TDR: HEALTH RESEARCH THAT MAKES AN IMPACT
QUICK FACTS

ABOUT TDR

TDR supports infectious disease research and strengthens research capacity in the most vulnerable communities in the world. Infectious diseases thrive in poor housing and sanitation. Mosquitoes, flies, crawling insects, and water-borne snails are among the major ‘vectors’ that transmit the diseases, which can be deadly or inflict serious disability.

TDR is hosted at the World Health Organization (WHO) in Geneva, Switzerland, and is sponsored by the United Nations Children’s Fund (UNICEF), the United Nations Development Programme (UNDP), the World Bank and WHO. An independent board and scientific advisory committee provide oversight.

ADDRESSING THE SUSTAINABLE DEVELOPMENT GOALS – Leaving no one behind.

WHAT WE DO

KEY RESEARCH AREAS:

VECTORS, ENVIRONMENT AND SOCIETY RESEARCH:
- Reducing the transmission of vector borne diseases like dengue, malaria and Zika virus.
- Building regional networks to identify insecticide resistance and prevent and manage outbreaks.
- Reducing health vulnerabilities due to climate change and biodiversity loss.

INTERVENTION AND IMPLEMENTATION RESEARCH:
- Evaluating how health interventions work in resource-constrained settings.
- Testing how to effectively deploy and adapt health interventions to control and eliminate infectious diseases.
- Supporting country infectious disease outbreak preparedness.
- Supporting country programmes in identifying, analysing and addressing their priority health issues.
- Promoting and supporting data sharing.

RESEARCH TRAINING SUPPORT:

Building national and regional research capacity is integrated into everything TDR does. Every research project has a learning component. Networks provide additional support and disseminate the information. The following are some of the core educational opportunities.

“SORT IT” OPERATIONAL RESEARCH AND TRAINING:

Training of healthcare staff and national policy-makers to identify barriers and develop solutions that improve health systems and reduce disease impact.
POSTGRADUATE TRAINING:
Support to 7 universities from low- and middle-income countries to provide PhD and Masters degrees focused on implementation research in malaria, TB and neglected tropical diseases.
- James P Grant School of Public Health, BRAC University, Bangladesh.
- Universidad de Antioquia, National School of Public Health, Colombia.
- University of Ghana, School of Public Health, Ghana.
- Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia.
- American University of Beirut, Faculty of Health Sciences, Lebanon.
- University of the Witwatersrand, School of Public Health, South Africa.
- University of Zambia, Department of Public Health, Zambia.

6 REGIONAL TRAINING CENTRES:
Coordinated training courses across multiple countries provided within a collaborative and learning network.
- Centro Internacional de Entrenamiento e Investigaciones Médicas, Cali, Colombia.
- The University of Ghana School of Public Health, Accra, Ghana.
- Gadjah Mada University, Yogyakarta, Indonesia.
- Astana Medical University, Astana, Kazakhstan.
- Research Institute of Tropical Medicine, Manila, Philippines.
- Institut Pasteur de Tunis, Tunis, Tunisia.

RESEARCH AND CAREER DEVELOPMENT FELLOWSHIP:
One-year fellowship to low- and middle-income country candidates to learn both the product development and full registration processes by taking part at every stage, training in the some of the world’s most advanced labs.

495 PARTNERSHIPS OR COLLABORATIONS IN
83 countries.

STAY CONNECTED WITH TDR:
WWW.WHO.INTERNATIONAL/DR
- TDR e-news monthly roundup of research news and training opportunities.
- TDR LinkedIn group.
- Twitter (TDRnews).
- TDR scientist list grant opportunities from TDR and other global health organizations.

ALL THE NUMBERS WITHIN THIS DOCUMENT COME FROM 2015/16 DATA
WHO WE ARE
AND HOW WE WORK

TDR is the United Nations’ leading programme for research on diseases of poverty. We help coordinate, support and promote global efforts to find new, sustainable solutions for the most disadvantaged. We support many of the Sustainable Development Goals through our efforts to increase good health and well-being, support gender equality, empower strong local institutions, and improve conditions affected by climate change.

Established in 1975 as the Special Programme for Research and Training in Tropical Diseases, we are co-sponsored by the United Nations Children’s Fund (UNICEF), the United Nations Development Programme (UNDP), the World Bank and the World Health Organization (WHO) and operate under the legal auspices of WHO.

We have three interdependent objectives:

1. SUPPORTING INFECTIOUS DISEASE RESEARCH TO MEET THE NEEDS OF THE MOST VULNERABLE.

2. STRENGTHENING HEALTH RESEARCH CAPACITY IN LOW- AND MIDDLE-INCOME COUNTRIES.

3. SHARING KNOWLEDGE GENERATED FOR POLICY AND PRACTICE.
TDR IS THE ONLY PUBLIC HEALTH RESEARCH INSTITUTION THAT IS JOINTLY OWNED BY EVERYBODY. THE SMALLEST COUNTRY IN THE WORLD HAS A STAKE IN IT, THE BIGGEST COUNTRY IN THE WORLD HAS A STAKE IN IT.

DR KAYODE OYEGBITE – former representative of UNICEF to TDR’s Joint Coordinating Board

↑ Photo: Research in India on effectiveness of health workers to distribute medicines for lymphatic filariasis in rural villages.
WHAT WE’VE DONE

We have helped build a strong community of trained scientists across low- and middle-income countries. TDR also helped establish the effectiveness of community health workers, who are extending services to the most remote areas.

In 2011, the Global Health Council, recognizing TDR’s innovative contributions, awarded the Programme with the Gates Award for Global Health.

More than

10 000 research PROJECTS AND US$ 1 BILLION INVESTED.

3 GENERATIONS OF PUBLIC HEALTH LEADERS — many directing disease control and research efforts.

PROVIDED EVIDENCE on a range of care strategies, new medications and diagnostics. For example, TDR helped establish the effectiveness of artemisinin-combination therapies and insecticide-treated bednets to control malaria, and community-led approaches to ivermectin distribution for river blindness.
PARTNERED WITH COUNTRIES
on five major elimination campaigns for neglected diseases – leprosy, onchocerciasis (river blindness), Chagas disease and lymphatic filariasis globally, and visceral leishmaniasis on the Indian subcontinent.

TRAINED
thousands of researchers in developing countries and played a pivotal role in the growth of several significant research institutions in Africa, Asia and South America.

TRAINED

PIONEERED
the role of communities and community health workers in delivering health interventions – now a critical component in many low-income countries.

PIONEERED

CO-DEVELOPED
12 new drugs for tropical parasitic diseases like malaria, leprosy, leishmaniasis, and sleeping sickness – more than half of all drugs developed for these diseases since 1975.

CO-DEVELOPED

Photo: Research in Nigeria on home management of malaria.
WHAT WE DO

DISEASES OF POVERTY ACCOUNT FOR ALMOST HALF OF THE HEALTH BURDEN but most are preventable, or treatable with existing medicines.

TDR is committed to building healthier communities through research – stronger local research institutions and more qualified researchers, engaged community members, effective policy-making, flexible and adaptable systems.

WHY? JUST A FEW OF TODAY’S CHALLENGES.

- **The incidence of dengue** has increased 30-fold over the last 50 years, with almost half of the world’s population at risk.
- **Zika virus is a cause** of microcephaly and Guillain-Barré syndrome. WHO has called for a rigorous research framework.
- **Over 95% of tuberculosis** deaths occur in low- and middle-income countries, placing it among the top 5 causes of death for women aged 15 to 44.

Even after helping to develop new tools – medications, diagnostics, and delivery strategies – the incidence of some diseases is not going down fast enough. TDR is trying to understand why these valuable tools are not implemented, emphasizing research that increases access to the most vulnerable. We’re working with many different scientific disciplines to help communities develop customized, sustainable approaches.
At a Glance

**RESEARCH:**
- Develop and evaluate disease prevention and control methods, tools and strategies.
- Ensure that innovation actually gets to those who need it most.

**STRENGTHENING RESEARCH CAPACITY:**
- Individual and institutional research skills, such as investigating system bottlenecks on critical health issues like tuberculosis and malaria.
- Identifying health research gaps and supporting priority setting.

**SHARING KNOWLEDGE:**
- Providing evidence for policy and practice.
- Initiating and developing knowledge platforms.
- Bringing databases together to expand information access.

*Photo: Research in Nigeria on community healthcare workers providing annual treatment for onchocerciasis, and diagnosis and treatment of simple malaria.*
HOW WE STRENGTHEN RESEARCH CAPACITY

Supporting a career of research, not just a grant. We provide learning opportunities for people in the countries most vulnerable to infectious diseases. These include Masters and PhD degrees, fellowships and customized workshops. Scientists who go to other countries for this almost always return home where they often go on to conduct important research and run major public health projects and institutions.

Some grantees become advisers on scientific committees or provide other research guidance, creating a powerful global network that expands the impact beyond TDR’s original support.

→ Photo: Community-based research to reduce dengue transmission in Thailand.
At a Glance

- TDR

- 60 Clinical research fellows from 26 countries.
- 07 Universities in low- and middle-income countries.
- 06 Regional training centres.
- 438 Participants from 82 countries learning how to use research to improve delivery and access.

AN EXTENSIVE LIBRARY OF PUBLICATIONS PRODUCED WITH AND FOR SCIENTISTS AND POLICY-MAKERS

TECHNICAL MANUALS
A range of evidence-based tools for both research and control.

ESSENCE
Series of best practice reports that strengthen and harmonize donor agency support to grantees and countries.
Currently, about 100 projects are supported for research and strengthening research capacity in more than 50 countries, with many people getting their Masters and PhD degrees as part of this work.

**VECTORS, ENVIRONMENT AND SOCIETY RESEARCH**

Mosquitoes and bugs are some of the vectors we investigate. They transmit viruses and parasites that infect millions of people. We support countries to identify ways to reduce their breeding and contact with them.

The diseases are moving from rural and wide open environments to urban areas where social factors play a much bigger role in transmission. We bring many different disciplines together to find new solutions – research on the behaviour of the communities, on housing and on the economic factors are all part of these efforts.

**WE WORK TO:**

- **Improve** tools such as window and door screens.
- **Find** new approaches for insecticide replacements.
- **Strengthen** regional networks to identify insecticide resistance and prevent and manage outbreaks.
- **Develop** community approaches for prevention and education.
- **Reduce** health vulnerabilities due to climate change and loss of diverse biological systems.
INTERVENTION AND IMPLEMENTATION RESEARCH

We study ways to help the most vulnerable people access and benefit from proven health interventions. We work with country programmes, researchers and communities to make it happen.

Research is helping countries investigate where and how interventions can work so that they can become policy and go into practice. We also help prevent and respond to outbreaks.

WE WORK TO:

- Facilitate innovation so new tools and interventions can be identified and brought to bear.
- Protect the effectiveness of available interventions against resistance.
- Strengthen the evidence-base for policy decisions.
- Optimize how interventions are implemented at country level.

about 100 projects in more than 50 COUNTRIES.

↑ Photo: Research to reduce the spread of dengue in urban areas of South-East Asia.
TDR is committed to equity. We believe everyone has the right to a basic level of health care. But who determines what is needed and where and when? How do we ensure full access to innovation, no matter where people live? Our work is carried out by interdisciplinary teams who represent the many aspects of an issue, and who learn from each other when planning:

- The type of research that needs to be done;
- The analysis into the available evidence and gaps; and
- The policies that need to be established or changed.

We are working to increase the numbers of those excluded in the past from this work – such as people living in the communities where the diseases create such a burden.
THE MAJORITY OF OUR SUPPORT GOES TO THOSE IN LOW- AND MIDDLE-INCOME COUNTRIES WHERE THE DISEASE BURDENS EXIST.

- **78%** of TDR grant funding.
- **71%** of experts on TDR advisory committees.
- **82%** of TDR-funded articles in peer-reviewed publications are freely open and available.

**Photo**: Research in Bolivia involving communities and environmental approaches to reduce Chagas disease.
Partnerships are essential to TDR. We connect with the highest levels of national government, and with clinics in remote locales. We have broad collaborations with disease control programmes, academia, research institutions, private industry and nongovernmental organizations.

One of the remarkable aspects of TDR since its early days has been the pioneering collaborations the programme fostered between the public and private sectors. This has resulted in over 60 million Africans receiving treatment to manage river blindness, and new malaria medications that are the backbone of control in Asia and Africa.

**Supporting Product Development Partnerships**

TDR pioneered the concept of product development partnerships (PDPs) that brought together governments, donors and pharmaceutical companies. It helped to establish Medicines for Malaria Venture (MMV), and now supports many others that have been created to bring new health products where there is no commercial market to support their development.

**TDR Scientific Committees**

Technical experts from a wide range of backgrounds, from low- to high-income countries.
COLLABORATIONS AMONG COUNTRIES, OUR CO-SPONSORS AND FUNDERS
Our work is carried out where the need exists. We support essential partnerships among governments, nongovernmental organizations, our co-sponsors and funders. This has resulted in expanded fellowships and broader research that is tied to country operations.

FUNDERS OF RESEARCHERS COME TOGETHER
The ESSENCE on health research initiative hosted at TDR helps build better coordinated service to individual and institutional grant recipients.

↑ Photo: Research in Tanzania to prevent sleeping sickness outbreaks.
HOW WE ARE GOVERNED

JOINT COORDINATING BOARD COORDINATES THE INTERESTS AND RESPONSIBILITIES OF ALL PARTIES INVOLVED

- 12 members represented by the governments selected by TDR resource contributors
- 6 governments selected by WHO Regional Committees
- 6 cooperating parties selected by the JCB
- 4 co-sponsors (permanent members)

STANDING COMMITTEE OVERSEES THE MANAGEMENT AND FINANCING OF TDR

- 4 co-sponsors (UNICEF, UNDP, World Bank and WHO)
- The Chair and Vice-Chair of the Joint Coordinating Board
- The Chair of the Scientific and Technical Advisory Committee
- 1 representative from the JCB resource contributors group
- 1 representative from a disease endemic country

SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE OVERSEES AND ADVISES ON TDR’S SCIENTIFIC ACTIVITIES

- 15 multidisciplinary members representing their speciality and expertise

In addition to this governance, committees provide scientific expertise and guidance to functional units.
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE (STAC)
STANDING COMMITTEE (SC)
JOINT COORDINATING BOARD (JCB)
The Special Programme for Research and Training in Tropical Diseases (TDR) is an independent global programme of scientific collaboration established in 1975. It has a twin mission to improve existing and develop new approaches for preventing, diagnosing, treating, and controlling neglected infectious diseases, and to strengthen the capacity of developing endemic countries to undertake this research and implement the new and improved approaches.

TDR is sponsored by the following organizations: