

# COMMUNICABLE DISEASES 2002

## Global defence against the infectious disease threat

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*Global defence against the infectious disease threat* provides a state-of-the-art report on the current infectious disease situation. Chapters document the latest trends for the major epidemic-prone and emerging diseases, describe new surveillance mechanisms set up by WHO, and profile each of the so-called neglected diseases of poverty. Two large partnerships, Stop TB and the Roll Back Malaria initiative, are assessed in terms of the multiple challenges faced and the many innovative ways in which these challenges are being addressed. A review of recent research on tropical diseases focuses on several new – and uniquely ambitious – R&D ventures and some exciting new drugs and other products under development for disease control.

Apart from providing the latest data and statistics, the report analyses the issue of global health security, as sharpened following the events of September 2001, and records the striking progress being made in the new wave of public-private partnerships. These partnerships are aiming to permanently eradicate or eliminate diseases that have caused enormous suffering, often for centuries.

Several overarching themes are apparent: a constantly diverging infectious disease threat accompanied by a convergence of concern, commitment, resources, and action on several fronts. On balance, the outlook is bright, though setbacks, new threats, and continuing areas of neglect are clearly present and frankly assessed. Maps, tables, colour photographs and an index are included.

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# MEASURABLE PROGRESS & FINANCIAL ISSUES





# Measurable progress

## Strategic budgeting: new priorities for WHO

WHO introduced strategic budgeting in 2000–2001, facilitating a more transparent overview of objectives, expected results, and indicators for measuring progress.

Results-based budgeting derives from an improved process of planning, programming, budgeting, monitoring, and evaluation, by which WHO would be held accountable for the achievement of specific results. Under such a process, budget allocations for each area of work are linked to a set of objectives and expected results. The report below shows how the expected results for CDS detailed in the Programme Budget 2000–2001 were met.

### Communicable Disease Prevention, Eradication and Control<sup>1</sup>

*Support will have been provided to all disease-endemic countries for training of health professionals and related personnel, and operational research programmes on new interventions.*

Country support was provided to more than 25 countries: a partnership for schistosomiasis and soil-transmitted helminthiasis (Partners for Parasite Control (PPC)) was established with other UN organizations, national institutions, and NGOs; a network of 12 experts was trained to provide country support in Africa within the framework of PPC; long-lasting insecticide-treated materials were developed and tested in collaboration with the private sector; and a strategic framework for vector control was developed with increased emphasis on dengue control. PPC allowed for coverage of more than 2 million schoolchildren with anthelmintic treatment and health education messages. The concept of long-lasting insecticide-treated material opens new opportunities for multi-disease control interventions.

A number of training tools were developed and widely used in national and international training courses; five training courses in planning malaria control were conducted with 127 malaria programme managers and senior health workers from endemic countries in Africa; and two regional courses on comprehensive vector control were held in India. In addition, a global strategic plan for capacity development for Roll Back Malaria was developed, and a network of partners in RBM capacity development was established.

The annual meetings of the WHO Advisory Group were held with significant recommendations to guide the work of WHO on Buruli ulcer. Partnerships with NGOs were strengthened; and

<sup>1</sup> Expected results formerly in Communicable Disease Prevention and Control concerning tuberculosis are shown under "Tuberculosis".

some of the affected countries are being assisted to develop strategic plans for the control of Buruli ulcer. Important technical documents and training materials have been developed. Financial and technical support was provided to selected endemic countries (Benin, Côte d'Ivoire, Guinea, and Togo) to train health workers. Collaboration with researchers has helped to advance work on finding some of the answers to the mysteries surrounding Buruli ulcer, especially in areas of transmission and drug treatment.

*Standards, guidelines, and strategies to support prevention and control of communicable diseases will have been produced.*

Consultations were called and reports published to develop strategies for the control of schistosomiasis in low-transmission areas, the judicious use of anthelmintics, and the use of pesticides for public health. New training materials for programme managers in vector control on the use of pesticides in public health have been published; and new training materials for programme managers in helminth control have been developed.

Technical guidelines (Management of severe malaria; Bench aids for the diagnosis of malaria infections; WHO recommended strategies for the prevention and control of communicable diseases) were developed and published electronically on the WHO website. Guidelines were translated and disseminated in French, Portuguese, and Spanish.

*Evidence, in the form of epidemiological and economic indicators, will be available to support control strategies promoted by WHO, and to assist in the development of novel prevention and control strategies.*

For Schistosomiasis and Intestinal Parasites, more than 10 publications have been published in scientific journals regarding economical epidemiology tools for field control.

For Investigation of communicable disease control strategies, an annual review of global TB control for 2001 was completed; new estimates were completed for burden of drug-resistant tuberculosis, TB associated with HIV/AIDS, and child deaths from acute respiratory infections.

*Based on the findings of operational research, appropriate social mobilization packages will have been developed and field-tested, with particular focus on tuberculosis and malaria.*

COMBI (Communication for Behavioural Impact) has been established as a form of behaviourally focused social mobilization, to achieve programmatic success. Training curricula and tools were developed to promote this approach through international courses and country workshops. Support was provided to India, Malaysia, Mozambique, and the United Republic of Tanzania to design and implement programmes for leprosy, lymphatic filariasis, and dengue. A Global Technical Network of social mobilization and communications experts was established and maintained. To a lesser extent, support was provided for developing social mobilization strategies for TB and malaria.

Social mobilization has not been a key focus of WHO's work in the past. However, with increasing efforts to address communicable diseases, especially those targeted for intensified control, elimination, or eradication, social mobilization is becoming more relevant.

*The partnership for leprosy elimination will have reduced to 10 the number of countries in which leprosy is still a public health problem, lowered the global prevalence rate to less than 500 000 cases, and increased the cumulative number of cases cured to 11 million patients.*

WHO and its partners announced in May 2001 that the overall target for the global elimination of leprosy as a public health problem (less than 1 per 10 000) had been attained. The partnership for leprosy elimination has reduced to six the number of countries in which leprosy is still a public health problem, has lowered the global prevalence rate to less than 500 000 cases, and has increased the cumulative number of cases cured to over 11.6 million patients.

*Effective strategies for monitoring and evaluation of lymphatic filariasis (LF) will have been developed; criteria for the certification of the elimination of lymphatic filariasis will have been defined and guidelines distributed to all disease-endemic countries and regions.*

The WHO Programme to Eliminate Lymphatic Filariasis (PELF) has brought together a public-private sector partnership into a Global Alliance to eliminate LF. PELF is supported by a Technical Advisory Group and the Programme Review Group. The strategies for the elimination of lymphatic filariasis developed by WHO – interruption of transmission through mass drug administration, and prevention and alleviation of disability due to lymphatic filariasis – were vetted by the Technical Advisory Group. Technical guidelines for national programme managers and training modules for drug distributors and for management of lymphoedema were produced and tested in those countries launching programmes to eliminate LF. During 2000, 3 million individuals received the recommended drug co-administration in 14 countries.

The programme scaled up effectively during the biennium: 3 million individuals were administered the recommended drugs in 2000 in 12 countries, and around 30 million in 2001 in 24 countries. Guidelines for national programme managers were produced and distributed to all filaria-endemic countries. Training modules for different categories of personnel likely to be involved were developed, tested, and commissioned. Health personnel at national and district level were trained. Standards for quality assurance of diethylcarbamazine (DEC) were redefined through modern assay techniques and validated. An inventory of DEC manufacturers was prepared and manufacturers or potential suppliers for DEC were audited to ensure Good Manufacturing Practices and Laboratory Practices for quality supplies of DEC for the global programme. WHO procured 140 million tablets of DEC for the endemic countries. The issue of certification was discussed in the Technical Advisory Group, which recommended that, since the objectives of PELF were not to eradicate LF, there was no need to set up a formal certification process, including an International Commission. The issue is to be reviewed after 2 years once further experience is gained in the assessment of interruption of transmission at country level.

*Lessons learned.* Increased efforts need to be made to create and sustain societal and political support of the LF elimination initiative in the endemic countries. In addition, scaling up speed does not fit the elimination perspective in the implementation of some of the national elimination programmes. Limited implementation capacity at sub-national level is one of the reasons for the slowing down of activities. The 2002–2003 operational plans include capacity-building at sub-national levels, increased emphasis on social mobilization activities, and integrated implementation with other public health initiatives at country level. Efforts to maintain and enrich the LF partnership have proven to be intense yet rewarding and essential for the growing of the global programme to eliminate LF.

*At least 90% of disease-endemic countries will have been formally certified free of dracunculiasis transmission.*

During an international certification meeting held in 2000, 155 countries were reviewed, resulting in 80% of the disease-endemic countries being formally certified free of dracunculiasis transmission. No international meeting for certification was held in 2001 because the cost of holding such a meeting was not justified by the small number of countries ready to be submitted for certification. The next international certification meeting will likely be held in late 2002 or in 2003.

The International Commission for Certification of Dracunculiasis Eradication (ICCDE) certified 42 countries and territories as free of dracunculiasis transmission during the biennium. The total number of countries and territories certified by the ICCDE to date is 152 out of the 199 (76% of the countries and territories already certified). At the end of 2001, only 13 countries worldwide have reported around 60 000 indigenous cases of dracunculiasis, 80% of which are concentrated in Sudan, where civil unrest is hampering implementation of eradication activities.

## Communicable Disease Surveillance and Response

*Access to WHO's network for rapid reporting and verification of disease outbreak information will have been broadened through expanded use of electronic links and outbreak reporting networks.*

In April 2000, WHO launched the Global Outbreak Alert and Response Network as a mechanism for keeping the volatile microbial world under close surveillance and ensuring that outbreaks are quickly detected and contained. This overarching network interlinks, in real time, more than 100 existing networks which together possess much of the data, expertise, and skills needed to keep the international community alert to outbreaks and ready to respond. By electronically linking together existing networks, WHO is able to magnify its limited resources considerably. The network was further strengthened in December 2001.

When international assistance is needed, as agreed upon in confidential consultation with the affected country and with experts in the network, WHO uses electronic communications to coordinate prompt assistance. To this end, WHO maintains global databases of professionals with expertise in specific diseases or epidemiological techniques, together with nongovernmental organizations present in countries and in a position to reach remote areas. Such mechanisms, which are further supported by the WHO network of over 270 collaborating laboratories and institutes, help the world make the maximum use of expertise and resources – assets that are traditionally scarce for public health.

*The first version of an electronic atlas of communicable and zoonotic diseases and anti-infective drug resistance, using geographically referenced information, will be available.*

In late 2002, WHO will launch the first global online atlas of infectious diseases as an important new tool for infectious disease surveillance and control. The atlas, which builds on the successful features of HealthMapper, will also allow users to see where the international community stands in its efforts to combat the infectious disease threat. Over 300 indicators for more than 20 infectious diseases of major public health concern are already included in the database.

*The first draft of the International Health Regulations will have been proposed for review.*

The International Health Regulations are currently undergoing substantial revision to bring them into line with the demands of a disease situation made vastly more volatile by the globalization of travel and trade, the spread of antimicrobial resistance, and the accelerated emergence of new disease threats. Revisions also reflect new challenges raised by the growth of electronic communications, which are increasingly being used to disseminate reports of disease occurrences, sometimes unsubstantiated and often unverified.

Important changes in the Regulations, currently nearing completion, include a considerable broadening of scope to embrace all infectious diseases of international importance, especially new and re-emerging diseases. Perhaps most importantly, the revised Regulations are being developed to better protect countries from the consequences of unofficial reports.

The International Health Regulations were created to serve countries and be adopted and implemented by countries. Country participation at every stage of the revision process is therefore crucial. Over the past two years, WHO has facilitated this involvement through the identification of national focal points, through individual country visits where these are requested, through participation at meetings on relevant issues, and by inviting national representation at meetings held to consider revisions. Following this phase of technical consensus building, the first non-regulatory draft of the revised Regulations will be shared with countries at the end of 2002.

*Support will have been provided to at least 35 countries for formulating and regularly updating national plans for epidemic preparedness, including support for epidemic investigation and management to ensure disease containment.*

WHO conducts a number of activities aimed at helping countries strengthen their laboratory and epidemiological capacity and take advantage of new tools, such as HealthMapper.

*A global strategy for the containment of anti-infective drug resistance will have been elaborated.*

Resistance to inexpensive and effective antimicrobial drugs has emerged and spread at an alarming rate, raising the prospect that many common diseases could become prohibitively expensive or impossible to treat. The bacterial infections that contribute most to human disease are also those in which emerging resistance is of most concern.

To address these challenges, WHO launched the first *Global Strategy for Containment of Drug Resistance* in September 2001. The strategy sets out a framework of interventions that can be used to slow the emergence and reduce the spread of antimicrobial-resistant microbes in a diverse range of settings. Practical advice on implementation is also provided.

*Support will have been provided to countries for establishing integrated national epidemiological and laboratory surveillance, emphasizing preparation of training plans for national epidemiologists and laboratory trainers in collaboration with technical partners, coordination of epidemiological training through TEPHINET and laboratory training with WHO collaborating centres, and strengthening of country capacity for epidemic response.*

In February 2001, WHO opened a new office in Lyon, France, to provide two-year specialized training for epidemiologists and laboratory specialists from developing countries where the epidemic risk is greatest.

As a founding partner, WHO continues to collaborate in the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET), a global network which is also a partner in the Global Outbreak Alert and Response Network.

## Malaria

*All participating countries will have formulated technical and implementation strategies for rolling back malaria, based on epidemiological, regional, and health systems needs.*

The Abuja summit demonstrated strong political commitment and created a momentum that led to the development of country-specific strategies.

Close to one-third of African countries – representing almost half the population at risk – have now completed the initial phase of strategic planning. The plans are based on evidence of the effectiveness of specific interventions and focused on measurable goals.

A strategy is in place for achieving immediate impact using existing interventions, and research has confirmed that the results, in terms of reduced morbidity and mortality, can be significant. Partnerships with industry are making these interventions increasingly affordable.

*Resource support networks will have been established and support provided to country programmes.*

The Abuja targets, with their emphasis on access to treatment, use of insecticide-treated nets, and intermittent treatment during pregnancy, are fully in line with the global strategy advocated by Roll Back Malaria and demonstrate the level of technical consensus that now exists.

Several public-private partnerships have recently been formed specifically to meet the need for better tools to control malaria. The Medicines for Malaria Venture is one such partnership, set up to provide support for the development of novel malaria therapies through strategic public-private collaboration. The venture aims to produce one new antimalarial drug every five years.

*Countries will have reviewed legal and policy aspects and drawn up the necessary legal instruments to promote implementation of malaria control interventions.*

Local production and distribution of insecticide-treated nets in Africa are being promoted through public-private partnerships. In an effort to make treated nets more affordable, African governments have been encouraged to reduce taxes and tariffs on nets, netting materials, and insecticides, as called for in the Abuja Declaration. To date, a total of 17 countries in Africa have done so. Several countries have increased the coverage rates of insecticide-treated nets from almost zero to about 20% in the past three years.

*Countries will have developed and tested at the operational level models for facilitating access of populations at risk to care from private and non-formal providers.*

A new home-based approach to treatment, pioneered by WHO, UNICEF, and other partners, promises to revolutionize access to treatment by putting knowledge and essential drugs into the hands of those who need them most – mothers, caregivers, and neighbours. The approach relies on the use of community members, such as volunteers, shopkeepers, and vendors, who are trained to recognize symptoms, distribute appropriate drugs, and provide accurate advice on drug doses. The approach is founded on studies conducted by TDR of community-directed schemes for the distribution of ivermectin in onchocerciasis control and, by Stop TB, on the use of community volunteers to supervise TB treatment. To support the approach, TDR has also conducted research on the logistics of drug supply, including appropriate formulations for home treatment and the role of unit-dose blister packages and labelling.

*Strategic investment in the design and deployment of new tools for malaria control will have been mobilized by establishing conducive investment schemes, attracting financial donations and resources into research and development for malaria, and promoting public and private collaboration.*

Additional partnerships have been formed to accelerate the search for a new vaccine, new drugs, and better control tools. More than a dozen candidate vaccines are now in development, and the level of investment and intensity of effort committed to this objective are unprecedented.

With the increased priority given to malaria research, additional new tools currently under development could be available within a decade. This prospect raises the hope of enhanced malaria control that would not only sustain the gains made using conventional tools but also usher in an era when the elimination of malaria as a public health problem might again be considered. Tools undergoing development include malaria vaccines, where the current level of investment and number of candidate vaccines are unprecedented, mosquitoes genetically modified so that they cannot transmit the parasites, and a generation of even more effective drugs that delay the development of resistance.

In the context of the global strategy, these approaches address the need to use existing interventions to the fullest extent possible. Other components of the strategy are addressed by fundamental, applied, and operational research that aims to develop new technical tools, including drugs and vaccines, and more effective ways of implementing existing interventions.

Field research has generated compelling evidence for the efficacy, particularly in sub-Saharan Africa, of interventions available to support these approaches.

*Increased resources will have been mobilized by partners at global and country levels for rolling back malaria.*

Efforts are being made to increase the efficient use of resources and mobilize new funds. For example, Roll Back Malaria has been working through established mechanisms, such as sector-wide approaches that pool funding from donors to match locally determined priorities, to identify the resources needed to implement country plans. Roll Back Malaria is also working through debt-relief initiatives, such as Poverty Reduction Strategy Papers, and the Heavily Indebted Poor Countries Initiative, to secure support for national health systems and to identify the resources required for accelerated malaria control. Use of these approaches acknowledges that sustainable malaria control in endemic countries ultimately depends on the strengthening of health systems. Despite some progress, considerable gaps remain. An estimated US\$ 700–800 million is required annually for combination drugs and long-lasting insecticide-treated nets alone.

In this regard, the Global Fund to Fight AIDS, Tuberculosis and Malaria, made operational in 2001, represents an unprecedented opportunity to secure the funding needed to implement country plans. Of the seven African countries whose proposals for malaria were approved by the Fund with no or minor adjustments, six had worked closely with Roll Back Malaria over a two-year period.

*A mechanism to review and report on progress will have been established and will be in operation through analysis of the malaria situation and development of an effective and efficient information system, and by documenting responses of the health and other sectors, resource flows and critical constraints.*

WHO and its partners within the Roll Back Malaria initiative are supporting epidemic-prone countries in their efforts to develop reliable multisectoral epidemic warning systems that combine early detection, early warning, and long-range forecasting. WHO and its partners are also supporting the development of preparedness plans, including advice on the stockpiling of essential supplies. Promising new studies are exploring the use of meteorological and environmental data, remotely sensed by satellites, combined with models of vector dynamics and transmission cycles, to predict conditions that may precipitate an epidemic.

Consensus is emerging that population-based surveys are indispensable to measuring the malaria burden and monitoring progress towards control. Beginning in 1999, household surveys have been conducted in 35 countries, mainly in Africa. The resulting data were recently analysed jointly by UNICEF and WHO to provide a baseline for monitoring progress in the implementation of global and country control strategies.

To improve mortality data, including for malaria, demographic surveillance systems, linked in a network, have been initiated or expanded in a number of African countries.

In parallel, Roll Back Malaria has supported a range of situation analyses and specific localized surveys in health facilities and households. Though less easy to aggregate or compare across countries and over time, data forthcoming from these studies should assist governments and local authorities in understanding the malaria burden and identifying opportunities to improve control. They will also provide a benchmark for measuring coverage of pregnant women with intermittent preventive treatment.

## Tuberculosis

*Programme indicators will have been produced for the control of major diseases in order to monitor the impact of interventions.*

A new team, TB Monitoring and Evaluation, was established in late 2001 to monitor and evaluate global trends in TB control. Its main objective is to monitor, globally, by region, and by country, trends in TB notification and trends in TB treatment success, DOTS coverage by national control programmes, and the quality of data from programmes. The team is also estimating the burden of the current epidemic and is forecasting the epidemic globally, by region, and by country.

*Standards, guidelines, and strategies to support prevention and control of communicable diseases will have been produced.*

A new framework for effective TB control has been developed based on new evidence and current needs of countries. Status of DOTS implementation has been monitored through annual global assessments (see Global TB Control report 2000 and 2001, and Global DOTS Expansion Plan report of 2001).

A working group has been formed to address the quality of and access to fixed-dose combinations. Work is advanced and recommendations are produced in collaboration with the department of Essential Drugs and Medicines Policy, cluster on Health Technology and Pharmaceuticals (EDM/HTP) and the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR).

The Practical Approach to Lung Health (PAL) has progressed and is being tested in a few countries, e.g. Chile, Morocco, Nepal, South Africa.

TB/HIV has been addressed as a top priority issue for the Stop TB department (STB). Collaborative projects between national tuberculosis control programmes (NTPs) and AIDS control programmes (ACPs) have started in four African countries. A new strategic framework has been developed and is endorsed by the Stop TB TB/HIV Working Group convened by WHO and by the Strategic and Technical Advisory Group (STAG). It is now being operationalized through the creation of practical guidelines for NTPs and ACPs.

The implementation of Community TB Care projects in several countries was completed during the biennium. Policy recommendations are being published which promote the engagement of community workers. Uganda has developed a national DOTS expansion plan using community TB care.

Public-private mix. Twenty-five countries have been evaluated to assess the contribution, or the lack of it, of private practitioners in TB control. A working group has defined policy directions for involvement of private practitioners, which is being studied through pilot projects in countries such as Egypt, India, Kenya, Philippines, and Viet Nam.

DOTS-Plus for MDR-TB has been launched as a strategy under development to address MDR-TB management in low- and middle-income countries. Guidelines have been produced for implementation of pilot projects. Access to second-line drugs has been favoured through the establishment of a multi-agency Green Light Committee achieving a 95% reduction of prices through negotiations with the pharmaceutical industry. DOTS-Plus projects are ongoing in Estonia, Latvia, Peru, Philippines, and Russian Federation.

TB in prisons. A manual for TB control in prisons was produced in cooperation with the International Committee of the Red Cross (ICRC) and is being translated into French, Russian, and Spanish for widespread dissemination.

A new framework for TB control in industrialized countries has been developed and published. It was endorsed by all low-incidence European countries during the WHO-sponsored Wolfhese meetings. A publication on operational research for gender and TB has been produced.

*A global charter and action plan will have been prepared to guide the actions of donors and countries in order to speed up a coordinated response to tuberculosis control.*

The 2000–2001 biennium saw the achievement of global coordination among the Stop TB partners, which was reflected in the success of:

- The Interim Coordinating Board that took place in February 2001 in Bellagio, Italy, where consensus was reached on the partnership framework. The principles of operation of the Global Drug Facility (GDF) were endorsed and it was agreed that the GDF would be managed by the WHO Stop TB Partnership Secretariat based at headquarters in Geneva.
- The Partners' Forum in Washington, DC, where the Global Partnership Framework was finalized and approved and the Washington Commitment was endorsed by all participants.
- The production of the Global Plan to Stop TB (launched in Washington, DC) setting out the resources and actions needed to meet the targets set for 2005.
- The meetings held in the WHO Regional Offices for Africa (AFRO), the Americas (AMRO), Eastern Mediterranean (EMRO) and the Western Pacific (WPRO). All regions developed regional strategic plans.
- World TB Days 2000 and 2001.
- National inter-agency coordination mechanisms were established in 11 of the 22 high TB burden countries.

Partners have seconded four staff to the Stop TB Partnership Secretariat. This demonstrates increased commitment of partners to the work of the Secretariat.

The expected result was relevant in achieving the objective of strengthening and expanding political commitment to control of TB at international and national levels, with common goals and a shared vision. In addition, the roles and responsibilities of partners have been defined and described in the Global Plan to Stop TB, which underlines the shared responsibilities of all partners towards reaching the targets for TB control.

*A global drug facility will have been set up to ensure universal access to high-quality tuberculosis drugs in improved forms, especially fixed-dose combination drugs, in order to minimize the further emergence of drug resistance.*

The Global Drug Facility, an innovative scheme developed in response to a call made by countries at the March 2000 ministerial conference in Amsterdam, ensures universal access to quality TB drugs. The GDF was initiated in 2000 in collaboration with partners and launched

on World TB Day 2001. Currently 17 countries receive support from the GDF. Monitoring procedures have been established for in-country operations. An evaluation of GDF operations will be concluded in mid-2003.

The GDF became operational in a very short time with innovative procedures for selection of countries, pre-qualification of manufacturers and development of monitoring mechanisms. Lessons learned are used for the improvement of these procedures, such as upgrading the internal monitoring mechanism, expanding the review process to include NGOs, and establishing a robust pre-qualification process for selecting TB manufacturers. The operational plan for 2002–2003 reflects these elements.

*(Tuberculosis research is now included in TDR's mandate.)*

## TDR expected results and indicators

### EXPECTED RESULTS

### OUTPUT AND PERFORMANCE INDICATORS – TARGETS FOR PERIOD 2000–2005

A. New *basic knowledge* about the biological, social, economic, health systems, and behavioural determinants, and other factors of importance for effective control of infectious diseases generated and accessible at national and international levels

- 8 new, significant and relevant scientific advances (biomedical, social, economic, and public health sciences) in neglected tropical diseases

B. New and improved *tools* for use in infectious disease prevention and control, e.g. drugs, vaccines, diagnostics, epidemiological tools, environmental tools, developed

- 6 new candidates (drugs, vaccines and diagnostics) ready to enter into development
- 8 new or/and improved tools (drugs, vaccines and diagnostics) resulting in regulatory approval for use in neglected tropical diseases
- 5 new and/or improved epidemiological tools developed for use in neglected tropical diseases

C. New and improved *intervention methods* for applying existing and new tools at the clinical and community levels developed and validated

- 11 new or improved intervention methods for the prevention, diagnosis, treatment, and rehabilitation of populations exposed to neglected tropical diseases validated

D. New and improved *policies* for large-scale implementation of existing and *new prevention and control strategies* developed, validated and guidance required for application in national control settings accessible

- 3 currently used control policies and strategies for neglected tropical diseases improved
- 5 new control policies and strategies for targeted neglected tropical diseases formulated, tested and validated
- 6 new and improved tools brought into the control of neglected tropical diseases

E. *Partnerships* established, and adequate support for research and product development *capacity building* in countries provided

- 11 multi-institutional R&D partners engaged
- 400 individual/institutional R&D partners engaged
- 50 MSc, 100 PhD completed, and 250 trained in immunology
- 13 institutions in least-developed countries strengthened
- 50% of centres and experts from disease-endemic countries out of the total number engaged in TDR research and product development
- 15% of research findings, new and improved tools and intervention methods produced by institutions in DEC

F. Adequate technical *information, research guidelines* and *instruments, and advice* accessible to partners and clients in countries

- Number of R&D initiatives in neglected tropical diseases using the instruments developed
  - Number of requests for pages from TDR website from developing countries
  - Number of effective staff contacts with R&D partners working in neglected tropical diseases
- Baselines and targets to be established for these indicators*

G. *Resources* for research, product development, and capacity building efficiently mobilized and managed

- 60% increase in overall funding of TDR
- 12-fold increase in contributions resulting from the participation of new groups of donors
- 75% undesignated funding out of total funding received
- 70% of total funds allocated to operations, 20% to personnel, and 10% to operational support.

## Management

The CDS Management Support Unit (MSU) continues to provide administrative and management support services to departments within the CDS cluster to ensure the effective and efficient use of both human and financial resources available to the cluster. The MSU provided support to the cluster in the following areas: budget, planning, external relations/resource mobilization, finance, personnel, information technology, communications, and administration. Key activities in 2001 included:

**External relations** – Planning and coordination of approaches to donors; preparation of consolidated CDS fund-raising documents and intercluster documents; providing information on partner policies, opportunities, contacts, proposals/funding status; coordinating arrangements for meetings of interested parties, both within CDS and with other clusters.

**Information technology** – Managing extranet and database hosting infrastructure; preparing a user requirements analysis and managing IT projects; supporting end-users; coordinating activities with other clusters, central services, and partner agencies.

**Communications** – Publishing the *Weekly Epidemiological Record*, *International travel and health*, *Action against infection*, and the list of CDS information resources; managing the CDS Information Resource Centre; ensuring quality control of CDS information material; coordinating activities with other clusters, central services and regional offices.

**Planning, budget, and finance** – Managing daily financial services; assisting departments in the finalization of workplans/budgets; preparing financial reports; streamlining of administrative processes; certification of financial transactions; monitoring of budget implementation; tracking of donor contributions; coordinating with financial services, in other clusters and at central level.

**Personnel** – Managing daily personnel administration (recruitment, contracts, post classification); streamlining administrative processes; coordinating with personnel services in other clusters and at central level.

## Income received 2000–2001

Contributions to the Voluntary Fund for Health Promotion and TDR Trust Fund	2000 US\$	2001 US\$	Total US\$
<b>Donor countries</b>			
Australia	1 286 114	2 127 796	3 413 910
Belgium	1 389 871	2 081 068	3 470 939
Canada	1 537 217	10 921 250	12 458 467
China	0	110 000	110 000
Cyprus	20 000	20 000	40 000
Denmark	3 158 747	2 163 720	5 322 467
Egypt	0	40 000	40 000
France	264 780	948 892	1 213 672
Germany	1 757 331	64 131	1 821 462
Greece	20 000	20 000	40 000
India	25 104	25 000	50 104
Iran (Islamic Republic of)	19 970	9 993	29 963
Ireland	874 140	795 282	1 669 422
Italy	1 732 422	5 724 210	7 456 632
Japan	2 245 500	1 100 000	3 345 500
Kuwait	20 000	20 000	40 000
Luxembourg	1 103 306	722 224	1 825 530
Malaysia	75 000	25 000	100 000
Mexico	10 000	10 000	20 000
Netherlands	4 139 964	8 443 753	12 583 717
New Zealand	40 510	0	40 510
Norway	4 459 951	4 726 431	9 186 382
Saudi Arabia	15 000	15 000	30 000
Spain	0	152 422	152 422
Sweden	2 431 290	2 277 060	4 708 350
Switzerland	1 772 698	1 979 449	3 752 147
Thailand	0	52 680	52 680
Turkey	25 000	25 000	50 000
United Kingdom	31 062 826	16 400 057	47 462 883
United States of America	7 439 942	13 830 933	21 270 875
Miscellaneous (below US\$ 20 000)	15 000	1 990	16 990
<b>Sub-total</b>	<b>66 941 683</b>	<b>74 833 341</b>	<b>141 775 024</b>
<b>UN organizations and agencies</b>			
Joint United Nations Programme on HIV/AIDS	1 489 330	1 556 153	3 045 483
United Nations Children's Fund	0	20 343	20 343
United Nations Development Programme	500 000	0	500 000
United Nations Fund for International Partnerships	1 827 000	1 758 780	3 585 780
World Bank	3 600 000	4 276 205	7 876 205
World Bank (Bill & Melinda Gates Foundation)	0	4 096 690	4 096 690
<b>Sub-total</b>	<b>7 416 330</b>	<b>11 708 171</b>	<b>19 124 501</b>

**Other contributors**

African Programme for Onchocerciasis Control	700 000	200 000	900 000
Arab Fund for Economic & Social Development	0	488 424	488 424
AstraZeneca	0	473 748	473 748
Aventis Environmental Science	104 000	0	104 000
Aventis Pharma SA	0	1 289 873	1 289 873
Bill & Melinda Gates Foundation	2 000 000	0	2 000 000
City of Lyon France	0	510 288	510 288
Commission of the European Communities	0	111 309	111 309
FMC Corporation	96 000	8 000	104 000
Fondation Mérieux	1 450 466	1 477 778	2 928 244
German Pharma Health Fund	52 250	4 389	56 639
Global Forum for Health Research	0	500 000	500 000
Harvard University Medical School (Bill & Melinda Gates Foundation)	0	737 200	737 200
International Development Research Centre	59 376	0	59 376
International Federation of Pharmaceutical Manufacturers Associations	0	50 000	50 000
International Federation of Red Cross & Red Crescent Societies	0	186 101	186 101
Liverpool School of Tropical Medicine	90 822	131 091	221 913
Médecins Sans Frontières	50 000	72 500	122 500
New York Community Trust	50 000	50 000	100 000
Nippon Foundation	0	300 000	300 000
Nippon Foundation (for Sasakawa Health Trust Fund)	114 536	55 824	170 360
Novartis Foundation	413 723	546 730	960 453
Onchocerciasis Control Programme	400 976	140 000	540 976
OPEC Fund for International Development	49 986	0	49 986
Open Society Institute	50 000	0	50 000
Oswaldo Cruz Foundation	0	149 576	149 576
Rockefeller Foundation	200 000	383 870	583 870
Roll Back Malaria	1 000 000	1 488 785	2 488 785
Sasakawa Health Trust Fund	6 794 689	5 865 100	12 659 789
Sumitomo Chemical Company	44 000	27 000	71 000
Valent Biosciences Corporation	0	97 000	97 000
Sustainable Development & Healthy Environments Cluster	0	110 000	110 000
Administrative Support funds	1 826 000	80 000	1 906 000
Casual income	1 390 000	0	1 390 000
Miscellaneous including TDR refunds and rebates	370 035	41 395	411 430
<b>Sub-total</b>	<b>17 306 859</b>	<b>15 575 981</b>	<b>32 882 840</b>
<b>WHO Regular budget</b>	29 268 000	- 4 100 643	25 167 357
WHO contribution to TDR	1 891 000	882 000	2 773 000
<b>Sub-total</b>	<b>31 159 000</b>	<b>- 3 218 643</b>	<b>27 940 357</b>
<b>Grand total income</b>	<b>122 823 872</b>	<b>98 898 850</b>	<b>221 722 722</b>

## Expenditures during 2000–2001

US\$ (000)

### Roll Back Malaria (RBM)

Management .....	5 568
Activities .....	38 416
<b>RBM Total .....</b>	<b>43 984</b>

### Stop TB (STB) Department

Director's Office .....	334
TB Strategy and Operations (TBS) .....	7 543
Stop TB Partnership Secretariat (TBP) .....	12 386
Management (fixed-term staff only) .....	9 224
<b>STB Total .....</b>	<b>29 487</b>

### Department of Communicable Disease Surveillance and Response (CSR)

Director's Office .....	1 608
Animal and Food Related Public Health Risks .....	2 013
Anti-infective Drug Resistance Surveillance and Containment .....	1 843
Epidemic Disease Control .....	5 830
Integrated Surveillance and Response .....	4 528
International Health Regulations .....	599
WHO/CSR Office in Lyon .....	847
Management (fixed-term staff only) .....	8 916
<b>CSR Total .....</b>	<b>26 184</b>

### Department of Control, Prevention and Eradication (CPE)

Director's Office .....	393
Strategy Development and Monitoring for Eradication and Elimination .....	17 530
Social Mobilization and Training .....	1 049
Strategy Development and Monitoring for Parasitic Diseases and Vector Control .....	1 463
Management (fixed-term staff only) .....	4 658
<b>CPE Total .....</b>	<b>25 093</b>

US\$ (000)

**Department of Research and Development (incl. TDR) (CRD)**

Technical and Administrative Bodies .....	599
General Activities Research and Development .....	1 338
Basic and Strategic Research .....	8 177
Product Research and Development .....	16 029
Intervention Development and Evaluation .....	9 754
Research Capability Strengthening .....	14 602
Programme Management* .....	7 591
TDR Trust Fund Administered Initiatives .....	2 366
Research and Development** .....	1 996
<b>CRD-TDR Total .....</b>	<b>62 453</b>

\* Includes partial staff costs for the department, as some were charged to teams.

\*\* Includes CRD - Voluntary Fund for Health Promotion outside TDR Trust Fund.

**Executive Director and Management Support Unit (EXD/MSU)**

Management .....	6 372
Activities .....	1 585
<b>EXD-MSU Total .....</b>	<b>7 957</b>

**WHO Mediterranean Centre (WMC) Tunis**

<b>WMC Total* .....</b>	<b>99</b>
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\*Fixed-term staff cost paid by SDE

**CDS GRAND TOTAL EXPENDITURES .....** 195 257

## CDS 2000–2001 contributions in kind

Partner (by department)	Period	Description	Estimated US\$
<b>STB</b>			
Royal Netherlands Tuberculosis Association (KNCV)	2000	Staff secondment	85 000
Centers for Disease Control and Prevention (CDC), USA	2000	Staff secondment	93 333
Soros Foundation, USA	2000	Partners in Health for Global Investment Plan	350 000
American Lung Association, USA	2000	Contribution towards TB website	570
Harvard University, USA	2000–July 2001	Staff secondment	196 000
			<b>724 903</b>
<b>WHO/CSR Office in Lyon</b>			
France - 2001	2001	One epidemiology coordinator	163 000
	2001	One laboratory specialist	163 000
Urban Community of Lyon, France	2001	Office space, equipment	700 000
			<b>1 026 000</b>
<b>TDR</b>			
African Programme for Onchocerciasis Control (APOC)	2000–2001	One scientist	326 000
	2000–2001	One secretary	197 000
			<b>523 000</b>
<b>RBM</b>			
Centers for Disease Control & Prevention (CDC), USA	2000-2001	Secondment of senior scientific adviser	326 000
US Agency for International Development (USAID)	2000-2001	Secondment of programme officer	326 000
			<b>652 000</b>

Partner (by department)	Period	Description	Estimated US\$
<b>CSR</b>			
Aventis	2000	Drugs, reagents, vaccines, field supplies to countries	350 000
AstraZeneca	2000	Drugs, reagents, vaccines, field supplies to countries	700 000
Centers for Disease Control & Prevention (CDC), USA	2000	Drugs, reagents, vaccines, field supplies to countries	100 000
State Serum Vaccine Institute, Switzerland	2000	Drugs, reagents, vaccines, field supplies to countries	544 000
UNICEF	2000	Drugs, reagents, vaccines, field supplies to countries	200 000
Centers for Disease Control & Prevention (CDC), USA	2000-2001	Staff secondment	326 000
	2000-2001	Staff secondment	326 000
Italy (Spallanzani Hospital)	2000-2001	Staff secondment	326 000
Netherlands	2000-2001	Staff secondment	258 000
USA (Department of Defense)	2001	Staff secondment	95 000
			<b>3 225 000</b>
<b>WMC</b>			
Government of Tunisia	2000-2001	Office space, furniture and running costs	<b>80 000</b>
<b>CPE</b>			
Novartis	2000	Leprosy drugs	8 990 000
Novartis	2001	Leprosy drugs	6 465 000
GlaxoSmithKline	2001-2001	Albendazole for treatment of lymphatic filariasis	17 000 000
France	2000-2001	Staff secondment	326 000
Belgium	2000-2001	Staff secondment	326 000
			<b>33 107 000</b>
<b>CDS GRAND TOTAL</b>			<b>39 337 903</b>