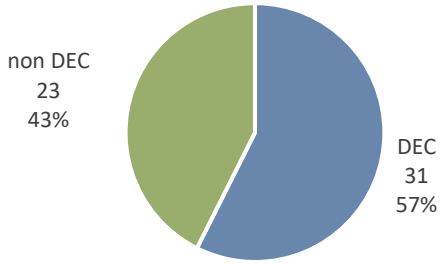


Figure 5. Equity: Proportion of advisers from DEC, 2023

Indicator 12 - Proportion of peer-reviewed publications supported by TDR with authors from DEC institutions (first author, last author)

There were 179 TDR-supported peer reviewed publications in 2023. The proportion of first authors from DECs was 77%, remaining well above the 67% target and stable since 2021, but below 2019 when it was at its highest (Figure 7).

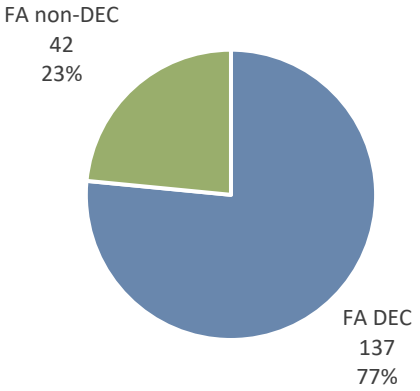


Figure 6. Equity: Proportion of first authors from DECs, 2023

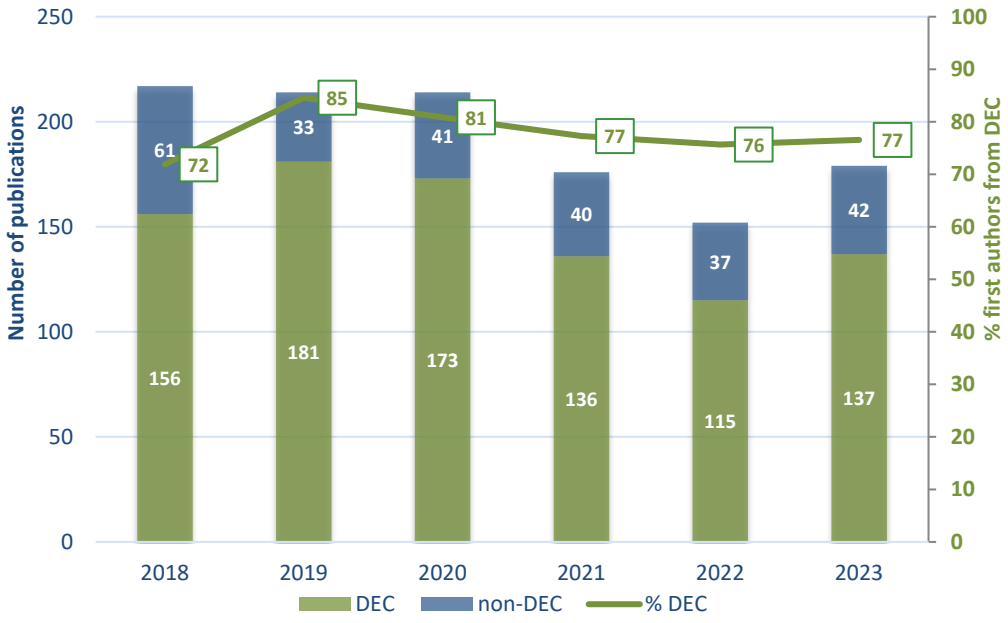


Figure 7. Equity: TDR supported publications and proportion of first authors from DECs: 2018-2023

Looking at the proportion of last authors from DECs, this has progressively decreased from its highest at 67% in 2020, to remaining just above the 56% baseline established in 2017.

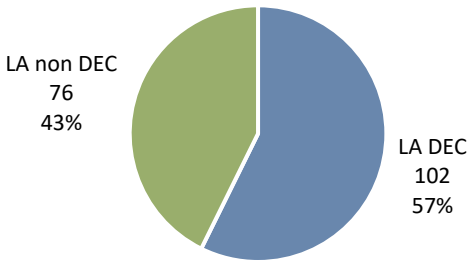


Figure 8. Equity: Proportion of last authors from DECs, 2023

Finally, the proportion of corresponding authors from DECs has also progressively dropped from its highest at 83% in 2019, to 72% in 2023.

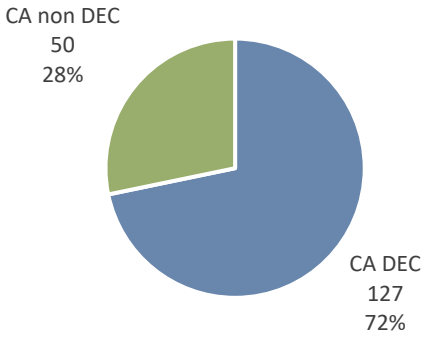


Figure 9. Equity: Proportion of corresponding authors from DEC, 2023

This evolution over the past few years can be explained by at least two factors. First, TDR's leadership role was illustrated through a series of editorials or opinion pieces authored by TDR management jointly with WHO leadership. Although these are not scientific publications per se, they are counted in the analysis. Second, there was a more hands-on role played by TDR staff members and consultants in supporting research projects in LMICs that required mentorship and coordination (such as SORT IT research projects). However, a new guidance will soon be issued to clarify that local researchers should be given precedence as much as possible, both in terms of leadership role in the project as well as having that reflected in the scientific publications' authorship. Other potential factors that need to be addressed so that these measures improve over time will be explored.

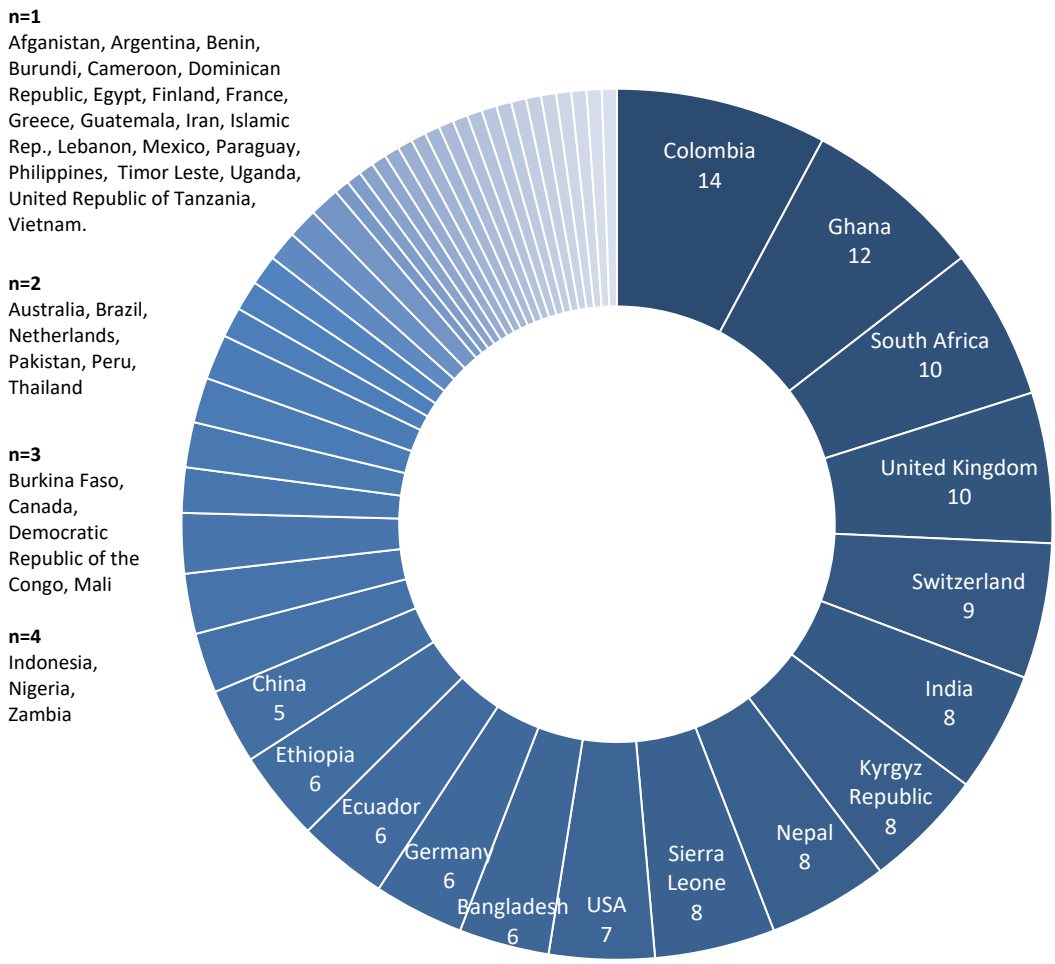


Figure 10. Equity: First authors of TDR-supported publications by country, 2023

First authors of TDR supported publications originated from 48 countries, of which 38 were DECs.

In descending order of the number of publications, Colombia, Ghana and South Africa had more than ten publications with a first author from their country.

Looking at last authors of TDR supported publications, in descending order of the number of publications, Switzerland, the United Kingdom, the United States of America, South Africa and India had more than ten TDR supported publications with last authors from their country in 2023.

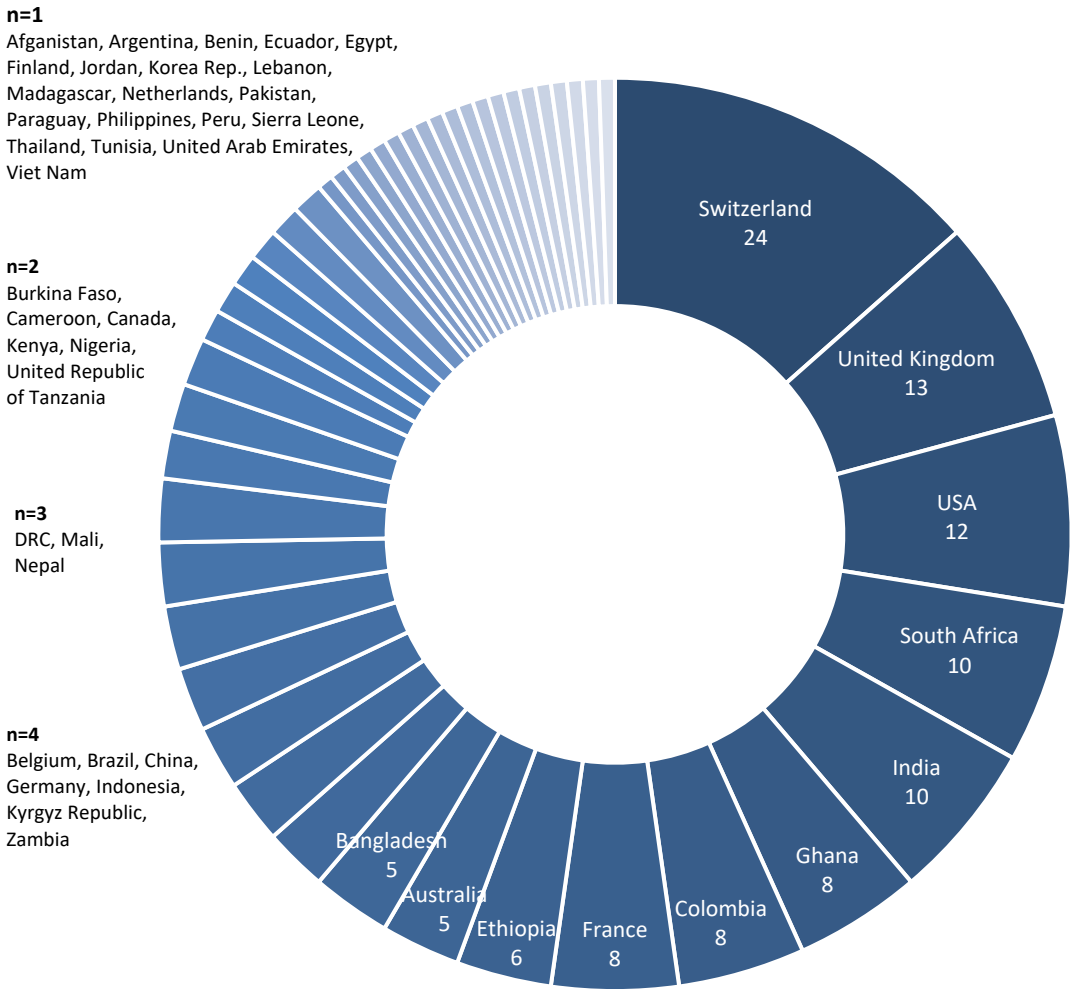


Figure 11. Equity: Last authors of TDR-supported publications by country, 2023

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

The number of peer-reviewed publications supported by TDR in 2023 was 179, which is more than in 2022. A complete list is included in Annex 1. It provides the names of the author(s), the publication title and the peer-reviewed journal in which the article or publication appears.

Open access

Of the 179 TDR-supported publications in 2023, 97% were published in open or free access, the highest percentage ever with only five exceptions, three with a first and last author from South Africa, one with a first and last author from the United Kingdom and one with a first and last author from China.

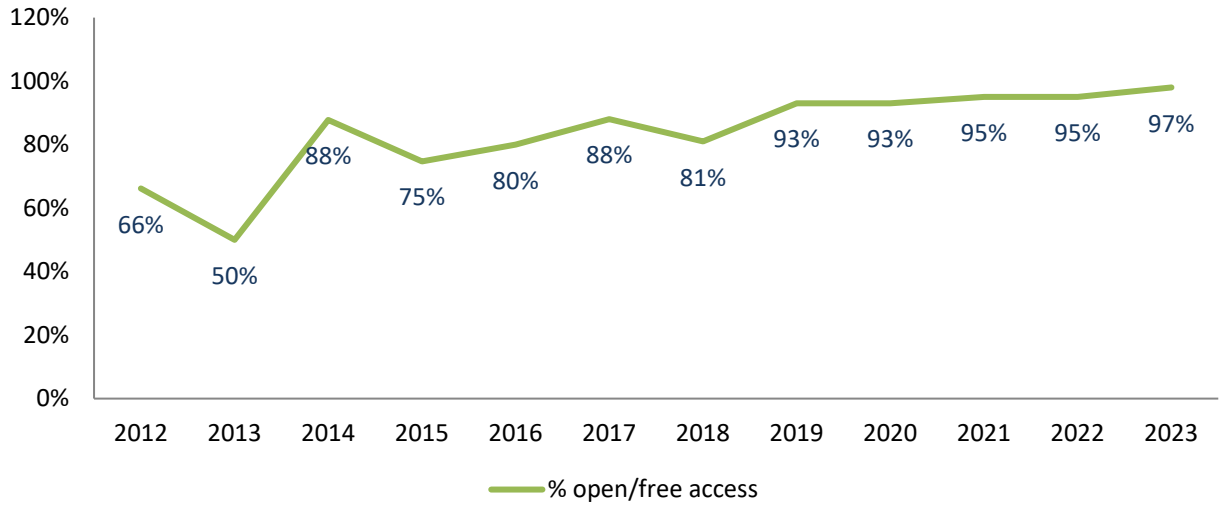


Figure 12. Equity: Proportion of publications in open/free access, yearly progress 2012 to 2023

In addition, we explored the presence and quality of data availability statements (DAS) in line with the WHO policy and implementation guidance on sharing and reuse of health-related data for research purposes.[24]

Of the 179 references, 155 papers were research papers where a DAS was justified. Of those, 113 (73%) had one, 42 (27%) did not. Of the 113 that did, 33 had the data set deposited in a repository and 19 stated that they gave access to all data either within the paper or in supplementary files (total 46%). Moreover, overall, 63 of 113 (55%) provided information on who to contact to discuss access to the data.

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

In 2023, the proportion of contracts and grants awarded to women, both in number and in total dollar amounts remained close to parity (Figure 13 and Figure 14), but a slight decrease was observed compared to 2022, where both reached 52% (Figure 15). However, the mean amount per grant was highest for women from DECs.

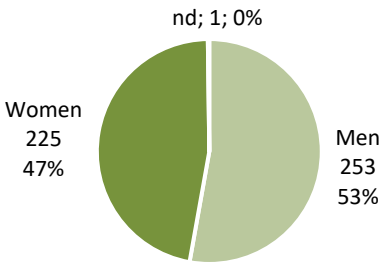


Figure 13. Equity: Proportion of grants and contracts awarded to women (% count), 2023

[24] Sharing and reuse of health-related data for research purposes: WHO policy and implementation guidance. World Health Organization (2022). https://iris.who.int/handle/10665/352859. License: CC BY-NC-SA 3.0 IGO

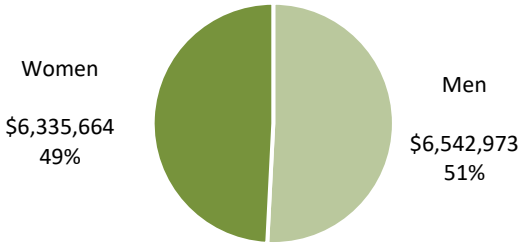


Figure 14. Equity: Proportion of grants and contracts awarded to women (% $ amount), 2023

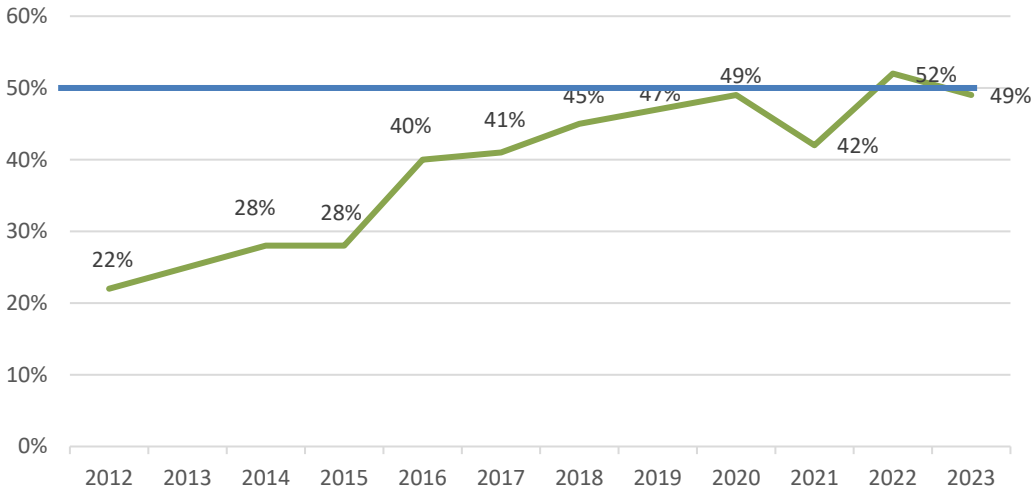
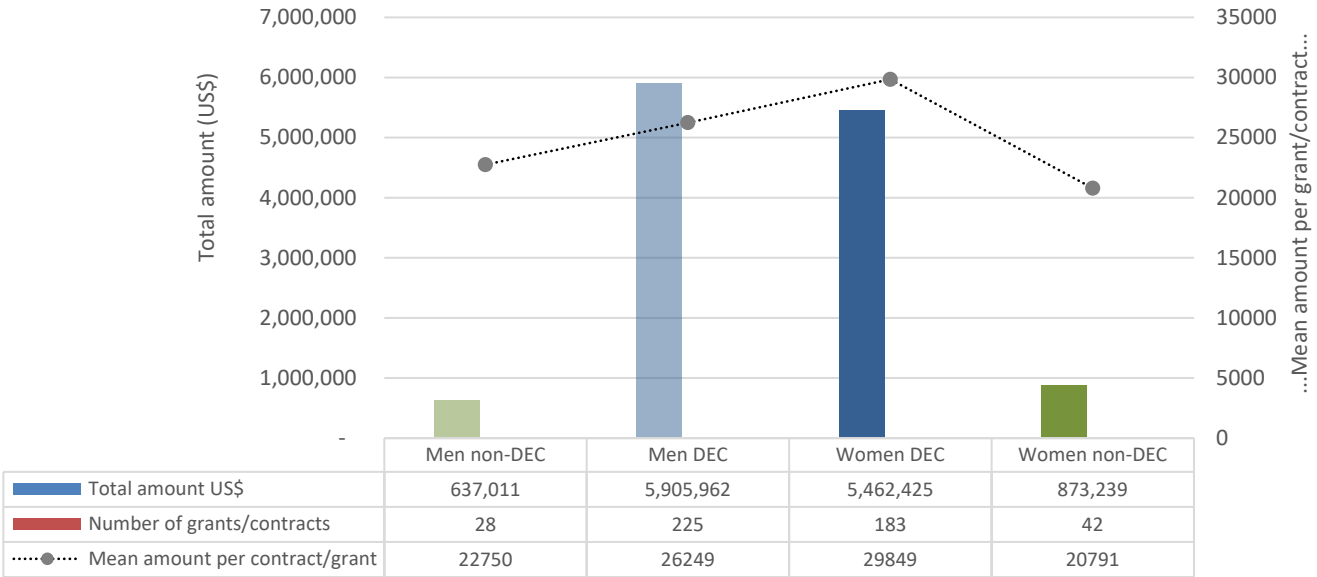


Figure 15. Equity: Proportion of grants and contracts awarded to women, 2012 to 2023 (% $ amount)



	Men non-DEC	Men DEC	Women DEC	Women non-DEC
Total amount US$	637,011	5,905,962	5,462,425	873,239
Number of grants/contracts	28	225	183	42
Mean amount per contract/grant	22750	26249	29849	20791

Figure 16. Equity: Proportion and value of grants and contracts awarded to men and women in DECs vs non-DECs (% amount), 2023

Indicator 15 - Proportion of women on TDR external advisory committees

In 2023, 45 individual experts were involved in TDR's external advisory committees. As some experts sit on more than one committee, they represented 54 expert seats. The proportion of women amongst them was 64%, representing 67% of the expert adviser seats. Similar to last year's record, this reflects the general effort of TDR towards gender equity in involving women in higher advisory roles.

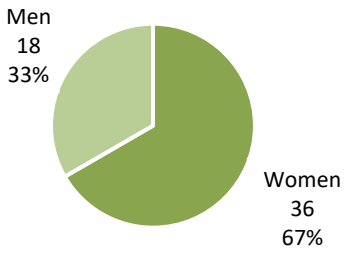


Figure 17. Equity: Gender distribution of external expert advisers, 2023

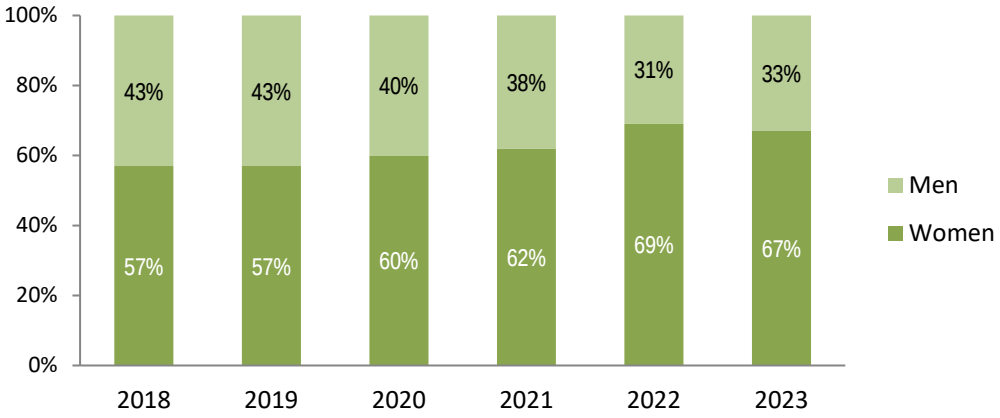


Figure 18. Equity: Yearly gender distribution of external expert advisers, 2018 to 2023

Indicator 16 - Proportion of women authors of peer-reviewed publications supported by TDR (first author, last author)

In 2023, 42% of first authors of TDR-supported publications were women, remaining consistently below the 50% target despite TDR's efforts to support women in science.

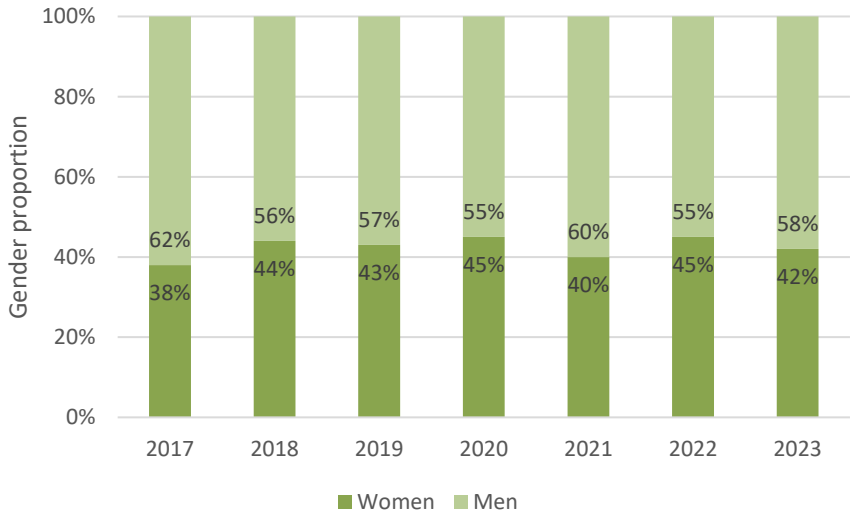


Figure 19. TDR-supported publications: Gender distribution of first authors, 2017 to 2023

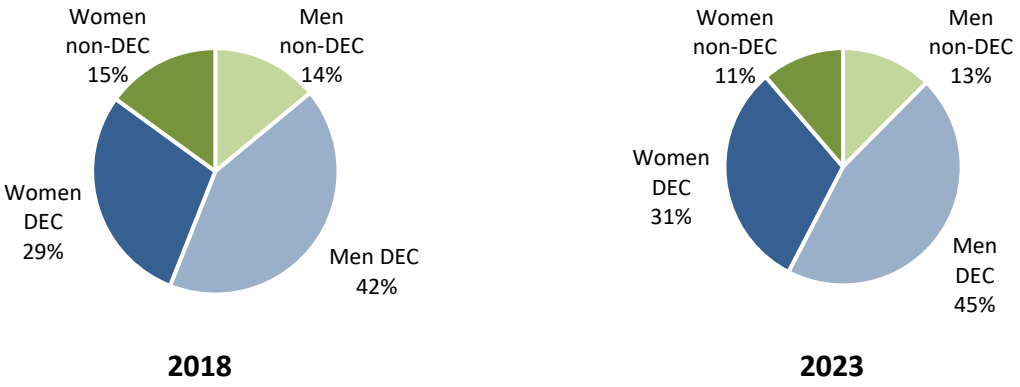


Figure 20. Equity: Distribution of first authors by gender and DECs, 2018 and 2023

The proportion of women among last authors of TDR-supported publications was overall at 30% in 2023 . The proportion dropped compared to 2022 in DECs (42% to 30%), as well as in non-DECs (32% to 30%).

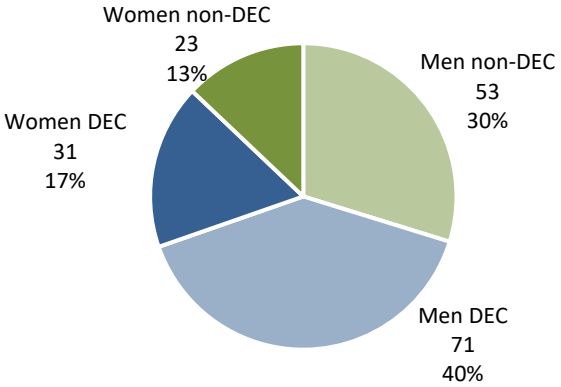


Figure 21. Equity: Distribution of last authors by gender and DECs versus non DEC, 2023

Since measuring the gender distribution of corresponding authors at the request of STAC in 2021, the overall proportion of women increased from 35% to 44% in 2022, but dropped again to 36% in 2023.

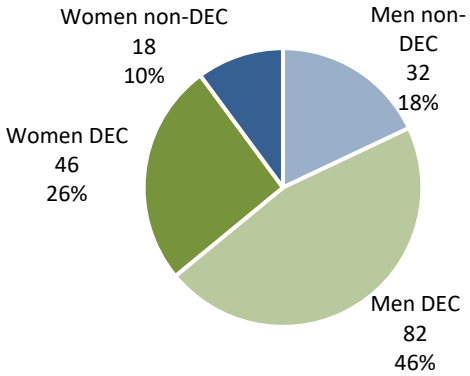


Figure 22. Equity: Distribution of corresponding authors by gender and DECs versus non DEC, 2023

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

- In 2023, 23 (13%) explicitly considered gender and women's issues and 14 (8%) disability.
- In preparation for the new strategy, in order to establish a baseline, we also measured the proportion of publications addressing explicitly one of the four major global health challenges affecting infectious diseases of poverty, using a One Health approach:
    - preparedness for epidemics and outbreaks, 54 publications (30%)
    - control and elimination of diseases of poverty, 103 publications (58%)
    - resilience to climate change's impact on health, 7 publications (4%)
    - resistance to treatment and control agents, 44 publications (25%)
    - evidence of a One Health approach, 23 publications (13%)

  Any of the global health challenges mentioned above:
    - at least one of the global health challenges, 147 publications (82%)

4.2 Effective multisectoral partnerships

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
18. Resources leveraged as direct contributions (co-funding, services or in-kind) to TDR projects (examples)	$ 1:1 ($ TDR : $ partners) People 1:30 (TDR : in the field)	< $ 2:1	$ 1:1 People 1:52 (TDR : in the field)

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

During 2022–2023, it is estimated that TDR leveraged more than US$ 21 million in co-funding of projects, technical contribution, in-kind support, meetings, facilities use, laboratory work, training, site co-funding, network development, etc. For each dollar invested by TDR, slightly more was leveraged from other sources. This is a rough estimate, due to the difficulty of quantifying the various contributions. During the same period, more than 1550 people in the field were estimated to be working on TDR projects, either as principal investigator, co-investigator, grantee, trainee conducting some form of research or capacity strengthening activities, consultant, etc. This means that the number of people who worked on TDR projects in the field was 52 times higher than the TDR secretariat head count. The list by TDR expected result appears in Annex 3.

4.3 Value for money

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
19. Evidence demonstrating value-for-money, cost savings and/or enhanced efficiency or effectiveness	N/A	N/A	Evidence provided

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

Thanks to sound management systems and a conservative income forecast, we managed to save US$ 4.9 million on operations support and staff costs, re-orienting some of this to operations activities, thus further improving the Programme's efficiency. Detailed information is available in TDR's 2022–2023 financial report.

4.4 Quality of work

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
20. Proportion of project reports evaluated as satisfactory by external advisory committees	100%	>80%	100%

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

All project progress reports submitted to external advisory committees for review in 2022–2023 were approved, some following minor changes.

4.5 Sustainability of outcomes

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
21. Number of effective public health tools and strategies developed which have been in use for at least two years	0	40	67 *(+23)*

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

The complete list is available in Annex 2.

5. Management performance

5.1 Effective resource mobilization

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
22. Percentage of approved biennial budget successfully funded	*87.9% (US$ 39.5/ 45 million)*	≥100%	96% of the US$ 40 million budget scenario was funded
23. Percentage of income received from multi-year, unconditional donor agreements	*17.3% (US$ 6.8/ 39.5 million)*	70%	35%

Indicator 22 - Percentage of approved biennial budget successfully funded

We started the 2022–2023 biennium with two approved budget and workplan scenarios: the starting level at US$ 40 million and the higher level, conditional on further available funding, at US$ 50 million. Revenue in 2022–2023 amounted to US$ 38.3 million, including US$ 28.1 million undesignated funds and US$ 10.2 million designated funds (some of the designated funds recognized in 2022−2023 are intended to fund activities in 2024−2025).

Planned costs were formally revised three times during the biennium; increasing to US$ 42.4 million in September 2022 as funds became available, then decreasing gradually back to US$ 40 million during 2023 as a result of savings in staff and operations support costs.

As at 31 December 2023, US$ 35.5 million had been spent or committed through legal agreements (commitments of US$ 2.6 million). This represents an overall implementation rate of 89% of the US$ 40 million budget scenario and the revised planned costs. This is consistent with the Standing Committee's agreement to save money for the 2024–2025 biennium, while reaching a higher than anticipated implementation rate.

During the biennium, part of the undesignated savings on staff costs and operations support were oriented towards funding additional activities. Consequently, for operations activities (both undesignated and designated funding), the implementation rate at 102% is slightly higher than the original US$ 40 million budget scenario and 85% of revised planned costs.

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

Income from contribution agreements that were unconditional and lasting three years or longer were at 35% in 2022–2023. This is similar to last biennium's 36% (up from 1% in 2018–2019). A higher proportion would give TDR the opportunity to better plan for medium- and long-term results.

5.2 Effective management

Key performance indicators	Baseline (2017)	Target (2023)	Progress *(contrib. 2023)*
24. Percentage of staff workplans and performance reviews (including personal development plan) completed on time	89%	≥90%	96%
25. Proportion of expected results on track	89%	≥80%	84%
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 2023. The only non-compliant case was beyond TDR's control.

For comparison, for this same indicator WHO's overall compliance rate was 59%, WHO headquarters was 45% and the Science Division was 60%.

Indicator 25 – Proportion of expected results on track

The list by TDR expected result appears in Annex 3. The summary status of expected results at 31 December 2023 was:

- 21 on track
- 4 with minor delays (some activities have been delayed)

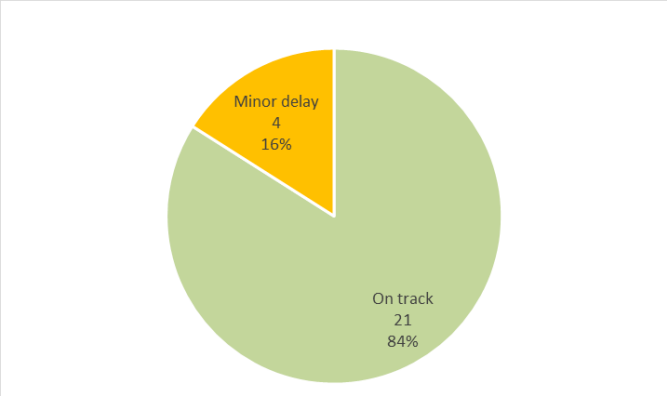


Figure 23. Status of expected results as at 31 December 2023

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

At the end of 2023, for the ten Programme-level risks that were open, ten action items had been added to address Risk 1 (Portfolio alignment with TDR strategy), Risk 2 (TDR income), Risk 9 (Communication of TDRs unique value), Risk 18 (TDR's visibility within collaboration and partnerships) and Risk 20 (Replacement of TDR key personnel). Of these ten new actions, seven are planned and three were on track at the end of 2023.

Overall, of the thirty-six action items monitored in 2023, 18 were on track, 7 were planned, none were delayed and 11 were completed.

Four Programme-level risks are proposed to be closed; Risk 12 (Impact of WHO transformation), Risk 16 (Impact of WHO staff mobility policy), Risk 17 (TDR 2018–2023 strategy implementation) and Risk 19 (Anticipating global health emergencies).

All actions were either on track or completed. No action was delayed.

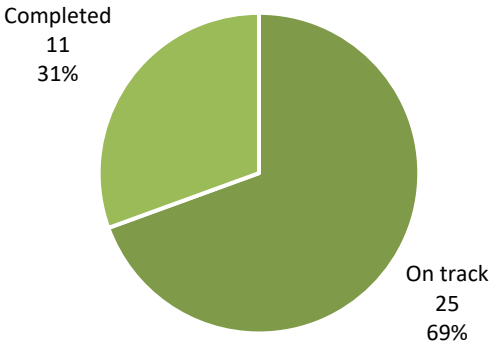


Figure 24. Status of action items, 31 December 2023

6. Lessons learnt

The role of working models in achieving targets of the 2018–2023 strategy

Since 2012, TDR has shifted from a centralized approach to a working model that relies heavily on partnerships. Democratizing research beyond academia led to an increased capacity in countries to lead and conduct research and training that supports countries' priorities, and made possible the achievement of ambitious targets that had been set for technical results (outcomes and outputs) at the beginning of the strategic period 2018–2023. Models that worked with a multitude of stakeholders from country ministries of health and diseases control programmes (such as SORT IT or the subregional TB research networks) resulted in a higher probability of impacting policy and practice in-country. This was also true for multisectoral and One Health approaches where problems affecting more than one field were dealt with in a concerted manner. This was the most important factor that allowed us to go well beyond the targets set for outcomes and outputs in the previous strategic period. The potential utilization of such models in the new strategic period would likely be able to generate similar levels of impact.

Cautious approach to scaling up operations played a role in financial stability and the magnified role of designated funding

The 2022–2023 biennium started with a good chance of TDR's revenue materializing towards the higher limit of the range. However, signals from the international context as well as caution expressed by the Standing Committee led to a conservative approach to implementation. As a result, only part of the savings in staff costs and operations support, as well as from additional funds received, were reinvested in scaling up operations activities (to achieve 103% implementation against the initial core funded workplan). At the request of our governing bodies, given the difficulty in maintaining the levels of core funding due to large cuts in contributions from two of TDR's main contributors, we conservatively reprogrammed a significant amount of funds to cover the potential funding gap in 2024–2025. This allowed us to start implementing the current biennium at the US$ 40 million scenario level, without having to roll out the contingency plan that would otherwise have been needed.

Due to the current international context that makes it less likely for core funding donors to be able to scale up their contributions in 2026–2027, the approach agreed by governing bodies includes a higher ratio of project-specific, designated funding in TDR's income. For this, TDR is working to raise designated funds that would allow implementation of our strategic priorities that include the four global health challenges and the One Health approach, as well as crosscutting themes such as capacity strengthening, gender equity and social innovation.

Aligning the Performance Framework 2024–2029 with the new strategy

Learning from the Performance Framework 2018–2023, the revised framework further aligns with the 2024–2029 strategy and its objectives. Adapting the indicators to the new strategy, including its focus on four major global health challenges affecting vulnerable populations and using a One Health approach, led to the addition of a new key performance indicator measuring the alignment of our outputs with the strategic objectives. At the same time, a novel aspect was introduced in having annual milestones that will allow closely monitoring the progress made on achieving strategic objectives. Also, to give more transparency to novel training modalities, the indicator measuring the yearly number of trainees now provides visibility to the two types of support TDR provides, namely education grants and other long-term course schemes on the one hand, and short-term and massive open online courses on the other.

7. Annexes

Annex 1. List of TDR-supported peer-reviewed publications 2023

1. Abio, A., Ngum, P., Lowery Wilson, M., Bärnighausen, T., & Lule, H. (2023). Sociodemographic distribution and correlates of nonfatal unintentional non-traffic-related injuries in Kenya: Results from the 2014 demographic and health survey. *Health science reports*, *6*(6), e1323. https://doi.org/10.1002/hsr2.1323

2. Adam, T., Ralaidovy, A. H., Ross, A. L., Reeder, J. C., & Swaminathan, S. (2023). Tracking global resources and capacity for health research: time to reassess strategies and investment decisions. Health Research Policy and Systems, 21(1), 5, Article 93. https://doi.org/10.1186/s12961-023-00979-7

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4. Adjei, M.R., Amponsa-Achiano, K., Okine, R. *et al.* (2023). Post introduction evaluation of the malaria vaccine implementation programme in Ghana, 2021. *BMC Public Health* **23**, 586 (2023). https://doi.org/10.1186/s12889-023-15481-6

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Annex 2. List of tools generated with TDR support that have been in use for at least two years at 31 December 2023

#	Year	Tools / strategies / solutions
1.	**1981**	*Leprosy – WHO recommendation for use of multidrug therapy (MDT) for leprosy following its registration in 1980 by Ciba-Geigy.*
2.	**1983**	*Schistosomiasis* – Diagnostic urine-filtration technique in disease control use
3.	**1983**	*African trypanosomiasis* – Card agglutination diagnostic test for trypanosomiasis (CATT) in disease control use.
4.	**1989**	*Onchocerciasis* – Ivermectin is shown to be safe and efficacious during community studies opening the path to mass drug administration with ivermectin provided via the Mectizan Donation Programme
5.	**1989**	*Chagas disease* – Improved agglutination blood test for rapid screening of transfusion blood in disease control use.
6.	**1990**	*African trypanosomiasis* – Eflornithine® registered by Marion Merrell Dow.
7.	**1993**	*Onchocerciasis* – Rapid epidemiological mapping of onchocerciasis (REMO) in disease control use.
8.	**1994**	*Filariasis* – Single-dose treatment with DEC or ivermectin is shown to be an appropriate treatment regimen, providing the basis for a new global control strategy based on mass drug administration.
9.	**1994**	*Leishmaniasis – Direct agglutination diagnostic test (DAT) and standard leishmania skin test antigen in disease control use.*
10.	**1994**	*Chagas disease, sleeping sickness and leishmaniasis* – Parasite genome sequencing project launched in meeting in Brazil, co-sponsored by TDR and FIOCRUZ. Sequences published in 2005.
11.	**1994**	*Onchocerciasis* – Effectiveness of mass drug administration with ivermectin in preventing posterior segment eye disease, visual impairment and blindness demonstrated in longitudinal studies in Africa.
12.	**1994**	*Visceral leishmaniasis* – Liposomal amphotericin B registered by NeXstar.
13.	**1995**	*Schistosomiasis* – Method for rapid identification of urinary schistosomiasis in highly endemic communities validated and in control use.
14.	**1995**	*Onchocerciasis* – Importance of onchocercal skin disease determined, providing the basis for extending onchocerciasis control to forest areas in Africa.
15.	**1996**	*Lymphatic filariasis* – Drug delivery strategies developed for lymphatic filariasis elimination in Africa.
16.	**1996**	*Schistosomiasis* – Guidelines for diagnosis of female genital schistosomiasis completed.
17.	**1996**	*Malaria* – Final results of large field trials of insecticide-treated bednets involving 400 000 people in Ghana, Burkina Faso, Kenya and The Gambia demonstrate that insecticide-treated bednets could reduce overall childhood mortality by around 20%.
18.	**1996**	*Onchocerciasis* – Community-directed treatment (ComDT) with ivermectin (CDTI) becomes the APOC mass drug administration delivery strategy following multi-country field studies showing that community direction results in better population participation than 'health system direction.
19.	**1997**	*Leprosy* – Improved multidrug therapy based on rifampicin, ofloxacin and minocycline (ROM) used for leprosy control.
20.	**1997**	*Malaria* – A TDR-supported pan-African conference on research in Dakar, Senegal decides to create the Multilateral Initiative on Malaria.

#	Year	Tools / strategies / solutions
21.	**1998**	*Malaria* – Home management of malaria approach adopted as a strategy by WHO.
22.	**1998**	*Lymphatic filariasis* – Safety demonstrated for albendazole as treatment.
23.	**2000**	*Lymphatic filariasis* – Rapid mapping of filariasis in control use.
24.	**2000**	HINARI, a partnership for Health InterNetwork Access to Research Initiative, is launched with TDR as part of the partnership in the area of research capacity building.
25.	**2000**	*Malaria* – Germline transformation of *Anopheles* mosquitoes.
26.	**2000**	WHO published the Operational guidelines for ethics committees that review biomedical research
27.	**2001**	TDR initiates several partnerships for developing capacity in bioinformatics.
28.	**2001**	*Malaria* – Evidence for policy – Reducing potential for artemisinins resistance via use of artemisinins combination therapy (ACT) in uncomplicated malaria
29.	**2001**	*Good laboratory practice:* Quality practices for regulated non-clinical research and development
30.	**2002**	*Malaria* – Genome sequencing of *Anopheles gambiae* activity completed through TDR-initiated consortium.
31.	**2002**	*Visceral leishmaniasis* – Miltefosine registration as first oral therapy against VL
32.	**2002**	The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER) is inaugurated.
33.	**2002**	*Workbook for Investigators*
34.	**2003**	*Malaria* – Unit-dose packaging of Coartem® to ensure adherence and suitability for home management of malaria in collaboration with Novartis.
35.	**2003**	*Lymphatic filariasis* – Longitudinal studies produce evidence that mass drug administration would be required for more than 4–6 years in most places to eliminate lymphatic filariasis.
36.	**2003**	*Sexually transmitted diseases* – TDR-led evaluation of rapid syphilis diagnostic tests led to those with acceptable performance being placed on the WHO procurement list at negotiated pricing for Member States.
37.	**2004**	*Malaria* – Regulatory label extension is obtained for the use of Coartem® (oral treatment of artemether + lumefantrine) in infants and young children above 5 kg in weight.
38.	**2004**	*Human African Trypanosomiasis* – Framework for clinical product development (in collaboration with the WHO Department for Neglected Tropical Diseases)
39.	**2005**	*Visceral leishmaniasis* – The health ministers of India, Nepal and Bangladesh sign a Memorandum of Understanding pledging to eliminate kala azar (visceral leishmaniasis) from their countries by 2015.
40.	**2005**	*Visceral leishmaniasis* – Validation of RK39 as a diagnostic for use in India but not in Africa, incorporated into visceral leishmaniasis elimination programme.
41.	**2005**	*Onchocerciasis, lymphatic filariasis* – RAPLOA (rapid assessment procedure for determining areas of *Loa* endemicity) developed, validated and incorporated into disease control use.
42.	**2005**	*Malaria* – Results from studies in Ghana indicate that the proportion of caregivers using ACTs correctly in terms of promptness, dosage and number of days is more than 90%, leading to reduced delay in seeking treatment.
43.	**2005**	WHO published the Operational Guidelines for the Establishment and Functioning of Data and Safety Monitoring Boards
44.	**2005**	*Effective project planning and evaluation for biomedical and health research* – Planning for success training programme launched
45.	**2006**	*Malaria* – Evidence for pre-referral treatment use provided in WHO Malaria Treatment Guidelines

#	Year	Tools / strategies / solutions
46.	**2006**	*Dengue* – Multi-country studies validating pupal productivity survey methods for dengue vector control are published, demonstrating method effectiveness.
47.	**2004**	*Human African Trypanosomiasis* – Clinical product development approaches (in collaboration with the WHO Department for Neglected Tropical Diseases)
48.	**2007**	*Leishmaniasis* – Paromomycin is registered for use in India through the Institute for One World Health.
49.	**2007**	*Tuberculosis* – WHO Policy recommending reduction of the number of smears for the diagnosis of tuberculosis and defining a new sputum smear-positive case
50.	**2008**	*Community-directed interventions* (CDI), an integrated approach for improved access to vital drugs and preventive measures, including for malaria, in remote African communities.
51.	**2008**	*Schistosomiasis* – Evidence for dosage of Praziquantel for the control of schistosomiasis
52.	**2008**	*Malaria* – Mefloquine-artesunate combination drug has been developed for malaria treatment and introduced in Brazil.
53.	**2008**	*Dengue* – Dengue diagnostics tests tested and available
54.	**2008**	*Tuberculosis* – WHO Policy online probe assays and second-line drug susceptibility testing
55.	**2010**	*African trypanosomiasis* – the tsetse fly genome sequenced, assembled and annotated by the International Glossina Genomics Initiative Consortium
56.	**2010**	WHO guidelines recommend *rectal artesunate* in paediatric populations with severe malaria living in remote locations in rural Africa and Asia
57.	**2010**	WHO recommendation against the use of *immunodiagnostics tests for active or latent TB* infection
58.	**2010**	*TB fluorescence microscopy*. Research results informed the introduction of LED-FM in high burden countries in Nov 2010
59.	**2010**	A simplified, revised and evidence-based *disease classification system for dengue* adopted in Latin-American and Asian countries
60.	**2010**	*Visceral leishmaniasis active case detection* methods applied at large scale by control programmes in the Indian subcontinent
61.	**2011**	*Malaria rapid diagnostics tests* (RDTs) evaluation rounds have led to quality improvements and the RDTs have become part of the overall strategy for malaria: Test, Treat, Track.
62.	**2011**	*An evidence-based strategy to support the elimination of visceral leishmaniasis* is being used in the Indian subcontinent
63.	**2011**	*New synthetic routes for enantiomerically-pure L-praziquantel* identified in collaboration with the Australian Research Council; used to develop a new paediatric formulation.
64.	**2012**	*ESSENCE good practice document: Five keys to improving research costing in low- and middle-income countries*
65.	**2012**	*Optimized and standardized trapping and bait technology for relevant vectors of HAT*
66.	**2012**	*HAT-Trick*, a decision support system for improved vector control intervention methods of human African trypanosomiasis (HAT)
67.	**2012**	*Framework for the introduction of rapid tests on sexually transmitted infections into country programmes*
68.	**2012**	*Dengue vector control methods and strategies*, combining targeted breeding containers and insecticide-treated materials in Asia
69.	**2012**	Evidence contributing to the WHO and UNICEF *Integrated Community Case Management strategy to reduce childhood mortality* through community case management of malaria, pneumonia and diarrhoea (updated in 2016)

#	Year	Tools / strategies / solutions
70.	**2012**	*T3: Test. Treat. Track.* Evidence on feasibility and costs of universal coverage diagnostic, testing and antimalarial treatment
71.	**2012**	Guidance framework developed for *testing efficacy and safety of genetically-modified mosquitoes* for malaria and dengue control
72.	**2012**	*The Global Report for research on infectious diseases of poverty* is used to inform EC's strategic direction in addressing neglected diseases of poverty
73.	**2013**	*Evidence from clinical trials of the efficacy and safety of multiple-dose and single-dose regimens with liposomal Amphotericin B* informed policy decisions in Bangladesh and Nepal.
74.	**2013**	*The Report on Priorities for Tuberculosis Research*, from the disease reference group on tuberculosis, leprosy and Buruli ulcer.
75.	**2013**	*The Report on Research Priorities for the Environment, Agriculture and Infectious Diseases of Poverty*, from the thematic working group comprising international experts convened by TDR.
76.	**2013**	*ESSENCE good practice document: Framework for planning, Monitoring and Evaluation for research capacity strengthening* has been adopted by several funding agencies and initiatives and revised in 2016
77.	**2014**	*The eco-health approach* to improve and innovate the routine Chagas disease and Dengue fever vector control interventions in Latin-America
78.	**2014**	*Implementation Research Toolkit* to strengthen country capacity to conduct implementation research embedded in disease control programmes
79.	**2015**	*West African Regional Network for TB control (WARN-TB),* grouping sixteen countries and national TB control programmes, was created with TDR facilitation
80.	**2015**	*SORT IT, The Structured Operational/Implementation Research and Training Initiative* that trains national programme officers in conducting operational research and using evidence to solve implementation bottlenecks and optimize health interventions
81.	**2015**	ESSENCE good practice document: *Seven principles for strengthening research capacity in LMICs*
82.	**2015**	*Caribbean network on vector control*, initiated by TDR, officially launched and self-sustainable, active in outbreak prevention and detection
83.	**2015**	*Malaria and neglected tropical diseases* – a web-based knowledge sharing platform resulting from the research on population resilience to climate change in Africa and currently presenting in more details all ex-VES research projects.
84.	**2015**	*Arboviral diseases (Dengue, Zika, Chikungunya) – Worldwide Insecticide Resistance Network (WIN),* initiated by TDR, focuses on surveillance of insecticide resistance and alternative methods of vector control
85.	**2015**	*The TB-Platform for Aggregation of Clinical TB Studies (TB-PACTS)* a partnership-based data sharing platform aggregating the REMoxTB, RIFAQUIN, and OFLOTUB studies
86.	**2015**	*WHO Central registry for the epidemiological surveillance of drug safety in pregnancy* established
87.	**2015**	*WHO global aDSM database,* for TB active drug safety monitoring and management
88.	**2015**	*Enhanced, user-centred informed consent form and process*, developed through SIDCER for clinical trials
89.	**2016**	*EWARS: Preparedness for early identification and response to dengue outbreaks*. A 'Model Contingency Plan' was developed and published together with a how-to guide
90.	**2016**	*Guidance on reporting implementation research*
91.	**2016**	*The Six Practices to Strengthen Evaluation of Global Health Research for Development* published by ESSENCE on Health Research initiative of funders
92.	**2016**	*A short training course on the principles of Implementation Research* for use at the Regional Training Centres.

#	Year	Tools / strategies / solutions
93.	**2017**	*Massive Open Online Course on implementation research*
94.	**2017**	*TDR's Regional Training Centres* located in each WHO region, training local researchers on a range of good research practices and project management
95.	**2017**	*The Clinical Research During Outbreaks (CREDO)* training curriculum has been granted accredited status by the African Academy of Sciences
96.	**2017**	*Global Vector Control Response*, developed jointly with the WHO Global Malaria Programme and the Control of Neglected Tropical Disease Department
97.	**2017**	*SIHI country hubs,* a new approach to advance social innovation in health through research, advocacy and capacity strengthening
98.	**2018**	Moxidectin for the treatment of onchocerciasis
99.	**2018**	*Practical guide for crowdsourcing to engage communities in research*
100.	**2018**	Decision support processes and tools to increase population resilience to climate change were developed, e.g. Climate Data Library, online map rooms, data analysis tools, smartphone applications
101.	**2018**	*A digital application for core competencies in clinical research*
102.	**2019**	Online course aimed at developing skills in gender-based analysis for vector-borne diseases and climate change research
103.	**2019**	A research package for facilitating the use of a new all-oral DR-TB treatment regimen by the countries
104.	**2019**	Training course on the ethics of implementation research
105.	**2019**	*Health Product Profile Directory,* online database describing eight to ten key characteristics of product profiles for populations in low- and middle-income countries
106.	**2019**	Portfolio-to-impact (P2I) tool, used to analyse portfolios of PDPs and commercial partners
107.	**2019**	The Western African Network against Arboviruses, initiated with TDR support
108.	**2020**	Training course on Good Clinical Practice (GCP) for research teams in hospitals participating in the "Solidarity" trial used through the WHO Academy's COVID-19 mobile learning app.
109.	**2020**	Guide for WHO staff managing research priority setting exercises
110.	**2020**	Guidance framework on testing sterile insect technology (SIT) against the vectors of arboviral diseases, developed with the International Atomic Energy Agency
111.	**2020**	Guidance framework on multisectoral approaches for the prevention and control of vector-borne diseases
112.	**2020**	Inclusion of a university in a French-speaking country in West Africa in the Postgraduate Training Scheme
113.	**2020**	Establishment of a sub-regional training centre in francophone West Africa
114.	**2020**	Development of a SORT IT programme for French-speaking researchers.
115.	**2020**	Innovative online SORT IT virtual platform to overcome COVID-19 restrictions and enable trainings to continue into 2021 and beyond
116.	**2020**	Professional Competency Framework for research management to support its professionalization as a disciplinary field
117.	**2020**	Implementation research toolkit for the use of digital technology for TB control
118.	**2020**	TB costing tool to favour the integration of a health economics component in implementation research projects
119.	**2021**	New SORT IT training module to strengthen researchers' communication skills and enhance uptake of research findings to policy and practice
120.	**2021**	*Public engagement and crowdfunding in health research* practical guide

#	Year	Tools / strategies / solutions
121.	**2021**	New online Directory of courses on medical entomology launched through the Global Vector Hub platform
122.	**2021**	*Social innovation monitoring and evaluation framework* and *social innovation research checklist* tools developed to guide and engage innovators, researchers and other stakeholders in social innovation research
123.	**2021**	The *Women in Science compendium* featuring 15 women global health leaders from the TDR Global community launched on International Women's Day
124.	**2021**	Launch of TDR's *Global Health Matters* podcast
125.	**2021**	New course on gender-based analysis of infectious diseases and climate change
126.	**2021**	New mechanism for funders to jointly review their investments in research capacity strengthening in LMICs and to enhance coordination developed through ESSENCE.
127.	**2021**	*One Health Handbook* a comprehensive reference source of One Health framing and integration of its challenges
128.	**2021**	Generic research package for promoting the calibration of computer-assisted detection software for TB screening released
129.	**2021**	Guide for improving compliance with the good clinical practice and good data management practice of population- and facility-based TB surveys available in English and French.

Annex 3. Leverage estimate in 2022–2023

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
RESEARCH FOR IMPLEMENTATION					
1.1.1.	**Country preparedness for disease outbreaks**	Ministries of Health and/or National Institutes of Health in Brazil, Colombia, Dominican Republic, Ethiopia, India, Malaysia, Mexico, Mozambique, Sri Lanka and Thailand. GLAI – Global Arbovirus Initiative and AFRO, SEARO, WHO–ECH, and the WHO Yellow Fever Department, Eliminate Yellow Fever Epidemic (EYE) Secretariat. African Health Organisation and all 47 WHO country offices, TDR, WHO–NTD, WHO–PHE and the WHO Emerging Diseases and Zoonoses Unit.	200 000	120	GLAI: Yellow fever on root cause analysis generic protocol, support to EWARS+ in countries. WHO-ECH: collaboration for the implementation of EWARS in Bangladesh, Cambodia, Ethiopia, Lao, Malawi, Mozambique, Myanmar, Nepal, Oman, Timor Leste. AMRO/PAHO leads on integration of EWARS on the Latin America Platform for dengue surveillance. CDC Thailand: involvement and financial support will facilitate the scale-up
1.1.4.	**Country resilience to the threat of drug-resistant infections**	Implementing partners include seven WHO country offices, 73 implementing partners in 30 countries from Asia and Africa (59 LMIC institutions and 14 HIC institutions (disease control programmes, academia and nongovernmental organizations). A list of partner institutions is available at: https://tdr.who.int/activities/sort-it-operational-research-and-training Eighty per cent of the mentors involved with trainings are from the South and 43% are SORT IT alumni embedded within these institutions. This has boosted high-income country and LMIC partnerships, as well as LMIC–LMIC, partnerships; promoted equitable research; and built new communities of practice to tackle AMR at a global level.	500 000	19	In Sierra Leone a new project was launched by those previously trained through TDR grants and was financed by the Canada government to the tune of US$ 300 000. Funding was provided to the NGO called Sustainable Health Systems, Sierra Leone, and a SORT IT course was conducted, training an additional 10 individuals. In Nepal, a new project with financial support of about US$ 100 000 from the WHO Country Office and Ministry of Health was launched by the SORT IT officers and alumni trained through TDR grants. Through the project, 12 additional public health professionals were trained in operational research and drafting manuscripts. In the UAE, costs of organisation, hosting etc were leveraged to the tune of US$ 100 000 by the United Arab Emirates University for training on AMR in the WHO Eastern Mediterranean Region.
1.3.3.	**Population health vulnerabilities to vector-borne diseases: increasing resilience under climate change conditions**	Projects involve institutions in Africa: AFROHUN; Makerere University, Uganda; Ministry of Health, Uganda; University of Nairobi, Kenya; Daktari NGO Spain; Institute Pasteur Dakar; Nigerian Institute of Medical Research; National One Health Committee Senegal; Kilimanjaro Clinical Research Institute United Republic of Tanzania; Tanzania Plant Health and Pesticides Authority; University of Rwanda; University of Kwazulu-Natal, South Africa; and University of Global Health Equity; Rwanda.		20	At regional level, there is collaboration with WHO–ECH and the One Health for Africa unit.

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
1.1.7.	**Maximized utilization of data for public health decision-making**	There are 73 institutions involved in SORT IT from 30 countries, most of which are from LMICs. HIC–LMIC and LMIC–LMIC collaborations continue, and new communities of practice are being built at a global level. This includes: WHO regional and country offices, academic institutions, nongovernmental organizations, and ministries of health. The list of partner institutions is available at: https://tdr.who.int/activities/sort-it-operational-research-and-training	750 000	28	We had three leveraged projects – one in each India and Zimbabwe-supported by the Global Fund and led by SORT IT alumni and another on mental health led by Cheshire University by those trained by TDR . A total of 28 research projects with 28 mentors – the mentors spend at least 20% of their time on hands-on mentorship of trainees through 2023. (these are not TDR staff).
1.2.1.	**Strategies to achieve and sustain disease elimination**	Public Health and Infectious Disease Research Center, Nepal; International Centre for Diarrhoeal Disease Research and the icddr,b; Epidemiology and Disease Control Division, Department of Health Services, Nepal; Director General of Health Services, Bangladesh; and the Damien Foundation, Belgium.	125 000	60	VL elimination: National programme meetings held in Nepal and Bangladesh. Travel, field health worker time, expenses on patients (diagnosis, treatment), training expenses of staff in hospitals (meetings, logistics). The Damien Foundation continued VL testing in new foci in Bangladesh. Diagnosis and treatment of PKDL in leprosy hospitals in Bangladesh and Nepal continued. VL and PKDL case screening started in new foci in Nepal by government and in Bangladesh with the Damien Foundation. Overall minimum estimated leverage for 2022-2023 is US$ 125 000. Investigators and research team support in the field and clinics represents 25 individuals in Bangladesh and 35 in Nepal.
1.2.6.	**Optimized approaches for effective delivery and impact assessment of public health interventions**	WHO–GTB; WHO–GMP; WHO Malaria Vaccine Implementation programme; AFRO; EURO; SEARO; WPRO; WARN/CARN Regional Network for TB Control; UNDP; FAO; Action Contre la Faim, France; EDCTP; GFATM; Institute of Tropical Medicine, Belgium; University of Thiés, Senegal; the Access and Delivery Partnership; The Union, Paris; the Damien Foundation, Belgium; University of Oslo; Robert Koch Institute, Berlin; Médecins sans Frontières, Paris; Stop TB Partnership, Switzerland; McGill University, Canada; London School of Hygiene and Tropical Medicine; US Agency for International Development; University of California, San Francisco; Luxembourg Institute of Health; Medicines for Malaria Venture (MMV), Switzerland; GAVI; and the World Organisation for Animal Health (WOAH).	1 000 000	500	Around US$ 1 million leveraged from the Global Fund for the conduct of the ShORRT operational research projects.
1.3.12.	**Strategies to promote gender-responsive health interventions on prevention and control of infectious diseases of poverty**	HERD International, Nepal; Makerere University, Uganda; Institute of Health Partners, Bhutan; Institute of Anthropology, Gender and African Studies, University of Nairobi, Kenya; Human Sciences Research Council, Durban, South Africa; Kamuzu University of Health Sciences, Malawi; BRAC James P. Grant School of Public Health, Bangladesh; Jimma University, Ethiopia. Partners include three Social Innovation in Health Initiative country hubs: Makerere University in Uganda, the University of the Philippines; and Centro Internacional de Entrenamiento e Investigaciones Médicas in Colombia.	100 000	26	Research capacities of the institutions were strengthened through learning by doing research activities with TDR technical support and guidance. This ER allowed research institutions to strengthen their own national and regional networks and linkages with the MoH. The involved institutions each dedicated at least one HC to strengthen capacities further within their own network, and present findings to national decision makers and / or at international for a.

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
1.3.10.	**Urban health interventions for the prevention and control of vector-borne and other infectious diseases of poverty**	Health System and Population Studies Division, (icddr,b), Bangladesh; and the Indian Council of Medical Research (ICMR), Regional Medical Research Centre.	100 000	8	The estimated leverage includes human resources time during workshops and beyond, expertise and engagement with national decision makers.
1.3.14.	**Testing of innovative strategies for vector control:** Evidence on effectiveness of the Sterile Insect Technology against vectors and arboviral diseases; Global map of vector control technologies; capacity building in medical entomology.	For the SIT field testing, a technical collaboration was developed with: the International Atomic Energy Agency (IAEA); the joint IAEA/FAO Team; WHO–NTD; WHO Regional Offices; and the Arboviral Diseases Branch of the US Centre for Disease Control (CDC). The SIT consortium from the Pacific Region will be working with the research institutions of French Polynesia, the Cook Islands and Easler Island (Chile), as well as the WHO Country Offices and the Ministries of Health. For the capacity building, a partnership was established with ARCTECH Innovation (UK) managing the Global Vector Hub Platform, where the directory of courses on medical entomology is currently online. For data sharing, a collaboration was established with the Global Biodiversity Information Facility (GBIF), a Programme from the Convention of Biodiversity.	1 500 000	50	The SIT field testing is funded by the US CDC (designated funding US$ 800 000). Countries involved in the project have committed to support with funding, staff and materials (estimated total ≥ US$ 800 000) via their vector control agencies. Direct support to the sterile mosquito production facilities by the Technical Cooperation department from IAEA. Co-funding of the training workshop on data sharing by GBIF leveraged about US$ 50 000. The total leveraged by this project for 2022-2023 is about US$ 1.5 million.
1.3.11.	**Multisectoral approach for prevention and control of malaria and emerging arboviral diseases**	The partnership on this project included/includes: WHO–WASH; WHO–GMP; WHO–NTD; the IDRC, Canada; Swiss Development Cooperation and the Swiss Tropical and Public Health Institute; the Swedish International Development Cooperation Agency (Sida); the National Institute of Parasitic Diseases, China; and the UN Peace and Development Trust Fund. The partnerships also include several institutions in countries such as malaria control programmes, research institutes, WHO Country Offices and other national and regional partners.	2 340 000	200	About 80% of the funding for this ER are designated funds with various collaborations. Sida funding beyond TDR under the collaboration with WHO–WASH, US$ 440 000 The UN Peace and Development Funds funding beyond TDR under the collaboration with WHO–GMP, US$ 1.2 million Leverage created through the case studies within the countries: total amount US$ 700 000. Additional leverage will be through uptake from countries on multisectoral approach.
Total			**6 615 000**	**1 031**	
RESEARCH CAPACITY STRENGTHENING					

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
2.1.1.1.	**TDR support to regional training centres**	Universitas Gadjah Mada, Indonesia; Universiti Malaya, Malaysia; United Nations University International Institute for Global Health, Malaysia; Institute for Health Systems Research, Malaysia; Pontificia Universidad Católica del Ecuador; Centro Internacional de Entrenamiento e Investigaciones Médicas (CIDEIM), Colombia; University of Ghana School of Public Health; Institut Pasteur de Tunis; Astana Medical University, Kazakhstan; Université Cheikh Anta Diop De Dakar; London School of Hygiene and Tropical Medicine, United Kingdom; University of Montreal, Canada; The Institute for Tropical Medicine, Belgium; B.P. Koirala Institute of Health Sciences, Nepal; and the École polytechnique fédérale de Lausanne, Switzerland.	7 500 000	22	Cheik Anta Diop University in Senegal, amplified its Fellowship and Research Program with an outstanding financial leverage of > US$ 100 raised from external funders for each dollar TDR invested; Ghana School of Public Health, CIDEIM Columbia and the newest RTC in Malaysia all matched TDR contributions by raising external funds at an approximate 1:1 dollar ratio.
2.1.2.	**Targeted research training grants in LMICs**	The ten universities supporting the scheme, Directorate for Development Cooperation and Humanitarian Affairs (Ministry of Foreign and European Affairs) of the Government of Luxembourg, and Germany's Deutsche Gesellschaft für Technische Zusammenarbeit.	2 000 000	50	In all the participating universities, the main leverage is in-kind contributions made by the faculty and personnel based at the collaborating institutions, in term of staff time and research resources. Furthermore, some of the collaborating universities have not only given discount to the students' tuition fees but also provided the opportunity to utilize the research findings as evidence to influence practice and policy or as a basis for further research. The total contribution of the participating universities and partners for 212 additional students enrolled during 2022-2023 biennium is estimated around US$ 2 million.
2.1.4.	**Advanced training in clinical product development**	BioNTech SE; Drugs for Neglected Diseases initiative; European Vaccine Institute; Fiocruz – Fundação Oswaldo Cruz, Brazil; Foundation for Innovative New Diagnostics (FIND), Switzerland; GSK Biologicals, United Kingdom; Infectious Diseases Data Observatory (IDDO) at the Centre for Tropical Medicine and Global Health at the University of Oxford; International Vaccine Institute (IVI), South Korea; ISGlobal Barcelona Institute for Global Health and the University of Barcelona; Luxembourg Institute of Health Competence Center for Methodology and Statistics (CCMS); Novartis, Switzerland; Swiss Tropical and Public Health Institute (Swiss TPH); University of Cape Town, South Africa; and the Ugandan Virus Research Institute/International AIDS Vaccine Initiative, HIV Vaccine Programme.	1 200 000	30	Based on the documentation received from two pharmaceutical companies, the estimated in-kind contribution for a one-year assignment for one fellow is around US$ 65 000. This includes mentoring time; conference attendance; relocation agency; two monitoring trips (calculated as cost to monitor sites in Africa); public transport; travel to Geneva for mentoring; insurance (site) and miscellaneous costs depending on the location. The total for 20 fellows is US$ 1.2 million.
2.1.6.	**Structured capacity building in IR**	The ADP partners, UNDP and PATH, are part of the project implementation at country level, in addition to their specific and complimentary roles in ADP projects. The collaboration includes joint planning with distinct objectives but contributing to the same goal and impact. The UNDP country focal points and PATH, in some ADP focus countries, provide online and off-line support to research and training teams.	5 000	125	Both partners have made in-kind contributions of their expertise and time during the concept development phase, and are involved in the project implementation activities, including liaison and advocacy with in-country stakeholders. Actual amount of funds leveraged will depend on the scope and number of IR projects funded as a result of this ER (by countries or ADP stakeholders). Additional non-monetary leverage will be in kind contribution through participation of collaborators, experts and partners in training activities.

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
2.1.7.	**Strengthening operational research capacity in Global Fund supported programmes**	The external partners for this project are disease control programmes and individual SORT IT alumni at country level. This partnership represents added value for the programme in form of OR skills for staff, and improved evidence-based performance. The SORT IT alumni could advance their careers and raise their local visibility due to the expanded OR projects. There is potential for the establishment of institutional collaborations between the programmes and the SORT IT alumni's host institutions.	125 000	50	All stakeholders and country-based collaborators make in-kind contributions of their expertise and time during the stakeholders' engagement and consultations. When the grant is approved, they are involved in the project implementation activities, including liaison and advocacy for OR findings utilization among the relevant in-country stakeholders. The GFATM grant support for OR provided to programmes constitute the leverage amounts. US$ 125 000. GF grant support for a SORT IT course on HIV/AIDS, tuberculosis and malaria in Zimbabwe during the current funding period (2023-2025).
Total			**10 830 000**	**277**	
GLOBAL ENGAGEMENT					
1.3.5.	**Research on social innovation to enhance healthcare delivery**	Partnerships at local, national, regional and global levels are at the core of the SIHI operations. The SIHI hubs are called "implementing partners" and focus on advancing social innovation research in LMICs. They work in partnership with governments, academia, communities, private sector organizations and other stakeholders. Their work is supported by SIHI "contributing partners" who contribute to SIHI's mission by helping to synergize efforts and leverage resources. Global and regional partners include Africa CDC, the Consultative Group on International Agricultural Research, Fondation Mérieux, the London School of Hygiene and Tropical Medicine (LSHTM), Pan African Community Initiative on Education and Health, the Schwab Foundation for Social Entrepreneurship, UNDP, UNICEF, the World Bank, the World Health Emergency Programme, WHO (HRP, AMRO/PAHO, WPRO, the WHO Innovation hub).	2 000 000	65	Various SIHI partners and stakeholders at global and country levels contribute directly to promote and advance social innovation in health care delivery. TDR funding to support the SIHI hubs has leveraged resources from: i) established academic centres whose regular activities focus on social innovation (e.g. the self funded hubs in India, South Africa and Sweden); ii) global partners who dedicated time to support SIHI and embed social innovation in their programmes (e.g. LSHTM, Fondation Mérieux); iii) experts (meetings, external review, strategic support); and iv) SIHI country hub partners (including ministries of health, universities, advisory experts and other stakeholders). Funding provided at country level to the hubs: financial contributions from the Philippine Council for Health Research, University of the Philippines Manila, Zuellig Foundation in the Philippines, Swedish Embassy in Uganda, the World Bank in Malawi, AMRO/PAHO, WPRO and the TY Danjuma Foundation in Nigeria. The estimated leverage amount in 2022–2023 is: US$ 2 000 000. With total TDR funds available for SIHI in 2022-2023 being US$ 770, for every US$ 1 invested by TDR, US$ 2.6 has been leveraged.
2.1.1.2.	**WHO regional office collaboration and Impact grants for regional priorities**	The ER by definition is the result of partnering with all WHO regional offices. However, in 2023 we were able to engage headquarters Health Emergencies Programme and the Global Programme on Migration Health in the process of implementation of the impact grants. In addition, partnership with AHPSR and HRP continues on various follow-ups to previous joint calls	500 000	21	Six regional office focal point's time, contributions to workshops and joint funding. Two workshops were organized, one virtual and one in person, in the WHO Regional Office for the Eastern Mediterranean, with grantees to improve methodological and other aspects of the impact grants.
2.2.1.	**Shaping the research agenda**	One Health AMR (FAO, UNEP, WOAH); COVID-19 data sharing and research mapping: UKCDR, GloPID-R	0	10	Profile of TDR and value of its technical advice.
2.2.2.	**Capacity strengthening to bring research evidence into policy**	IDDO, NIAID, HIFA, EPHI	0	100	Profile of TDR and value of its technical advice.

TDR Expected Result		Partners and collaborations	Estimated 2022–2023 contribution (US$) from partners	Approx. number working on the project in the field	Contribution type
2.3.1.	**Collaborative networks (ESSENCE on Health Research) and engagement with global health initiatives**	ESSENCE includes over 40 members, major international donors and funders of research and research capacity strengthening. The Global Health Matters podcast partnered with several organizations, including WHO, on specific episodes and with others in the process of dissemination.	200 000	15	Several funder members of ESSENCE funded work of consultants and other activities in line with ESSENCE workplan, at an estimated cost of US$ 200 000.
2.3.3.	**TDR Global - the community of trainees, grantees and experts**	We partner with three regional nodes: University of Ghana (Africa node), CIDEIM (Americas node), University of Yogyakarta (Asia node), as well as with country nodes in Ethiopia (Armauer Hansen Research Institute), USA (University of Carolina Chapel Hill). We work with the Social Entrepreneurship to Spur Health and an external review group made up of independent international experts who provide input and recommendations to guide the TDR Global strategy and activities.	400 000	25	Leverage through technical support for the development of the “Focus on equity in mentorship” crowdsourcing contest. External working group volunteering time and expertise. The CIDEIM website is being upgraded and will include a special space to highlight the programmes supported by TDR (regional training centres, SIHI, TDR Global)
2.3.4.	**Effective engagement in gender and equity**	University of Ghana; Ministries of Health; TDR regional training centres; SIHI network; HRP; WHO gender team.	300 000	15	Leverage is created across SIHI hubs and their regional networks in strengthening capacities via hand on training opportunities, notably in the Philippines. This ER created synergies contributing to fundraising (ER 1.3.5.) The University of Ghana has dedicated time, resources and expertise to roll out the TDR developed MOOC module on gender and IR three times during the biennium and involving more than 500 students globally. The consolidated evidence generated with TDR technical and financial support, is contributing to the ongoing WHO work on gender and equity (including guidance for health managers, guidance on intersectionality and health,...) All SIHI hubs and their sister network hubs have strengthened and in some cases built completely their research capacities on gender. The work on this ER supported the hubs and in particular Uganda, to raise additional funds (see ER 1.3.5)
2.3.5.	**Community engagement and ethics**	PABIN; SIDCER; the SIHI secretariat; TDR colleagues from all strategic priority areas (research for implementation, research capacity strengthening and global engagement); the WHO ethics unit	400 000	50	Technical support from experts in the field, network infrastructure and expertise, value of VL projects on which community engagement approach will be tested, value of prior research on which current projects are built, etc.
Total			**3 800 000**	**301**	

Annex 4. Progress on the TDR's current portfolio of expected results Status update

Expected Result Title	*ER Status 31 Dec 2023*
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 1.3.3. Climate change and vector-borne diseases	On track
ER 1.1.7. Maximized utilization of data for public health decision making	On track
ER 1.1.8. Maximized utilisation of safety information 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 1.3.12. Gender-responsive health interventions	Delayed
1.3.11. Multi-Sectoral Approach for Prevention and Control of Malaria and Emerging Arboviral Diseases	Delayed
1.1.5. Optimised methodologies	On track
1.3.10. Urban health interventions for the prevention and control of vector-borne and other infectious diseases of poverty.	On track
1.3.14. Innovative strategies for vector control	On track
2.1.1.1. Strategic support to WHO regional activities: the regional training centres	Delayed
2.1.2. Targeted research training grants in low-and middle-income countries	On track
2.1.4. Advanced training in Clinical Product Development (Career Research and Development Fellowship grants)	On track
2.1.6. Structured capacity building in Implementation Research to improve access and delivery of health technologies in LMICs	On track
2.1.7. Strengthening operational research capacity in Global Fund supported programmes	On track
1.3.5. Research on social innovation to enhance healthcare delivery	On track
2.1.1.2. WHO regional office collaboration and Impact grants for regional priorities	On track
2.2.1. Knowledge Management shaping the research agenda Shaping the research agenda	On track
2.2.2. Capacity strengthening to bring research evidence into policy	On track
2.3.1. Collaborative networks (ESSENCE on Health Research) and engagement with global health initiatives Collaborative networks and Global Health Initiatives	On track
2.3.3. TDR Global - the community of former trainees, grantees and experts	On track
2.3.4. Effective engagement in gender and equity:	On track
2.3.5. Community engagement and ethics	Delayed

Annex 5. TDR 2023 revenue

Contributor	
Core contributors	**Amount (US$)**
Belgium	681 044
India	55 000
Japan	50 000
Luxembourg	1 185 037
Malaysia	25 000
Mexico	10 000
Nigeria (1)	200 000
Norway	306 341
Panama	7 000
Spain (2)	161 813
Sweden	1 162 487
Switzerland	1 940 639
Thailand	44 274
United Kingdom of Great Britain and Northern Ireland	3 877 001
World Health Organization	900 000
Miscellaneous	608
Subtotal	**10 606 244**
Contributors providing project-specific funding	**Amount (US$)**
International Development Research Centre	151 172
Luxembourg	413 340
Medicines Development for Global Health	8 495
Robert Koch Institute	272 065
Sweden (Sida)	313 418
United Kingdom Foreign, Commonwealth and Development Office	100 000
United Nations Development Programme	1 144 000
World Health Organization	487 986
Subtotal	**2 890 476**
Total contributions	13 496 720

1. The contribution from the Government of the Federal Republic of Nigeria for the period 2021 to 2023 was reported in full in the 2022 certified financial statement.
2. The contribution from the Government of Spain is for 2023 only. Contributions received in both 2022 and 2023 will be reported in the 2023 certified financial statement due to the timing of their receipt.

TDR acknowledges that funds received as core funding from the Governments of Germany and Norway and Sida (Sweden) enable the Programme to conduct its work in intervention and implementation research, research capacity strengthening and knowledge management, which aligns with the scope of the EDCTP programme supported by the European Union.

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** Listed in order of level of contribution*