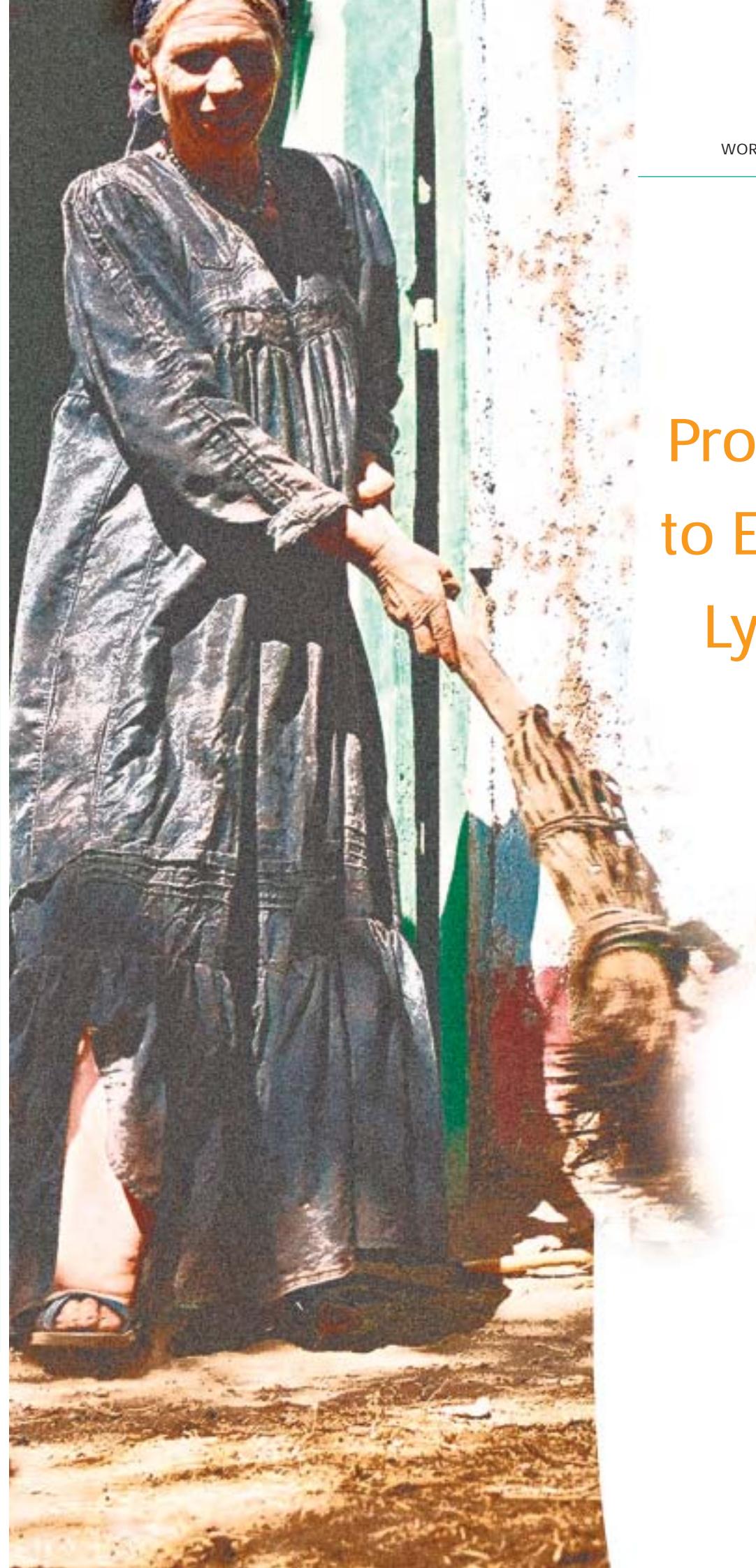




WORLD HEALTH ORGANIZATION

# Global Programme to Eliminate Lymphatic Filariasis

Annual Report on Lymphatic Filariasis 2002



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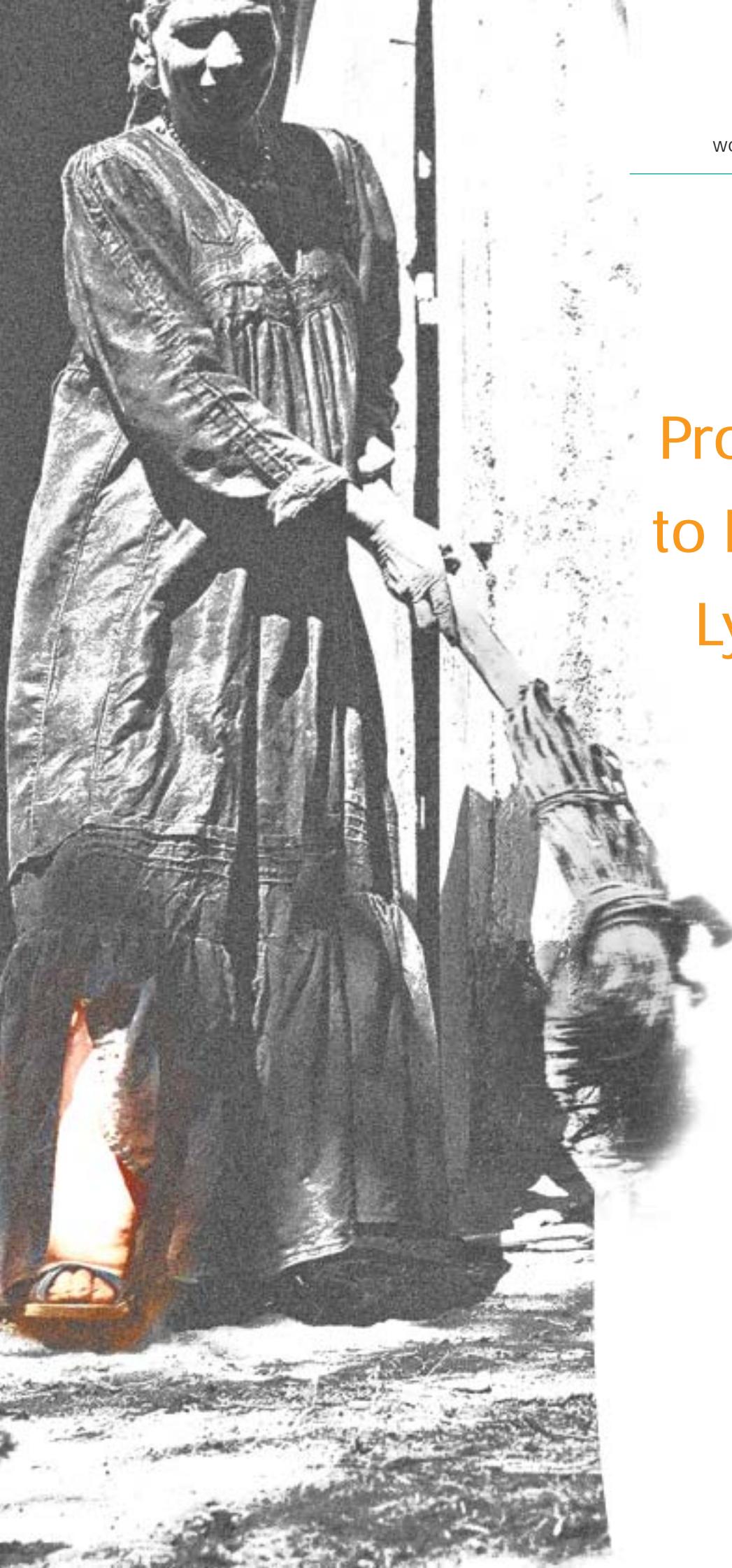
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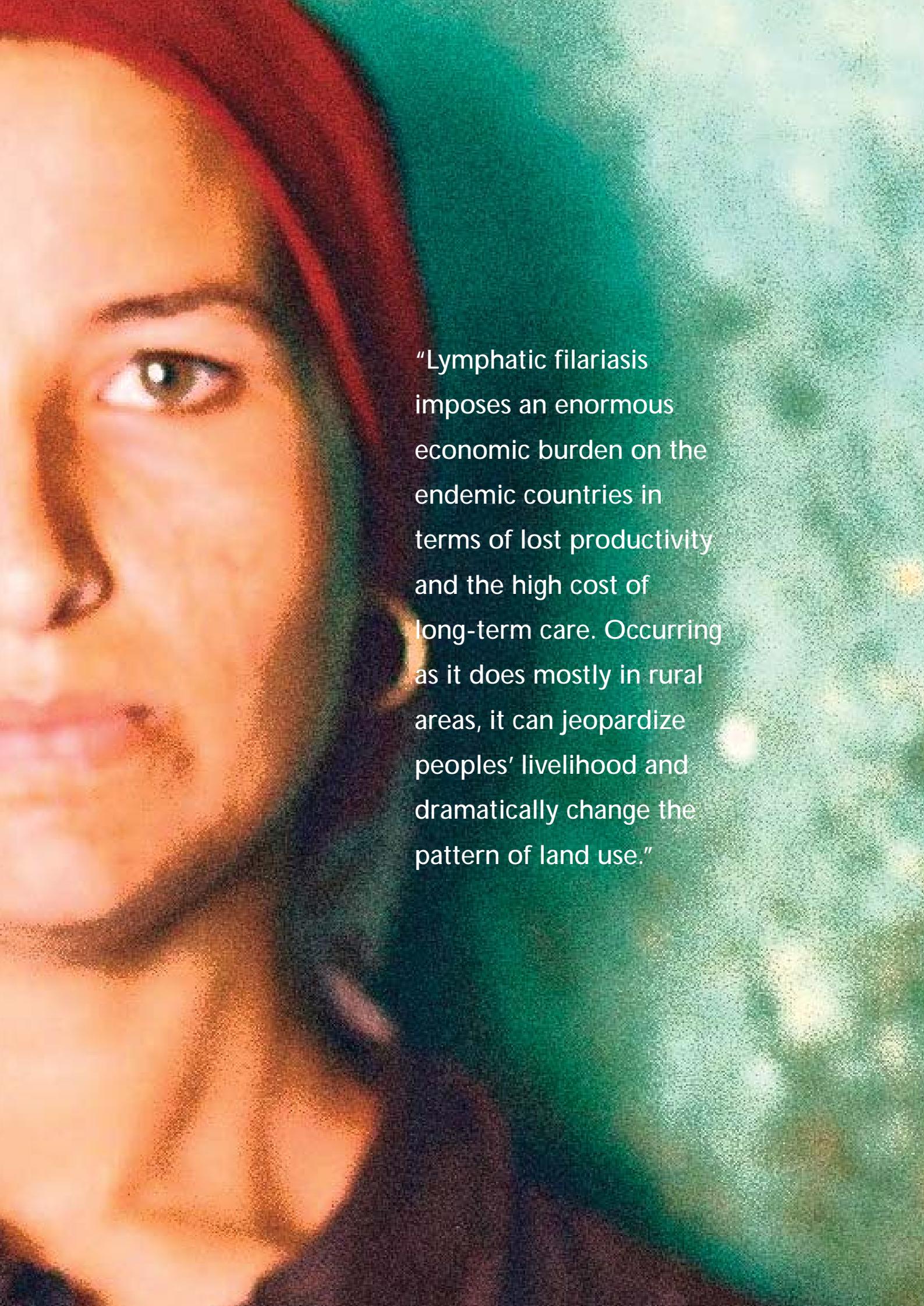


A black and white photograph showing a person from the waist down, wearing a sari and orange flip-flops. They are standing in a shallow, rocky stream, holding a bundle of laundry and a small container, possibly washing it. The background shows more of the stream and some foliage.

# Global Programme to Eliminate Lymphatic Filariasis

Annual Report on Lymphatic Filariasis 2002





**"Lymphatic filariasis imposes an enormous economic burden on the endemic countries in terms of lost productivity and the high cost of long-term care. Occurring as it does mostly in rural areas, it can jeopardize peoples' livelihood and dramatically change the pattern of land use."**



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This publication can be viewed at and downloaded from the web site of the

Global Alliance to Eliminate Lymphatic Filariasis at: [www.filariasis.org](http://www.filariasis.org)

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## Programme Highlights



### Programme Highlights

#### In the countries

- In 2002, a total of 59.2 million people in 32 countries were given the recommended two-drug, once-yearly treatment of mass drug administration (MDA) under the Global Programme to Eliminate Lymphatic Filariasis (GPELF); this is almost a two-fold increase from 2001.
- An at-risk population of 27 million people was covered by the first round of MDA.
- The planned national elimination programmes and requests for donated drugs from another 14 countries were examined and approved; they will be implemented in 2003.
- GlaxoSmithKline donated 66 million albendazole tablets to WHO which were supplied to 31 countries for either the first or a subsequent round of MDA.
- Merck & Co., Inc. donated 44.4 million ivermectin (Mectizan<sup>®</sup>) tablets to WHO which were supplied to eight countries covered by the African Programme Review Group and the Eastern Mediterranean Programme Review Group; 34.5 million for areas endemic for lymphatic filariasis only and 9.9 million for areas where lymphatic filariasis and onchocerciasis are co-endemic.
- WHO procured 58 million diethylcarbamazine citrate (DEC) tablets from pre-qualified manufacturers and supplied them to eight countries.
- Surveys continued in all Programme Review Group Regions to map implementation units (IUs) for transmission of lymphatic filariasis.

## In the regions

- All six Regional Programme Review Groups met in 2002 and reviewed the progress being made by country programmes and approved the request for cost-free supply of drugs.
- A workshop on mapping was conducted in the Dominican Republic with participants from Brazil, the Dominican Republic and Haiti.
- A four-part training package on community home-based prevention of disability due to lymphatic filariasis was field-tested in the African Region.
- The focal points had a very active year where travel commitments dominated their working schedule to provide technical support to country programmes.
- Several training courses on the interruption of transmission and on disability prevention took place in the Regional Programme Review Groups:



Regional Programme Review Group	Interruption of transmission		Disability prevention	
	No. of courses	No. of people trained	No. of courses	No. of people trained
African	413	12 571	47	993
American	9	715	15	129
Eastern Mediterranean	98	2 300	13	273
Indian Subcontinent	171	8 467	2	60
Mekong-Plus	139	8 299	106	5 236
PacCare	38	3 839	28	9 040
<b>Total</b>	<b>868</b>	<b>36 191</b>	<b>211</b>	<b>15 731</b>

## Programme Highlights

### At the global level

- An Informal Consultation on defining the roles of vector control and xenomonitoring in the programmes to eliminate lymphatic filariasis was held at WHO headquarters, Geneva, on 29–31 January 2002. The Consultation reviewed the state-of-the-art and current knowledge of proven techniques for controlling the mosquito vectors responsible for each of the three types of lymphatic filariasis to provide GPELF with the option of applying appropriate vector control tools that are selectively targeted to prevent transmission.
- The 8th Global Programme Review Group Meeting was held at WHO headquarters, Geneva, on 1–2 February 2002. The Group reviewed the progress made in the regionalization of the Group and made recommendations for effective operation of the RPRGs in supporting the national elimination programmes in their respective regions.
- The Technical Advisory Group met for the third time in Sevrier-Annecy, France, on 19–22 March 2002 and discussed issues related to MDA coverage by the elimination programme and monitoring, social mobilization, evidence-based research, disability prevention, communication and training, safety monitoring of co-administered drugs, and vector control. Specific recommendations to the programmes were made on monitoring disability prevention research. In collaboration with the Secretariat, current priorities were examined and topics were identified for the next meeting of the Technical Advisory Group.
- An Informal Consultation on surgical approaches to the urogenital manifestations of lymphatic filariasis was held at WHO headquarters, Geneva, on 15–16 April 2002. The Consultation defined a standard operation procedure for hydrocele surgery which could be practised by physicians after appropriate training. The issue of increasing access to hydrocele surgery in endemic communities was examined from a public health perspective.
- An Informal Consultation on monitoring and evaluation of lymphatic filariasis elimination was held at WHO headquarters, Geneva, on 10–11 June 2002. The purpose of the Consultation was to discuss monitoring and evaluation issues and make recommendations to the Technical Advisory Group.
- An Informal Consultation on basic principles for prevention of disability due to lymphatic filariasis was held at WHO headquarters, Geneva, on 11–12 November 2002. The purpose of the Consultation was to revise a draft document, *Basic principles and a framework for action for the prevention of lymphatic filariasis-related disabilities*, developed in consultation with Global Programme partners and which provides a conceptual framework that links LF-related disabilities to other chronic conditions through the new International Classification of Functioning, Disability and Health (WHO, 2001). The Informal Consultation also had to consider the results of Knowledge, Attitude and Practice (KAP) studies carried out in several countries, and to deal with issues related to capacity-building at the national level.
- Several Regional Focal Point Meetings were held at WHO headquarters, Geneva, during 2002.

## Introduction

This Annual Report highlights the progress made during 2002 in activities aimed at the worldwide elimination of lymphatic filariasis (LF) through the efforts of the Global Programme to Eliminate Lymphatic Filariasis (GPELF).

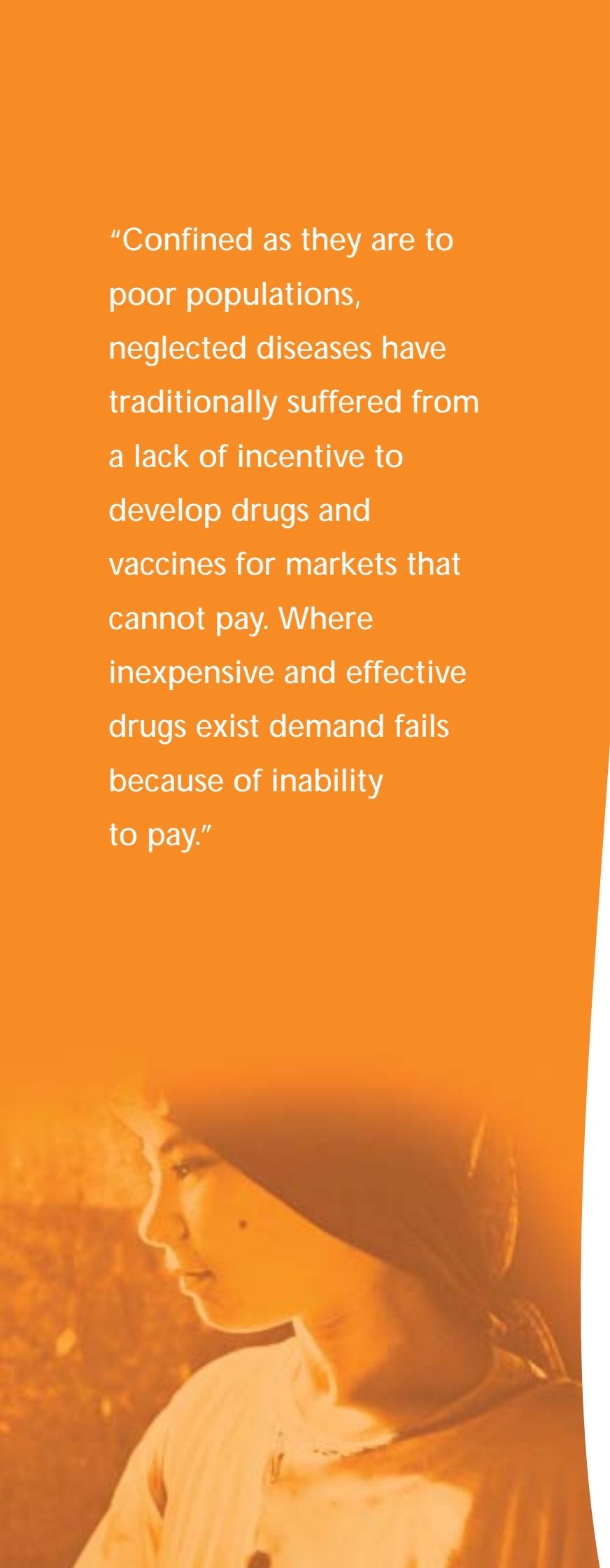
Lymphatic filariasis continues to be the major cause of disability in the world, and approximately 120 million people are infected. The disease is endemic in 80 countries and territories, 32 of which have implemented active elimination programmes – 10 more than in 2001. Nevertheless, the challenge remains considerable: although these 32 countries and territories represent almost 80% of the global at-risk population, they have covered only 5% of their own at-risk population with mass drug administration (MDA). Despite this, progress is encouraging since these countries reported a satisfactory drug coverage rate that established a promising foundation for future scaling-up of the elimination programmes. There is an urgent need to inject more energy into advocacy and fundraising: capacity building is a crucial component of the Global Programme and requires continuous enhancement. In addition, social and political support from the endemic countries is vital for the success of the Programme.

The GPELF reports each year on its activities, and annual reports and other related materials can be requested from the CDS Information Resource Centre<sup>1</sup> or downloaded from the website of the Global Alliance to Eliminate LF at [www.filariasis.org](http://www.filariasis.org).

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"Confined as they are to poor populations, neglected diseases have traditionally suffered from a lack of incentive to develop drugs and vaccines for markets that cannot pay. Where inexpensive and effective drugs exist demand fails because of inability to pay."



# Chapter 1

## Neglected Diseases



The “neglected” diseases are so-called because they almost exclusively affect poor and powerless people in rural or peri-urban areas of low-income countries. These diseases may attack the disregarded, but also affect everyone. In rural communities, they jeopardize food safety and cause dramatic changes in patterns of land use. In urban slums, disease spreads unchecked as even the most rudimentary health services fail to reach those who are ill. While it may be convenient to neglect the disenfranchised who suffer from these diseases, this indifference is costly – society bears an enormous economic burden as a consequence of lost productivity and the costs of long-term care.

Through continuing neglect, these diseases help guarantee that each generation remains anchored in poverty. Schistosomiasis and guinea-worm disease significantly impact school attendance. Sleeping sickness can permanently impair mental functions and may cause mental retardation, even in children who are cured. Buruli ulcer takes its heaviest toll in lost limbs and crippling deformities in the young. Trachoma leads to irreversible blindness. Dengue ravages communities with life-threatening epidemics that are particularly devastating to children. Lymphatic filariasis infects the young but rests dormant for years before emerging to incapacitate and disfigure adults during their most productive years.

While neglected diseases cause immense suffering and often life-long disabilities, they rarely kill and therefore do not receive the attention and funding of high-mortality diseases such as AIDS, tuberculosis and malaria. The costs of treatment and rehabilitation are certainly beyond

the reach of the impoverished, and often beyond the capacity of the social systems of infected regions. The disabled remain disabled, often in their youth, and inextricably linked to poverty as unwilling impediments to socioeconomic development in endemic countries.

Because these diseases are confined largely to the poor, there is little incentive for the development of drugs and vaccines for markets that cannot pay. Moreover, even when inexpensive and effective drugs are developed, their distribution and use are hindered by the inability of the sick to pay even nominal amounts – and the cycle of deprivation continues.

However, long-standing development and distribution problems, once considered intractable, are now being addressed in a wave of public-private partnerships. A particular advantage of these new partnerships is their ability to deliver interventions for several diseases with drug co-administrations: systems created to deliver one drug regimen can be used to deliver others and simultaneously attack diseases that co-exist in endemic areas. This approach has been used successfully and cost-effectively in the lymphatic filariasis/schistosomiasis and the lymphatic filariasis/onchocerciasis initiatives. The GPELF is showing promise and progress with impressive results.

In many cases, action is possible due to the availability of new drugs, often developed through the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR), that are safe, inexpensive and suitable for both mass administration and community distribution. The collective and

collaborative efforts of pharmaceutical companies, research institutions, private donors, nongovernmental agencies and national governments have resulted in drug donation and distribution programmes as well as effective approaches to vector control and environmental improvements.

Drugs can contain and even eliminate disease – but much also needs to be done to relieve the suffering of people living with long-lasting disabilities and the associated social stigma caused by disease. Certainly the poor lack the financial resources to seek proper health care, but people affected by unsightly disfigurement also tend to keep themselves hidden and are reluctant to seek treatment until the disease is well-advanced and the disability permanent. As the disease progresses, the victims are often abandoned by their families and ostracized by society, becoming unproductive for physical, psychological and social reasons and a burden on the very community that excludes them. Moreover, in poor rural areas, belief systems frequently attribute diseases that disable and deform to punishment or superstition; control efforts that depend on community participation become especially difficult to implement when the causes of disease are interpreted as non-medical and therefore beyond human control.

Long-term care is the primary responsibility of the family and friends of the sick, but it is also incumbent on the community – local, national and global – to provide health care assistance through education, training, information dissemination and resource allocation. Often the simplest steps can make immense differences and bring significant relief to disease

sufferers. For instance, thorough and regular hygiene can dramatically reduce the frequency and seriousness of inflammation and lymphoedema of lymphatic filariasis patients, thereby greatly improving the quality of their lives, even if the disease remains incurable.

There is a growing recognition by the international community that poverty fosters disease and disease keeps people in poverty, whereas good health boosts prosperity. This attitude reflects the higher rank accorded to health care in the development agenda. By acknowledging the “neglected diseases” and addressing elimination efforts, vector controls, disability and long-term care, the global community can both reduce poverty and relieve an enormous burden of suffering and disability for the disadvantaged. The fight to eliminate these diseases is also a fight against poverty.





"Eliminating lymphatic filariasis will free millions of people in low-income countries from the threat or the effects of a debilitating and potentially disfiguring disease."

## Chapter 2

# Progress of the Global Programme to Eliminate Lymphatic Filariasis



## Initial assessment and mapping of lymphatic filariasis distribution

### Objective for 2002

- to strengthen the capacities of endemic countries to assess and map the distribution of lymphatic filariasis in preparation for mass drug administration.*

The initial assessment and mapping of the distribution of LF within endemic countries continued to be priority activities in 2002 (see Table 2.1, page 21). The primary strategy for interrupting transmission of infection is to cover the entire population at risk of LF, either with a single administration of a two-drug regimen given once a year for a period of 4–6 years or with DEC-fortified salt intake for a period of 1 year.

Before MDA is planned and implemented in endemic countries, it is necessary to define IUs and to identify areas where transmission occurs. After disease distribution is mapped, IUs are categorized as endemic or with transmission, non-endemic, or uncertain. Additional surveys to verify the status of LF in the “uncertain” IUs are carried out, using detection of antigenaemia with immuno-chromatographic test (ICT) cards in areas where *Wuchereria bancrofti* is endemic or by night blood surveys in areas endemic for brugian filariasis. The ICT is performed on a finger-prick blood droplet taken at any time of day and gives a result within a few minutes. Survey results are plotted on a map of the country, with the “uncertain” IUs categorized as either endemic or non-endemic.

In early 2002, it was discovered that the ICT cards manufactured by Binax

Inc. needed to be read exactly according to the manufacturer's guidelines; any deviation resulted in a false reading. In particular, it was essential to examine the test at 10 minutes of application or the result tended to convert from negative to positive. Clearly, this hindered field operations, and the purchase of ICT cards was withheld. WHO and GlaxoSmithKline provided financial assistance to Binax in modifying the cards to meet the specifications of the users in the field. This was done in technical collaboration with Barnes Jewish Hospital, Emory University and CDC and resulted in the modified and more user-friendly cards which are expected to be produced commercially by 2003.

Despite the delay in obtaining ICT cards, the national elimination programmes in Cambodia and Côte d'Ivoire completed disease distribution surveys and LF-endemic maps were prepared accordingly. In addition, funds were provided for mapping activities in Cameroon, Central African Republic, Gambia, Malawi, Mali, Niger, Senegal, Uganda and Zambia in the African Programme Review Group; Sri Lanka in the Indian Subcontinent Programme Review Group; and Indonesia and Myanmar in the Mekong-Plus Programme Review Group.

To strengthen the capacities of endemic countries to map the distribution of LF in preparation for MDA, a workshop was held in the Dominican Republic with the participation of Brazil and Haiti. The workshop topics were: standardized methodology for LF mapping; techniques to facilitate compiling known data on LF prevalence; developing plans for LF mapping; and using HealthMapper for mapping, monitoring and evaluating MDA programmes.

HealthMapper, a software package developed by WHO, is an integrated database management and mapping tool that helps users to select IUs; draw a preliminary map of disease distribution based on existing data; select sample regions to survey; enter data and analyse survey results; overlay prevalence contour maps or other relevant layers; classify IUs by LF status; prepare a plan of action; monitor MDA coverage; and monitor the impact indicators.

## Interruption of transmission

### Objective for 2002

- to reach 50 million people in endemic countries

In 2002, 32 LF-endemic countries implemented MDA. For various reasons, Guyana (which planned a DEC-fortified salt programme), Maldives and Nepal could not start the MDA programme but planned to implement it in 2003.

According to the Strategic Plan presented at the first Global Alliance meeting in Santiago de Compostela, Spain, in 2000, the targeted at-risk population for 2002 was 50 million. The at-risk population covered by co-administered drugs in 2002 was, 59.2 million people with a global reported coverage of 87% (see Table 2.2, page 22). In addition another 35.7 million people were covered by DEC alone in India.

All of the 32 endemic countries that implemented MDA programmes in 2002 submitted annual reports to WHO (see Table 2.3, page 23).

Table 2.1 Status of mapping by country arranged by Regional Programme Review Group

Completed	In progress	Planned
<i>African Programme Review Group</i>		
Benin	Gambia	Cameroon
Burkina Faso	Kenya	Central African Republic
Comoros	Madagascar	Guinea
Côte d'Ivoire	Nigeria	Liberia
Ghana	Senegal	Malawi
Togo	United Republic of Tanzania	Mali
Uganda	Niger	Zambia
<i>American Programme Review Group</i>		
Costa Rica	Brazil	
Guyana	Dominican Republic	
Haiti		
Suriname		
Trinidad and Tobago		
<i>Eastern Mediterranean Programme Review Group</i>		
Egypt	Yemen	Sudan
<i>Indian Subcontinent Programme Review Group</i>		
Maldives	Bangladesh	
Nepal	India	
Sri Lanka		
<i>Mekong-Plus Programme Review Group</i>		
Cambodia	Indonesia	
	Lao People's Dem. Republic	
Malaysia	Myanmar	
Thailand	Philippines	
	Viet Nam	
<i>PacCARE Programme Review Group</i>		
American Samoa	Papua New Guinea	
Cook Islands		
Fiji		
French Polynesia		
Kiribati		
Micronesia		
New Caledonia		
Niue		
Samoa		
Solomon Islands		
Tonga		
Tuvalu		
Vanuatu		
Wallis and Futuna		

Table 2.2 Total population of all IUs for MDA with drug co-administration in 2002

Region	Country	Total population of all IUs targeted for MDA in 2002	Population reported to have ingested the drugs	Drug coverage %*	
				As reported by IUs	As observed in cross check sites
Africa	Burkina Faso	2 612 524	1 786 125	68.4	72.4
	Benin	289 094	224 971	77.8	nd
	Comoros	413 300	245 224	59.3	nd
	Ghana	1 650 058	1 223 122	74.1	nd
	Kenya	592 273	480 900	81.2	91.5
	Nigeria**	nd	2 168 355	nd	nd
	Togo	709 455	556 974	78.5	nd
	Uganda	965 323	733 375	76.0	nd
	United Republic of Tanzania*	2 017 677	1 260 049	62.5	88.4
	Zanzibar, UR of Tanzania	984 625	818 155	83.1	77.6
Americas	Dominican Republic	141 762	117 791	83.1	83.6
	Haiti	510 795	434 896	85.1	nd
Eastern Mediterranean	Egypt	2 574 781	2 448 399	95.1	nd
	Yemen	109 349	79 119	72.4	nd
Indian Subcontinent	Bangladesh	5 178 741	4 860 402	93.9	87.30*
	India***	23 884 633	21 072 433	88.2	nd
	Sri Lanka	10 044 082	8 637 505	86.0	85.1
Mekong-Plus	Indonesia	322 250	255 144	79.2	nd
	Myanmar	8 634 179	7 474 094	86.6	95.8
	Philippines	4 731 378	3 480 089	73.6	nd
	Thailand	130 491	118 752	91.0	64.1
	Viet Nam	88 200	76 339	86.6	nd
PacCARE	American Samoa	57 291	28 489	49.7	nd
	Cook Islands	18 037	17 676	98.0	90.0
	Fiji	775 077	545 780	70.4	100.0
	French Polynesia	226 172	211 052	93.3	nd
	Kiribati**	84 000	13 175	15.7	nd
	Niue	1 788	1 469	82.2	82.0
	Samoa	174 140	96 301	55.3	97.0
	Tonga	90 720	82 023	90.4	100.0
	Tuvalu**	9 900	nd	nd	nd
	Vanuatu	186 678	156 368	83.8	nd
	Wallis and Futuna	14 166	8 522	60.2	nd
	32 countries under MDA	68 222 939	59 713 068	87.53	

\* Drug coverage calculated as percentage of persons administered the drugs over a total population in IUs.

\*\* Incomplete data. \*\*\*India: not included 35.7 M covered with DEC alone.

nd = no data (data not included in annual report).

The analysis also showed that, between 1999 and 2002, an at-risk population of 29 million from new IUs were covered by the first round of MDA, 26 million by the second round, 3 million by the third, and 0.09 million by the fourth (see Figure 2.3).

#### Procurement of quality drugs for MDA

At least 66 million albendazole tablets and 44 million ivermectin tablets were supplied to endemic countries. Albendazole is donated by GlaxoSmithKline (GSK) and ivermectin is provided by Merck & Co., Inc. The value of the albendazole donated by GSK is estimated at US\$ 13.6 million at wholesale acquisition cost.

GSK, Merck & Co., Inc., the Mectizan® Donation Programme, WHO and national elimination programmes coordinated the logistics of the drug shipments; this is an essential part of the

procurement process that ensures timely and properly managed delivery several weeks in advance of MDA campaigns by means of an agreement with each country.

#### Ensuring supplies of DEC

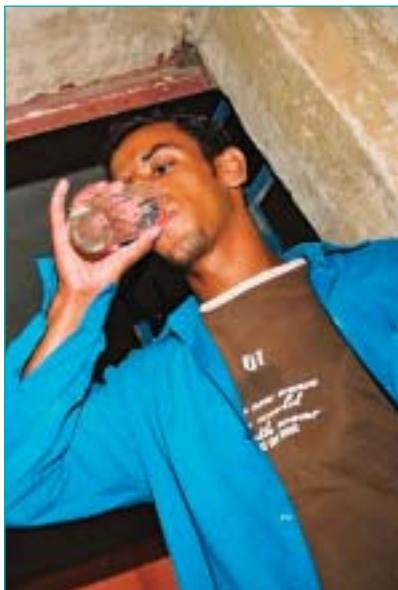
The following tasks were carried out with three internationally recognized experts in the manufacture of pharmaceuticals and chemicals and in quality assurance, which includes Good Manufacturing Practices and Good (Quality Control) Laboratory Practices.

- A modern stability-indicating HPLC assay for DEC was standardized to replace an out-dated titration method in the United States Pharmacopoeia 25, which became official on 1 January 2002. The new method will also replace the out-dated titration method in the Second Addendum of the Indian Pharmacopoeia, which will be issued in 2003.

Table 2.3 LF-endemic countries covered by MDA in 2002 by Regional Programme Review Groups

	Number of endemic countries*	At-risk population in endemic countries (millions)*	At-risk global population (%)	Number of countries started MDA	At-risk population covered in 2002 (millions)	% of at-risk population covered in 2002
Africa	39	477	38.6	9	9.9	3.09
Americas	7	9	0.7	2	0.6	6.74
Eastern Mediterranean	3	15	1.2	2	2.5	17.21
Indian Subcontinent	5	514	41.6	3	29.5	5.74
Mekong-Plus	11	214	17.3	5	11.4	5.34
PacCARE	15	6	0.5	11	1.2	18.35
Total	80	1 235	100	32	59.7	5.11

\*At-risk population adjusted according to mapping



- The group pre-qualified three manufacturers of DEC:
  - Burroughs Wellcome (India), Mulund, Mumbai, India (an affiliate of GSK)
  - Unichem Laboratories, Goa, India
  - Panacea Biotech, New Delhi, India
- The group pre-qualified one manufacturer of DEC API (active pharmaceutical ingredient):
  - Syntholab Chemicals and Research, Mumbai, India
- The group investigated methods of adding DEC to table salt (for the drug regimen identified as "DEC-fortified salt"); discussed procedures and regulatory issues with the Salt Commissioner of India; began negotiations with a salt factory in Madagascar regarding the production of DEC-fortified salt; and visited salt factories in Basle, Switzerland, and Tamil Nadu, India, to observe table salt manufacturing procedures and the possibilities of fortifying salt.

To accomplish this, more than 58 million DEC tablets were supplied to endemic countries. Some national programmes were able to purchase the DEC tablets through their own resources and others retained stock from the previous year. The cost of DEC is less than US\$ 0.01 per person per year.

DEC powder was sent to two countries for DEC-fortified salt drug regimens. WHO supplied 2745 kg of DEC API to Haiti to cover three IUs and 6341 kg to Guyana to cover the entire country (10 regions) for producing DEC-fortified salt. The cost of DEC powder is US\$ 9.30 per kilogram.

## Social mobilization

Social mobilization plays a central and critical role in the GPELF, whether achieving high coverage rates for MDA or supporting the goal of preventing disability due to LF. It is a planned process that is vital to political advocacy, generating national resources and stimulating local public and private sector partnerships in order to obtain the specific changes in behaviour the elimination programme seeks to achieve.

Although social mobilization involves producing Information, Education and Communication (IEC) materials, its fundamental purpose is to achieve healthy behaviours at all levels - in the home, neighbourhood, community - encouraging people to take tablets during MDA, for example, or to regularly clean and exercise limbs affected by LF.

WHO's Social Mobilization and Training Unit at headquarters provided technical assistance to endemic countries on request in implementing COMBI (communication for behavioural impact), a strategic, behaviourally-focused social mobilization programme. A COMBI plan was first implemented at the national level in 2001 and was further strengthened and broadened in 2002.

As a result of a series of country missions by social mobilization/communication experts, an increasing number of countries are requesting direct assistance in helping their LF elimination teams to design behaviourally-focused and strategic national and district level social mobilization campaigns.

India (Tamil Nadu), Kenya, Sri Lanka and Zanzibar, United Republic of Tanzania credited the implementation of COMBI plans with achieving higher MDA coverage. Nepal and the Philippines were assisted in designing social mobilization plans that will be implemented in 2003. Assessment missions were carried out in Uganda and the United Republic of Tanzania in 2002 and both countries will be supported in designing and implementing social mobilization plans for MDA in 2003.

Several tools to help national programme managers and social mobilization/communication experts were developed in 2002. The social mobilization module of the Programme Managers guide was updated and will be field-tested<sup>1</sup>. A manual for social mobilization/communication experts is being finalized and a market analysis supplement to help national programmes carry out a more thorough situational analysis that will help focus social mobilization strategies and interventions is being developed.

#### Lessons learned:

- Strategic social mobilization planning must be a pre-requisite for the production of materials.

An essential aspect of an elimination programme is to identify the behavioural changes and then to develop a strategic social mobilization plan to achieve them. Communication materials may or may not be needed, depending upon the behavioural changes sought and the results of the market analysis of

the target audience. The analysis provides the rationale for the various communication methods to be used and identifies the tasks related to the production of communication materials.

- Commitment of national, regional and local governments to implementation is critical.

The best-designed strategic social mobilization plan will still be ineffective if there is inadequate support from ministry of health senior staff and officials. Without this commitment, plans will be half-heartedly implemented, if at all. A critical component of social mobilization plans is "administrative mobilization" with the specific purpose of securing the active and focused participation of political leaders, and just as importantly, galvanizing the civil service and government machinery into action.

- Working with advertising agencies who understand the local social and cultural context can be beneficial.

The experience of national programmes thus far suggests that it is possible to establish strong working relationships with competent local advertising and marketing agencies to design and implement strategic social mobilization plans. However, when such relationships are carefully managed and guided, the overall impact on behavioural results can be tremendous. For example, in Sri Lanka advertising was one of the major components of the social mobilization plan in 2002 that resulted in consistently high MDA coverage rates of over 80% in all participating implementation units.



<sup>1</sup> Preparing and Implementing a National Plan to Eliminate Lymphatic Filariasis (WHO/CDS/CPE/CEE/2000.15 and 16 for countries where onchocerciasis is co-endemic)

The advertising efforts undoubtedly enhanced the awareness level of the general public and increased participation in MDA.

In another example, both Kenya and Tamil Nadu, India, used advertising agencies to develop the conceptual design for the logos and materials to emphasize a desired behaviour, to provide advice on media reach, and to select the appropriate mix of media outlets to achieve maximum impact with the available budget.

Experience has shown that an adjudication process should be followed when choosing the appropriate agency based on capacity, cost and experience, among other criteria. In general, larger international agencies are able to produce materials even if there are delays in payment, which is especially important if tight deadlines must be met.

- There is great potential for private sector partnerships and support.

There is seldom enough money for communication activities in the public sector. However, promising possibilities exist for public-private sector partnerships for social mobilization. There is a strong likelihood that private sector sponsors will provide financial support for social mobilization components in return for being allowed briefly to promote a specific product (which should not be related to pharmaceuticals, alcohol or tobacco). In some cases, such support was forthcoming with no brand promotion required. For example, the local branches of GlaxoSmithKline (GSK) contributed to social mobilization efforts in Egypt, Kenya and the state of Tamil Nadu, India.

The experience in Zanzibar showed how programme managers actively presented a case to the private sector once they were encouraged to think creatively. (See: The Global Elimination of Lymphatic Filariasis-The Story of Zanzibar, World Health Organization 2002: WHO/CDS/CPE/SMT/2002.15).

- External personnel may be necessary to oversee social mobilization implementation.

Ideally, social mobilization plans should be implemented only with local staff and locally contracted advertising/marketing communication agencies. In several cases this proved to be quite successful, as in Sri Lanka and Tamil Nadu, India. In other cases, such as Zanzibar, it was necessary to locate external personnel to facilitate implementation due to a lack of local expertise.

- The level of technical support and costs can diminish over time.

Most national programme managers have had minimal training in or experience with social mobilization and consequently struggle to design and implement effective social mobilization plans. As was demonstrated in Zanzibar, once an initial strong strategy has been designed by PELF, Ministry of Health staff and partners at the national and district levels, individuals at the local level are more likely to develop the skills and knowledge necessary to continue adapting, refining and implementing plans with very little subsequent technical support.



In addition, as national programmes scale up their activities, the use of communication interventions becomes increasingly cost-effective with the more economic use of mass media and the lower cost of producing larger quantities of materials such as posters and leaflets.



#### Box 2.1

##### **What is communication for behavioural impact (COMBI)?**

COMBI is a social mobilization plan designed to mobilize all societal influences on an individual and the family to prompt them to change behaviours. It is a process that strategically blends a variety of communication interventions intended to encourage them to adopt and to regularly practise recommended healthy behaviours.

#### Box 2.2

##### **Sri Lanka: case study**

In 2001, Sri Lanka conducted MDA and targeted a population of 9 million in 8 districts. The coverage ranged from 48.4% to 80.5% of the total population.

Technical assistance was provided in preparation for the second round of MDA in 2002. After a rapid situational analysis and a review of the 2001 experience, a number of recommendations were made.

## Advocacy

### *Objective for 2002*

- *to develop advocacy and communication tools to increase the interest of key global decision-makers (nongovernmental development organizations, fundraising agencies, etc.) and those of regions and countries.*

Considerable political and social commitment will be needed to reach the target of covering the global at-risk population of 350 million with MDA by the year 2005. Such commitment can be achieved only through a massive effort to raise awareness at all levels – national, regional, local. Proactive communication – as wide and as varied as possible – is thus crucial to increase the visibility of GPELF and to influence policies and attract funding for LF elimination programmes in the 80 endemic countries.

As a means of communicating the importance of GPELF, a series of "success stories" has been planned, made possible by a contribution from the Bill and Melinda Gates Foundation. The first of these, *The global elimination of lymphatic filariasis: the story of Zanzibar*, was issued in May 2002 (WHO/CDS/ CPE/SMT/2002.15). It relates the activities during the first year of the LF elimination programme in Zanzibar, United Republic of Tanzania, portraying the dedication of the many people who were convinced of the value and purpose of the programme and who made the 2001 MDA campaign a success. It is also the story of the hard work and commitment of the people of Zanzibar.

A second success story, *The global elimination of lymphatic filariasis: the story of Egypt*, will be published in 2003.

Most global advocacy activities were oriented towards supporting the Second Meeting of the Global Alliance to Eliminate Lymphatic Filariasis (GAELF2), held in May 2002, and towards wide dissemination of its conclusions and recommendations. The meeting began with a filmed opening address by Dr Gro Harlem Brundtland, Director-General of WHO, prepared in collaboration with WHO's LF team. Media relations with the regional LF focal points, representatives of endemic countries attending the meeting, and the printed press and television were also managed primarily by the LF team, as were production and dissemination of advocacy materials related to the event – banners, pop-up boxes, brochures, folders, etc.

Four advocacy films for use at the national and international level were produced in English, French and a non-dubbed "international" format for adaptation by national programmes to other languages:

- *Lymphatic filariasis: a winnable battle* (18 minutes): a global advocacy film that gives an overview of the problem of LF in the world and explains the role of the Global Alliance.
- *A movement for hope* (4 minutes): a short film for policy-makers and interested parties, giving an overview of the Global Programme and the Global Alliance.
- *A fair for health, a fair for hope* (14 minutes): a film about the LF health fair held on the Philippine island of Mindoro.

- *Lymphatic filariasis: meeting the challenge* (12 minutes): a film about the effort in Uganda to treat communities with high levels of infection.

The advocacy component of the Global Programme aims to increase the visibility of the elimination efforts using the mass media, promotional events and materials, policy-makers, endorsement by international leaders, and similar activities.



### Egypt: a country profile

Egypt occupies a unique position within GPELF. In 2000, the country took on the logistic and organizational challenges of covering the entire at-risk population from the beginning of the programme, rather than scaling up over a number of years. Very few countries have adopted this method: once such an elimination programme has been started, the momentum must be maintained since it is not possible to stop halfway through. With support from the comprehensive resources of the Ministry of Health and Population and the primary health care infrastructure, the national campaign achieved encouraging results.

In 2002, the third round of MDA – covering a population of 2.5 million – was completed. Drugs were distributed door-to-door by teams composed of primary health care staff, a doctor, a nurse and a records clerk. Teams visited every household and administered 2.5 million albendazole tablets and 13 million DEC tablets over the 2-week campaign. Because the primary health care workers were usually from the community they covered, they were well known and trusted by the villagers who were then more likely to accept the drugs. The teams worked in the late afternoon and evening when people were more likely to be at home and they returned several times until they were sure that every eligible individual had received the tablets.

Training was essential for the success of the elimination programme. The team members were trained how to inform people about the importance



of the elimination campaign, to calm any fears they might have, to prepare them for any potential adverse reactions to the drugs, to calculate the number of tablets needed according to age, and to persuade people to take the drugs and ensure that they were properly ingested.

Each successive MDA campaign was able to build upon and learn from the experiences of previous ones. By 2002, the elimination programme had developed a multifaceted, broad-based network system of key players and institutions to support the work of the door-to-door health care teams. Community involvement and participation through social mobilization will become increasingly important as the elimination programme enters its final phase.

High-profile interviews with the health minister and senior officials

from the Ministry of Health and Population have "kick-started" the campaign each year. Special messages, films and advertisements were broadcast on national television during peak viewing times. Religious leaders became powerful advocates for the elimination programme and made announcements in places of worship, explaining the importance of the campaign and urging people to participate. The Ministry of Agriculture helped by offering their mobile film unit to screen films about LF in rural areas. The Ministry's 10 000 agricultural extension workers received training and talked to farmers about MDA, reinforcing information as well as encouraging people to take the tablets.

Schoolchildren were reached through 250 000 comic books about LF designed specifically for them.

The current challenge is to maintain the high coverage rates until the end of the elimination programme, and Egypt is poised to do just that.

As part of a series of country profiles, an advocacy publication that focuses on the Egyptian experience will be available during the first quarter of 2003 from the CDS Information Resource Centre.<sup>1</sup>

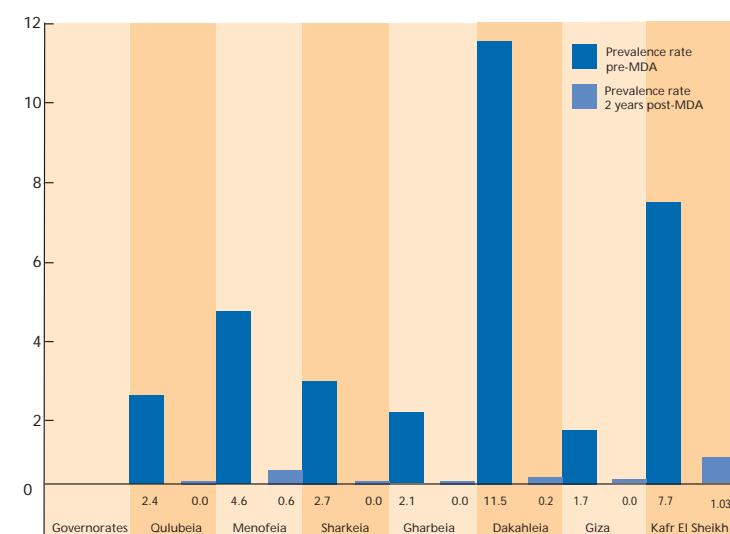
*"We will continue these annual campaigns until September 2004 and I think by then we will be able to declare Egypt free of lymphatic filariasis."*

Dr Mahmoud Abu El Nasr  
Under Secretary for Preventive Affairs and Primary Health Care  
Ministry of Health and Population, Cairo, Egypt

*"We are halfway there, we are leading the world in this... just imagine, the Egyptians are leading the world in proving that it can get rid of lymphatic filariasis, this very disabling disease."*

Dr Zuheir Hallaj, Director,  
Communicable Diseases  
WHO Regional Office for the  
Eastern Mediterranean and  
Acting Representative to Egypt,  
Cairo, Egypt

Prevalence Rates

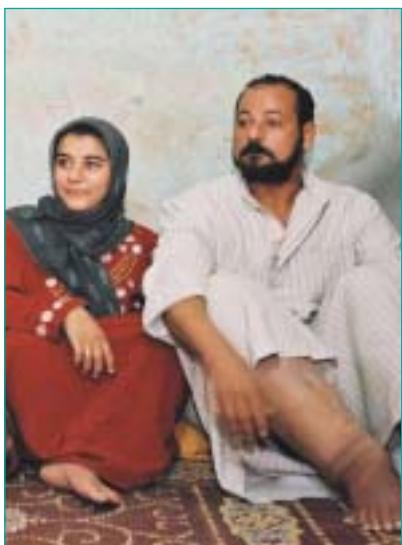


<sup>1</sup> CDS Information Resource Centre, World Health Organization, 1211 Geneva 27, Switzerland.  
Fax: +41 22 791 4285.

## Prevention of disability

### *Objectives for 2002*

- *to convene an informal consultation on surgical approaches to the urogenital manifestations of LF;*
- *to develop and implement KAP studies;*
- *to convene an informal consultation on basic principles for the prevention of disability due to LF;*
- *to finalize the basic principles and framework for action for the prevention of disability due to LF.*



The Informal Consultation on surgical approaches to the urogenital manifestations of lymphatic filariasis was held in Geneva on 15–16 April 2002. The participants were specialists from around the world with extensive experience in urogenital and surgical interventions in hydrocele due to LF. The purpose of the Consultation was to define surgical approaches to the urogenital manifestations of LF, as well as to examine these procedures from a public health perspective. The participants recognized the magnitude of the problem of urogenital manifestations, which are much more frequent than lymphoedema yet more amenable to curative treatment, and recommended that surgical management of urogenital manifestations be given priority by GPELF.

The main conclusions were that surgery for hydrocele should be made available at the most peripheral part of the health care system and that, of all the urogenital manifestations of lymphatic filariasis, hydrocele is the most common.

The proceedings, conclusions and recommendations of the Informal Consultation have been published in a WHO document.<sup>1</sup>

KAP studies were carried out in Burkina Faso and the United Republic of Tanzania (mainland and Zanzibar) in order to gather information about the perception of LF within the communities of those countries. Analysis of the study results provided the basis for country-specific adaptation of the training package on community home-based prevention of disability due to LF designed for LF sufferers, their families, friends and neighbours. The results will also serve as a prelude to further studies.

An Informal Consultation on the basic principles for the prevention of disability due to lymphatic filariasis was held in Geneva on 11–12 November 2002. The participants were representatives of ministries of health from several endemic countries; WHO collaborating centres; WHO headquarters staff from the Programme of Long-Term Care; international agencies; and non-governmental development organizations. The objective of the Informal Consultation was to consider the draft strategy document, *Basic principles and framework for action for the prevention of lymphatic filariasis-related disabilities*. This document takes into account the results of KAP studies carried out in Burkina Faso and the United Republic of Tanzania (mainland and Zanzibar), which were presented during the Consultation.

The Consultation also considered the possible implications of the new International Classification of Functioning, Disability and Health

<sup>1</sup> Report of an informal consultation on surgical approaches to the urogenital manifestations of lymphatic filariasis. Geneva, World Health Organization, 2002 (document WHO/CDS/CPE/CEE/2002.33).

(ICF) for the elimination strategy, and looked into issues related to capacity-building at the national level. The final version of the strategy document will be published in 2003.

## Training

### *Objectives for 2002*

- *to complete the preparation of a four-part training package on community home-based prevention of disability due to LF;*
- *to provide technical assistance to countries on the elimination of disability due to LF;*
- *to begin the development of a training module for district medical officers.*

Among the important training activities undertaken in 2002, the completion and field-testing of a four-part training package on community home-based prevention of disability due to LF, and the implementation of the first of a series of training workshops at national level in Burkina Faso and Zanzibar, United Republic of Tanzania, which used these materials, were notable additions to PELF. The purpose of this training activity was to generate a training "cascade" at the district level, consisting of a train-the-trainer workshop, training of informal carers, and at-home education of LF sufferers and their families, friends, and neighbours (Figure 2.1, see page 34). Advocacy materials and media coverage were used to increase awareness of, and expand participation in, the training activities conducted in the community.

Studies are currently under way to ascertain how these community-level activities can be appropriately integrated with similar activities organized by other health and

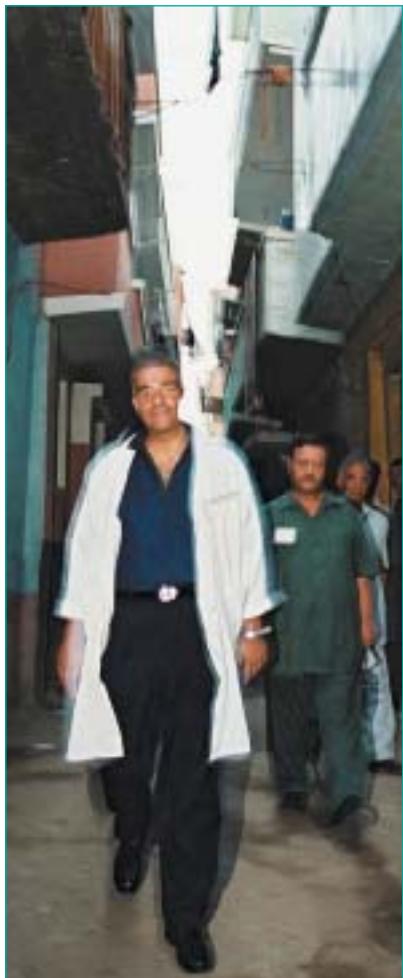
non-health programmes aimed at preventing disability due to LF. All these activities were made possible through the financial support provided by the Bill and Melinda Gates Foundation.

Several missions were organized, by both WHO headquarters and regional offices, to provide technical assistance to countries on such issues as mapping, training, social mobilization (see the section "Social Mobilization") and prevention of disability.

Throughout 2002, there were 868 training workshops involving more than 36 000 health workers and dealing with issues related to the interruption of transmission of LF in several endemic countries. In addition, more than 15 700 health workers were trained in the 211 training workshops that dealt with disability prevention.

The need for technical guidelines and related training materials for district





medical officers was identified as a priority for the effective implementation of elimination activities at the national level. The development of these materials is in progress and they are expected to become available in 2003.

All completed training materials were widely distributed to the endemic countries through WHO regional offices.

#### Four-part training package for community home-based prevention of disability due to lymphatic filariasis<sup>1</sup>

The training package consists of:

- *Training module* (Tutor's Guide and Learner's Guide) for train-the-trainer workshops. These guides include detailed information on the following, in addition to all the elements listed under *Flipchart booklet* and *Poster* below:
  - teaching techniques – specific examples; requisite materials, time frames and step-by-step instructions for activities such as group discussions, role-playing exercises; brainstorming sessions, case studies and demonstrations;
  - evaluation of the learners;
  - basic elements of monitoring and evaluating the workshop.
- *Flipchart booklet* used by informal carers to:
  - provide information on LF;
  - demonstrate the basics of caring for limbs affected by lymphoedema;

- give advice on how to interact with LF sufferers and their families, friends and neighbours and with the community;

- explain how and where to refer severe cases of LF.

- Poster for LF sufferers and those closely involved with them that describes:

- the basic steps in caring for limbs affected by lymphoedema;
- when to consult a primary health care unit.

In addition to the training activities, advocacy materials and media coverage are fundamental for increasing individual and community awareness. It is essential to identify the type of community activities that can be organized to support and augment programmes for the prevention of disability due to LF. Whenever possible, these activities should also be integrated with similar programmes designed for controlling other diseases, such as malaria, guinea-worm disease and dengue, that co-exist in the same area.

The package is designed for three types of training:

- Train-the-trainer (2 days + 1 day of field experience)
- Training of informal carers (1 day + 1 day of field experience)
- Training of LF sufferers and those closely involved (1 day).

Train-the-trainer workshops and workshops for training informal carers take place at the district level; the training of LF sufferers and those

<sup>1</sup> Document WHO/CDS/CPE/CEE/2003.35 Parts 1–4

closely involved takes place at the local level.

**Note:** A group of core trainers who can serve as facilitators for train-the-trainer workshops should be identified and trained

## Vector control

An Informal Consultation on defining the roles of vector control and xenomonitoring in the Global Programme to Eliminate Lymphatic Filariasis was held at WHO headquarters on 29–31 January 2002 and brought together 22 experts from several countries. The Consultation was convened to assess the potential value of vector control activities within GPELF. It also provided the opportunity to consider the possible role of monitoring filariasis prevalence in the human population by vector sampling and assays. The term "xenomonitoring" was used for this approach.

The main conclusions were that national programme managers should establish links with other vector-borne disease control programmes wherever they exist in order to maximize synergies and use of limited resources; and where MDA coverage rates or duration are limited, the added impact of effective vector control can most usefully enhance the effectiveness of the programme.

The proceedings, conclusions and recommendations of the Informal Consultation have been published;<sup>1</sup> the document is available on request from

the CDS Information Resource Centre.

## Technical Advisory Group

Established in 2000, the Technical Advisory Group (TAG) meets annually to make recommendations to WHO on all aspects of the LF elimination programme and research priorities within the framework of the Global Alliance to Eliminate Lymphatic Filariasis. At its third annual meeting on 19–22 March 2002, TAG considered four main topics:

- issues related to lymphatic filariasis vector control;
- drug safety;
- social science;
- disability prevention.

There were two notable outcomes of the meeting. First, TAG committed its full authority to dealing with technical issues and addressing research priorities. Second, TAG members resolved to offer their expertise as consultants more frequently and more actively for WHO activities organized to implement technical operations of GPELF. For this purpose, two members of TAG participated in a working group convened by WHO and the Emory LF Support Center on the technical aspects of monitoring and evaluating elimination programme operations, including verifying interruption of the transmission of LF. Another TAG member made field visits to observe MDA and safety monitoring of drug co-administrations.

The Group also addressed emerging technical issues and areas of research for GPELF and made recommendations

<sup>1</sup> Defining the roles of vector control and xenomonitoring in the Global Programme to Eliminate Lymphatic Filariasis: report of the Informal Consultation, WHO/HQ, Geneva, 29–31 January 2002. Geneva, World Health Organization, 2002 (document WHO/CDS/CPE/PVC/2002.3); and *Annals of Tropical Medicine & Parasitology, The Elimination of Lymphatic Filariasis: Public-health Challenges and the Role of Vector Control*. Guest Editors: G.B. White and M.B. Nathan, Volume 96, Supplement 2, December 2002.

in the areas of vector control, social science, drug safety, disability prevention and research.

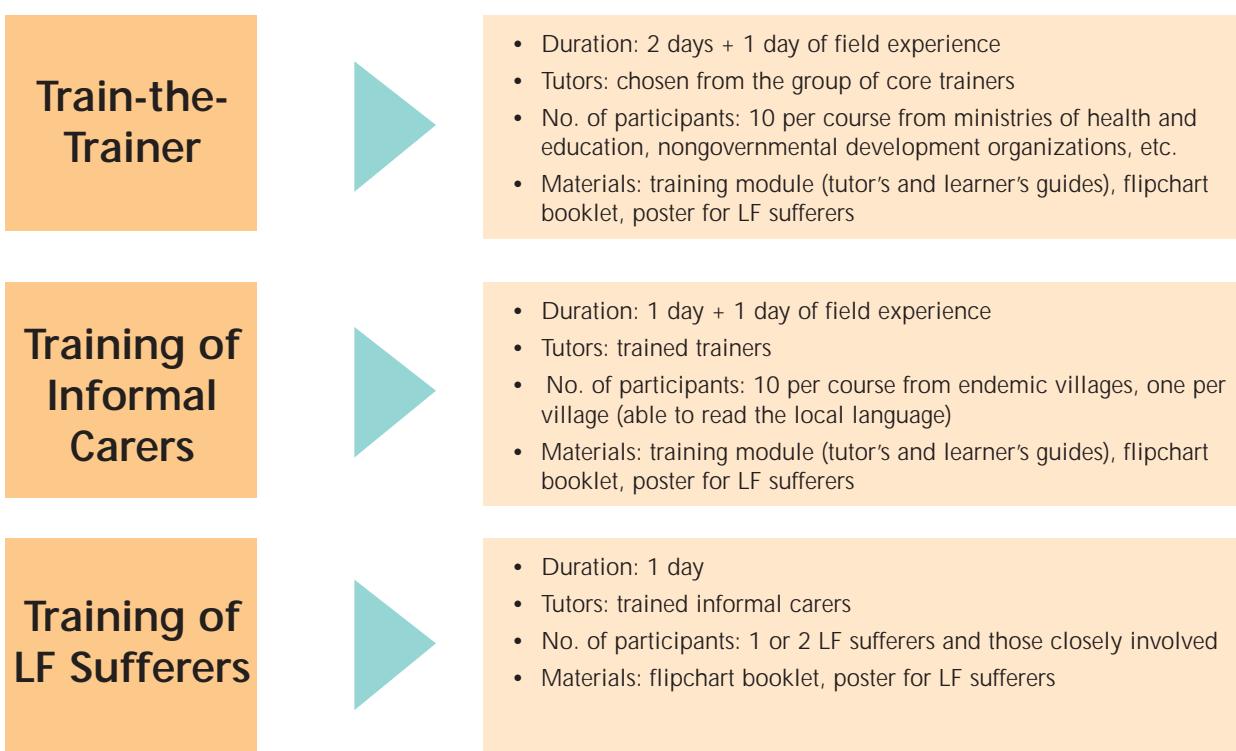
#### Vector control

Noting the need to determine the cost-effectiveness of vector control in various GPELF regions, TAG endorsed the recommendations of the report of the Informal Consultation on defining the roles of vector control and xenomonitoring. It also recommended that the Secretariat acquire greater expertise in this area before developing guidelines to be used by national programme managers.

#### Social science

TAG welcomed the addition of a social scientist to the group and stressed the importance of using social mobilization to improve MDA programmes as was demonstrated by COMBI in Zanzibar and similar undertakings in Haiti, India (Tamil Nadu) and the Philippines. COMBI can be particularly helpful in overcoming cultural barriers to MDA. Guidelines and training materials should be developed and made available for use by national programmes from the outset of elimination activities.

Figure 2.1



### Drug safety

Regarding the safety of combination drugs (co-administration), TAG noted that so far monitoring of active surveillance has not identified any unexpected adverse reactions. With improvements in the reporting system for severe adverse experiences (SAEs), TAG anticipates that ongoing passive surveillance will further prove the efficacy of the combination drugs.

### Disability prevention

TAG re-emphasized the importance of the prevention and rehabilitation of disability due to LF as important components of all national elimination programmes. Though it depends upon the circumstances in each country, those involved with managing disability should expect considerable "learning by doing" as they work with LF patients. However, TAG acknowledged that there are effective yet simple, low-cost treatments that can be implemented by non-medical personnel after relatively brief training. TAG endorsed the conceptual framework outlined by GPELF with its partners that views the management of disability and rehabilitation in the broader context of social, cultural and environmental determinants and recommended further consultation with partner experts on these issues.

### Research

TAG welcomed the establishment of a WHO post shared between the LF Secretariat and the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) and recommended emphasizing implementation research to support elimination programmes. TAG endorsed the operational research priorities proposed by the Secretariat,

which included: obstacles to MDA implementation in urban areas; investigations on remission of LF symptoms (especially lymphoedema) following MDA with combination drug therapy; implications of annual variations in MDA coverage and duration; and programme experiences and the impact of social mobilization.

### **Monitoring of safe use of drug co-administrations used in the Global Programme to Eliminate Lymphatic Filariasis**

In 2002, active safety monitoring of drug co-administration in the first round of MDA in 12 countries (13 programmes) was carried out by active surveillance and analysis of data obtained from a standard questionnaire submitted to WHO. Out of 27 912 respondents, 18 081 took DEC plus albendazole and 9 831 took ivermectin (Mectizan<sup>®</sup>) plus albendazole in the first round of MDA. Although 25.6% of the respondents reported an adverse experience after taking the drugs, only 3.5% had experiences severe enough to prevent them from continuing their daily activities, such as going to work or school. A detailed analysis by country follows on the following page in Tables 2.4–2.7.



## Chapter 2 Progress of the Global Programme to Eliminate Lymphatic Filariasis

Table 2.4

	Total resp.	Number of adverse events per respondent								
		One		Two		Three		More than three		Total adverse event
American Samoa	684	52	7.6%	44	6.4%	23	3.4%	19	2.8%	138 20.2%
Bangladesh	7 819	1 543	19.7%	339	4.3%	68	0.9%	4	0.1%	1 954 25.0%
Cook Islands	990	102	10.3%	77	7.8%	49	4.9%	41	4.1%	269 27.2%
French Polynesia	2 133	252	11.8%	113	5.3%	38	1.8%	75	3.5%	478 22.4%
Haiti	1 791	472	26.4%	339	18.9%	175	9.8%	110	6.1%	1 096 61.2%
Myanmar	998	232	23.2%	40	4.0%	18	1.8%	9	0.9%	299 30.0%
Niue	238	30	12.6%	10	4.2%	4	1.7%	8	3.4%	52 21.8%
Samoa	3 297	263	8.0%	112	3.4%	69	2.1%	43	1.3%	487 14.8%
Vanuatu	131	8	6.1%		0.0%	1	0.8%	17	13.0%	26 19.8%
<i>subtotal (DEC+albendazole)</i>	10 262*	2 954	16.3%	1 074	5.9%	445	2.5%	326	1.8%	4 799 26.5%
Burkina Faso	3 331	732	22.0%	254	7.6%	51	1.5%	41	1.2%	1 078 32.4%
Nigeria	2 245	57	2.5%	41	1.8%	15	0.7%	8	0.4%	121 5.4%
UR of Tanzania (Mafia)	1 510	205	13.6%	184	12.2%	77	5.1%	33	2.2%	499 33.0%
UR of Tanzania (Zanzibar)	2 745	386	14.1%	170	6.2%	71	2.6%	33	1.2%	660 24.0%
<i>subtotal (IVM+albendazole)</i>	9 831	1 380	14.0%	649	6.6%	214	2.2%	115	1.2%	2 358 24.0%
<b>TOTAL</b>	<b>27 093*</b>	<b>4 334</b>	<b>15.5%</b>	<b>1 723</b>	<b>6.2%</b>	<b>659</b>	<b>2.4%</b>	<b>441</b>	<b>1.6%</b>	<b>7 157 25.6%</b>

\*Excluding Bangladesh

Table 2.5

	Total resp.	Degree of severity of adverse events					
		Mild		Moderate		Severe	
American Samoa	684	59	8.6%	72	10.5%	7	1.0%
Bangladesh	7 819	NA		NA		NA	
Cook Islands	990	208	21.0%	51	5.2%	10	1.0%
French Polynesia	2 133	283	13.3%	122	5.7%	73	3.4%
Haiti	1 791	306	17.1%	457	25.5%	333	18.6%
Myanmar	998	221	22.1%	31	3.1%	47	4.7%
Niue	238	26	10.9%	21	8.8%	5	2.1%
Samoa	3 297	227	6.9%	195	5.9%	65	2.0%
Vanuatu	131	21	16.0%	2	1.5%	3	2.3%
<i>subtotal (IVM+albendazole)</i>	18 081	1 351	13.2%	951	9.3%	543	5.3%
Burkina Faso	3 331	479	14.4%	590	17.7%	9	0.3%
Nigeria	2 245	101	4.5%	20	0.9%		0.0%
UR of Tanzania (Mafia)	1 510	499	33.0%		0.0%		0.0%
UR of Tanzania (Zanzibar)	2 745	210	7.7%	308	11.2%	142	5.2%
<i>subtotal (IVM+albendazole)</i>	9 831	1 289	13.1%	918	9.3%	151	1.5%
<b>Total</b>	<b>27 912</b>	<b>2 640</b>	<b>13.1%</b>	<b>1 869</b>	<b>9.3%</b>	<b>694</b>	<b>3.5%</b>

Table 2.6

DEC plus albendazole co-administration				
	Mild	Moderate	Severe	All levels
Dizziness	7.5%	3.8%	1.7%	11.4%
Headache	4.8%	3.4%	1.7%	7.0%
Nausea	2.5%	1.2%	0.6%	5.8%
Fatigue	4.4%	2.0%	1.2%	5.3%
Fever	1.9%	1.7%	1.3%	4.0%
Joint and muscle pain	1.1%	0.9%	0.3%	2.4%
Abdominal pain	1.4%	1.2%	0.7%	2.2%
Diarrhoea	1.2%	0.6%	0.3%	1.8%
Skin swelling	0.2%	0.2%	0.0%	0.2%
Swelling of limb	0.2%	0.1%	0.0%	0.2%
Other symptoms	1.0%	0.4%	0.3%	1.0%

Note: Frequency for degree of severity not available for Bangladesh.

Table 2.7

Ivermectin plus albendazole co-administration				
	Mild	Moderate	Severe	All levels
Headache	5.0%	2.4%	0.4%	7.7%
Joint and muscle pain	2.2%	2.1%	0.3%	4.6%
Nausea	2.5%	1.6%	0.3%	4.4%
Abdominal pain	2.5%	1.6%	0.3%	4.4%
Fever	2.3%	1.0%	0.2%	3.5%
Fatigue	1.8%	1.4%	0.2%	3.5%
Diarrhoea	1.9%	1.3%	0.2%	3.5%
Dizziness	2.0%	1.1%	0.3%	3.4%
Swelling of limb	0.0%	0.4%	0.0%	0.5%
Skin swelling	0.1%	0.0%	0.0%	0.1%
Other symptoms	2.2%	0.7%	0.1%	3.0%

Professor Jens S. Schou, an external independent expert on pharmacovigilance and a member of the Technical Advisory Group, visited Burkina Faso and Ghana in November 2002 to assess the systems in place for the responsible and safe use of drug co-administrations.

In February 2003, the WHO Safety Committee, consisting of programme staff and external and internal experts on drug safety, reviewed the use of drug co-administrations during 2002.

Based on the data collected, the Committee made the following conclusions and recommendations:

- After reviewing the findings of the active surveillance following single exposure to co-administered drugs in 20 093 individuals (10 262 received DEC and albendazole, while 9 831 received ivermectin and albendazole), the Committee concluded that the frequency and intensity of the reported reactions were in line with previously documented reactions.

2. Based on this finding, the Committee decided that there was no need to continue with the active surveillance for side-effects. Furthermore, due to the nature of the reactions observed, the Committee did not expect significant changes in the pattern and frequency of these particular adverse reactions in subsequent exposure to the drugs.

3. The Committee recommended that in future the focus should be on the identification and management of idiosyncratic reactions to the drugs, and in particular to the serious adverse experiences (SAEs) following drug administration. Programme managers should be instructed to report any such reactions.

An SAE is defined as an adverse experience following treatment with a drug that results in any of the following:

- death
- life-threatening adverse drug experience
- admission to hospital or prolongation of an existing hospitalization
- persistent or significant disability/incapacity
- congenital anomaly or birth defect
- cancer
- overdose (accidental or intentional).

Important medical events not resulting in death and not life-threatening or requiring hospitalization may be considered SAEs when, based upon appropriate medical judgement, they jeopardize the patient or subject, and may require medical or surgical intervention to prevent one of the outcomes listed in the above definition; such events should also be reported.

The report of an SAE should be handled with utmost urgency and

should initially be taken care of according to local regulations before immediate forwarding to WHO by the national programme manager.

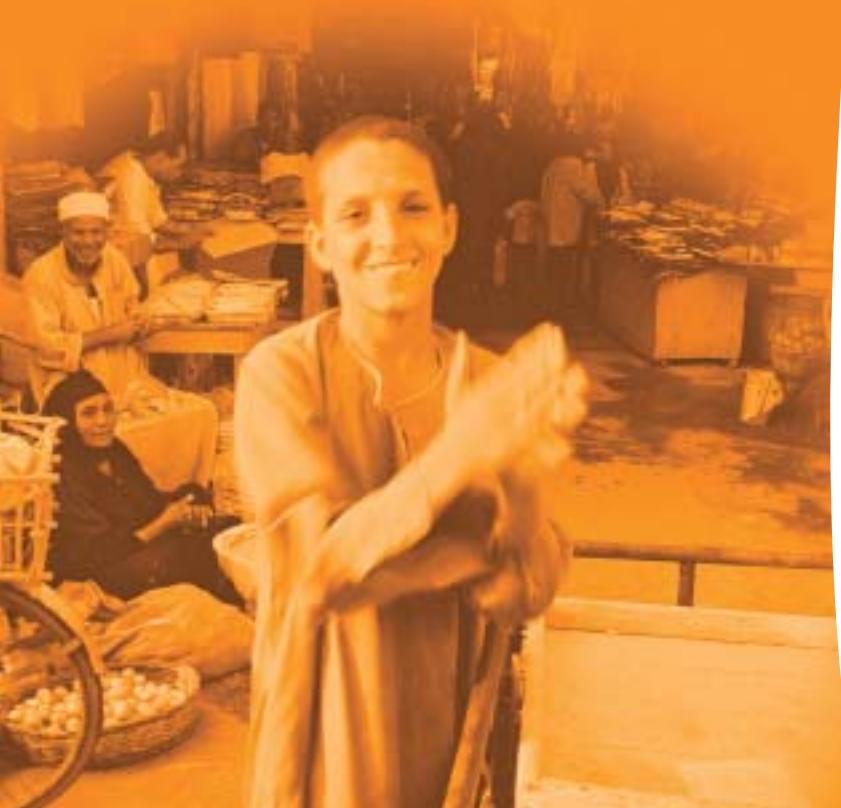
4. The Committee reinforced TAG's recommendations to:

- encourage programme managers to be vigilant and report pregnant women who are excluded from drug exposure during MDA;
- use the last menstrual period as an appropriate means to prevent drug administration to pregnant women during MDA campaigns.

5. There were only three reports of SAEs to the Global Programme and all three patients subsequently recovered. The Committee reviewed the reports and found that only two of them could be considered Stevens-Johnson reactions while the third one represented another condition that probably had no connection with drug administration. It appeared that the SAEs were handled appropriately at the national level.

6. Based on the review of the status of the national programmes and the materials presented, there was no obvious cause for concern about the continuation and further scaling-up of MDA provided that the above mentioned pharmacovigilance activities continued. However, the Committee pointed out the increased possibility of idiosyncratic adverse drug reactions with successive annual drug administrations to the same patients. This also means that the occurrence of SAEs may increase, and subsequently lead to reassessment of the safety of the drugs.

"The Global Alliance to Eliminate Lymphatic Filariasis has been forged among many organizations, each with a different mandate but all having a common goal: to tackle the wide-ranging and complex process of science and practice that will result in the elimination of lymphatic filariasis as a public health problem from the world."



## Chapter 3

# Global Alliance to Eliminate Lymphatic Filariasis

## Partnership

The Global Alliance to Eliminate Lymphatic Filariasis has been forged among many organizations, each with a different mandate but all having a common goal: to tackle the wide-ranging and complex process of science and practice that will result in the elimination of lymphatic filariasis as a public health problem from the world.

Early support in the task of eliminating lymphatic filariasis came from the ministries of health of the endemic countries and a number of international organizations, including the Arab Fund for Economic and Social Development (AFESD), the United States Centers for Disease Control and Prevention (CDC) and the United Kingdom Department for International Development (DFID).

In 1998, the coalition was given a powerful boost when GlaxoSmithKline (at the time SmithKline Beecham) announced its commitment to collaborate with WHO in the form of a unique partnership between the private sector and the public sector to support the global programme to eliminate lymphatic filariasis, by donating albendazole (one of the drugs used against lymphatic filariasis) free of charge for as long as necessary. The two organizations pledged to work together closely to undertake this massive international public health effort. Subsequently, Merck & Co., Inc. pledged to expand its ongoing Mectizan® Donation Program for onchocerciasis (river blindness) to cover treatment of lymphatic filariasis with ivermectin in all African countries where the two diseases occur together. The donations will enable countries which are in need, but which are

without the necessary resources, to acquire the drugs and to pursue their national elimination programmes.

## What is the Global Alliance?

The Global Alliance to Eliminate Lymphatic Filariasis, for which WHO serves as the secretariat, is a free, non-restrictive partnership forum for the exchange of ideas and coordination of activities, with membership open to all interested parties. Its functions includes sharing of information on progress and challenges, coordination of activities (such as fund-raising) and advocacy. To date the Global Alliance to Eliminate Lymphatic Filariasis, in addition to the ministries of health of the endemic countries, includes 39 organizations from various sectors of society, including the public and private sectors, academia, government bodies, and nongovernmental development organizations.

The Global Alliance to Eliminate Lymphatic Filariasis was officially formed during a meeting at Santiago de Compostela, Spain, in May 2000. During this first meeting discussions focused on support for effective country action, seeking support (including funding), communication and information needs, the role of nongovernmental development organizations in national programmes to eliminate lymphatic filariasis, critical elements for successful programmes and maximizing regional cooperation.

The second meeting of the Global Alliance to Eliminate Lymphatic Filariasis was held in New Delhi,

India in May 2002. The overarching theme of the meeting was empowering countries and their people to manage public health development and pursue poverty alleviation through the elimination of lymphatic filariasis. Representatives of the Global Alliance discussed national ownership of elimination programmes, poverty alleviation and sustainable development related to lymphatic filariasis elimination, and the commitment to global partnership as well as national-level partnership.

### **Update on the Global Alliance to Eliminate Lymphatic Filariasis (GAELF)**

Following the Second Meeting of the Global Alliance to Eliminate Lymphatic Filariasis (GAELF2) in New Delhi in May 2002, the partners of the Alliance faced the significant challenge of scaling up the national LF elimination programmes. This major global public health initiative required the Alliance to determine how to best use the strengths of its many diverse partners to achieve the goal of covering 350 million people at risk of LF infection with MDA by the end of 2005.

The Alliance benefited significantly from the productive discussions of the Working Group sessions in New Delhi; to maintain that momentum, an Ad-hoc Strategic Planning Workshop took place at the Liverpool School of Tropical Medicine, Liverpool, England, on 11–13 December 2002. This Workshop dealt with the strategic planning of regional and national programme issues related to the scaling up of LF elimination efforts.

Following the Strategic Planning Workshop, two task forces were established.

- The Task Force on Communications and GAELF3 is composed of representatives from the Emory LF Support Center, the non-governmental development sector, pharmaceutical donors, Regional Programme Review Groups and WHO. It is chaired by Professor David Molyneux of the Lymphatic Filariasis Support Centre, Liverpool School of Tropical Medicine, England.
- The Task Force on Advocacy and Fundraising is composed of representatives from the Emory LF Support Center, the Liverpool LF Support Centre, the Mectizan® Donation Program, Regional Programme Review Groups and WHO. It is chaired by Dr Brian Bagnall of GlaxoSmithKline, USA.

## Terms of Reference of the Chair of the Alliance

*Acting on behalf of GAELF, the Chair shall:*

1. Chair the Global Alliance and Secretariat meetings.
2. As a key spokesperson of GAELF, play a major role in the process of defining the vision and messages of GAELF with particular attention to the needs of non-expert yet influential target audiences.
3. Champion the cause of the Alliance at major public health and development forums and international meetings, including the World Health Assembly and WHO Regional Committee meetings.
4. Advocate the cause of GAELF to all categories of potential donors and supporters.
5. Advocate the need to prioritize lymphatic filariasis elimination efforts to the governments of LF-endemic countries.
6. Coordinate the activities and functions of the two Task Forces of GAELF.
7. Guide the functioning of the Secretariat on the regular business of GAELF.
8. Circulate a quarterly summary report on activities, achievements and problems to all members of GAELF.
9. Report in full to the third meeting of GAELF (GAELF3).

The Chair of GAELF will continue to perform these functions until GAELF3.

## Terms of Reference of the Task Force on Advocacy and Fundraising

*Acting on behalf of GAELF, the Task Force shall:*

1. Serve as a catalyst for advocacy and fundraising with the goal of expanding the donor base for GPELF and GAELF as well as maintaining and strengthening relationships with current donors.
2. Draw up an Action Plan for Fundraising and Advocacy for GPELF and GAELF.
3. Facilitate and implement the Action Plan by drawing upon the resources of the Liverpool LF Support Centre (for the European private sector), the LF Support Center of Emory University (for the North American private sector), and WHO (for bilaterals and multilaterals).
4. Identify and contribute to coordinated approaches to existing and new donors to solicit funds or in-kind contributions.
5. Conduct advocacy and fundraising efforts, with particular emphasis on enabling the affected regions and countries to engage directly in these efforts.
6. Develop and make available fundraising and advocacy training materials to interested GAELF partners, and fundraising packages for key audiences and systems to put such packages to effective use; submit project proposals

directly to potential donors.

7. Work with the Task Force on Communications and GAELF3 (TFC-GAELF3) to develop advocacy packages, using the messages developed by the Task Force on Advocacy and Fundraising (TFAF), and to promote consistent use of the GAELF corporate logo and subtitle.
8. Report quarterly to the GAELF Secretariat on fundraising and advocacy developments, achievements, problems and progress.
9. Report in full (including recommendations for future work) to GAELF3.

The Task Force will function until GAELF3.

#### ***Membership<sup>1</sup>***

- Chair
- One representative from:
  - Emory LF Support Center
  - Liverpool LF Support Centre
  - Mectizan® Donation Program
  - RPRGs/countries (2 to 3 members each)
  - WHO.

#### **Terms of Reference of the Task Force for Communications and GAELF3**

*Acting on behalf of GAELF, the Task Force shall:*

1. Develop a communications strategy and Action Plan, including communication packages, and develop a network of potential communicators.
2. Maintain and enhance the quality of communication and dissemination of information relevant to the aims of GAELF and of GPELF through the GAELF Newsletter, the web site ([www.filariasis.org](http://www.filariasis.org)) and any other ad hoc GAELF communication systems or materials.
3. Seek contributions for the above from all partners.
4. Enhance communications between existing partners, encourage the involvement of new partners in GAELF and in the wider health and development community, including the non-technical media.
5. Enhance the profile of lymphatic filariasis in the wider community as an eliminable, "neglected disease" through the development of generic advocacy materials including those developed by TFAF.
6. Implement the Action Plan.
7. Be responsible for organizing GAELF3 in Cairo, Egypt, in March 2004.
8. Report quarterly to the GAELF Secretariat on activities, achievements

<sup>1</sup> Others may be coopted as required.

and problems.

9. Report in full (including recommendations for future work) to GAELF3.

**This Task Force will function until GAELF3.**

#### ***Membership<sup>1</sup>***

- Chair
- One representative from:
  - Emory LF Support Center
  - the nongovernmental development organization (NGDO) sector
  - pharmaceutical donors
  - RPRGs/countries (2 to 3 members each)
  - WHO.

#### **Terms of Reference of the Secretariat**

*Acting on behalf of GAELF, the Secretariat shall:*

1. Set the objectives for GAELF3.
2. Maintain regular sharing of information and consultation with GAELF partners.
3. Review the progress of the GAELF Task Forces on a quarterly basis, provide policy guidance to the Task Forces and report progress to GAELF partners.
4. Represent the Alliance externally, including active participation in fundraising and advocacy.
5. Develop and recommend alternative GAELF governance/management structures (including supporting financial mechanisms) for discussion and ratification by GAELF3.
6. Review key issues as they arise and take appropriate actions.

**The Secretariat will function until GAELF3.**

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<sup>1</sup> Others may be coopted as required.

## Chapter 4

### Programme Implementation

"The Programme was able to scale up the mass drug administration from 3 million people in 12 countries in 2000 to 60 million in 32 countries by 2002, exceeding the targets envisaged in the 1999 strategic plan by 10 million."



## Regional Programme Review Group perspectives

### African Programme Review Group

Implementation of PELF began in the endemic countries of the African Programme Review Group (PRG) in 2000. In 2001, the PRG mandated a review of new applications to support national elimination programmes as well as evaluation of reapplications for additional support of established programmes. To accomplish this, 11 members were appointed in their individual capacities.

Two African PRG meetings were held, the first in October 2001 in Cotonou, Benin, and the second in October 2002 in Kampala, Uganda. At the initial meeting, a proposal to hold two meetings a year was adopted and seen as a necessary step for the timely processing of national applications and reapplications, particularly in view of the scaling up of the programme. Two meetings are planned for 2003, in April and in October.

The meeting in 2001 defined the direction of, and developed a plan of action and guidelines for implementing, elimination and control programmes. At the second meeting in 2002, the regional strategy, drafted in 2001, was finalized and the member countries collectively agreed that intervention measures should include MDA, disability management (including rehabilitation) and vector control (specifically the use of insecticide-treated nets).

During both PRG meetings, steps were taken to integrate national LF elimination programmes with other disease control activities in national action plans. Mapping information on LF distribution shared with the Roll Back Malaria programme facilitated the use of insecticide-treated nets for the benefit of both programmes where the diseases coexist.

Both meetings benefited from the participation of programme partners, including GlaxoSmith Kline (GSK), Health Development International (HDI), the Liverpool LF Support Centre, and the Mectizan® Donation Program.

Capacity-building efforts in mapping and database management were initiated. The WHO Regional Office for Africa conducted two mapping methodology training sessions using HealthMapper, a software programme developed by WHO. Follow-up visits were made to assist countries in disease mapping, and methodology training sessions were organized in 14 countries: Cameroon, Central African Republic, Gambia, Guinea, Kenya, Liberia, Malawi, Mali, Niger, Senegal, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. Particular attention was paid to determining the overlap of LF with onchocerciasis in the co-endemic countries of Benin, Burkina Faso, Ghana, Mali and Togo.

The Regional Office conducted one database management training session and made follow-up visits to set up databases in Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Guinea, Mali, Niger, Senegal, Togo and the United Republic of Tanzania.

Countries received financial support for disease mapping and preparatory activities for MDA. Nearly all of the countries with current MDA programmes received assistance from the Regional Office and all but one country that received training in mapping methodology also received funding for mapping efforts.

National programme managers from 13 countries that had either implemented MDA or made preparations to do so in the near future met for the first time in October 2002, which provided the participants with the opportunity to share experiences and information on various aspects of programme implementation. The countries that participated were Benin, Burkina Faso, Comoros, Ghana, Kenya, Madagascar, Mali, Malawi, Niger, Nigeria, Togo, Uganda and United Republic of Tanzania.

At present, 17 of the 39 endemic countries have started LF elimination activities. In 2002, nearly 9.5 million people were covered by MDA (Figure 4.1).

### The PRG worked towards three goals:

- To keep on schedule in order to complete disease mapping by 2005.
- To scale up MDA, both within the nine countries where it has already begun and in new countries recruited into the programme.

- To broaden the capacity of the Regional Office by decentralizing technical support to countries by:
  - establishing sub-regional offices in western, central and southern Africa;
  - by adding a staff member responsible for administrative and logistic issues to improve responsiveness to country needs and requests; and
  - by recruiting staff specialized in disability prevention to strengthen these activities.

## Country activities

### Benin

Mapping of LF was completed in Benin in 2000 using ICT cards. Results of the survey indicated that 48 of 77 IUs (sous-préfectorates) with an at-risk population of 3.43 million were endemic (Map 4.1). The prevalence of LF as determined by ICT cards was 2.03%; that of

hydrocele was 4.4% and of lymphoedema 0.3%. Previously, there had been only two surveys, in 1983 and 1995, in Comé, which found microfilarial prevalence of 24.6% and 46.3% respectively.

Benin began the first round of MDA in 2002 in Aplahoué, Djakotomey and Klonékanmey. An at-risk population of 224 971 was covered with ivermectin + albendazole; the reported coverage was 77.8% (range 76.4–79.7%) of the total population of the three implementation units (Map 4.1). The geographical coverage showed that 6.3% of the IUs and 6.4% of the total population of all endemic IUs were covered. The microfilaremia prevalence in the sentinel site of Azondogahoué, chosen for this IU, was 0.4% in a sample of 519 people.

A door-to-door strategy was adopted for drug distribution, and WHO provided technical and financial support.

Map 4.1 Benin

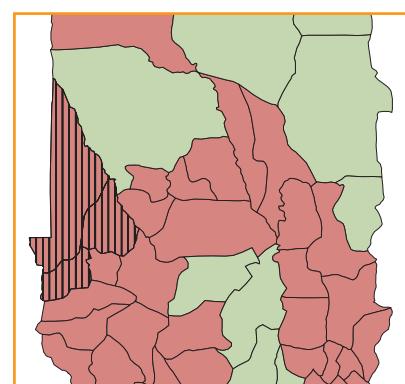
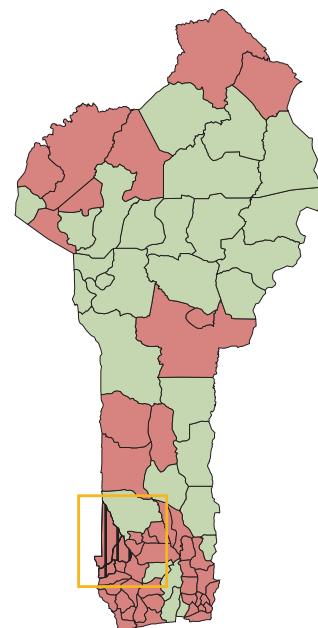
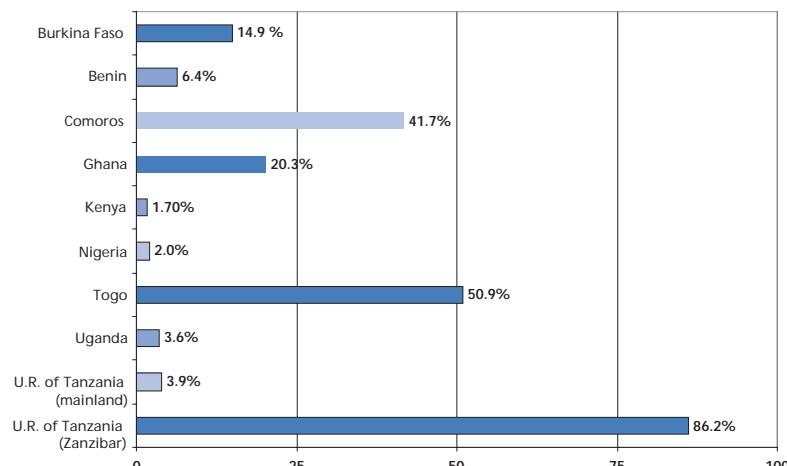


Figure 4.1 African PRG - Geographical coverage\* by country in 2002



MDA coverage  
 Below 65%  
 65 - 80%  
 Above 80%

Endemicity status  
 Non-endemic  
 Endemic  
 Uncertain

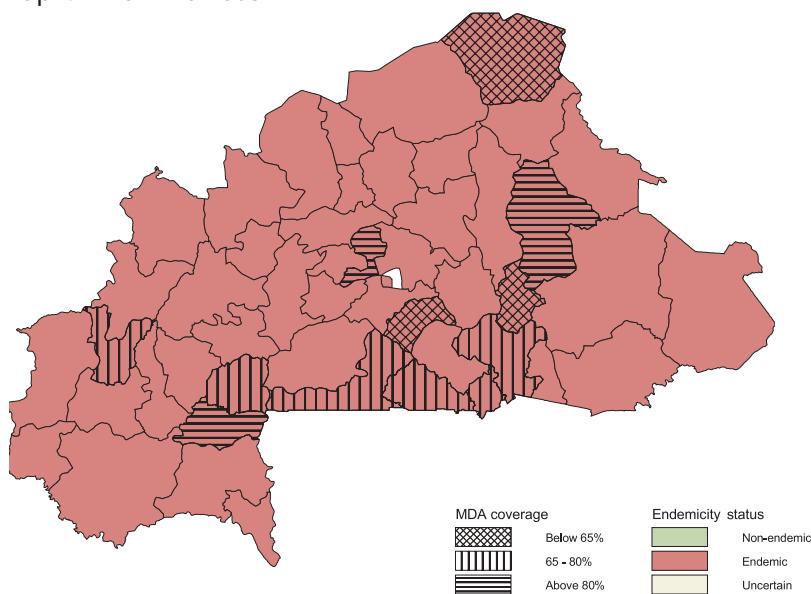
### Burkina Faso

Mapping of LF in Burkina Faso was completed in 2000. Survey results indicated that all 53 IUs (health districts) with an at-risk population of approximately 12 million were endemic. The first round of MDA under PELF began in 2001 in four IUs in the southern part of the country. In 2002, ivermectin and albendazole were co-administered in 14 IUs and an at-risk population of 1.78 million was covered with a reported coverage of 68.4% (range 53–81.8%) (Map 4.2). The low coverage rate was due to the small number of MDA reports received after the meningitis outbreak in 2002. Geographical coverage was 26.4% of the IUs and 14.9% of the at-risk population in all endemic IUs.

As determined using ICT cards, LF prevalence for new IUs that started MDA in 2002 was 52.1%, and the microfilaraemia prevalence in the six sentinel sites ranged from 8.7 to 6.5%.

The drug distribution strategy was a mixed one, based mainly on door-to-door distribution with some distribution booths as well. WHO provided technical and financial support from the Bill and Melinda Gates grant; Helen Keller International, part of the Onchocerciasis Project, provided support for social mobilization, training, and supervision; Handicap International actively participated in developing basic principles for the prevention of LF-related disabilities; and the Foundation for Community Development and the Liverpool LF Support Centre assisted with operational research.

Map 4.2 Burkina Faso



### The Islamic Federal Republic of Comoros

LF mapping was completed in 2000 and showed that the three IUs (islands) of Moheli, Grand Comoros and Anjouan, with an at-risk population of 600 000, were endemic. The first case of LF was described in 1902 and some clinical data on the prevalence of the disease have been available since 1910. A survey in 1996 showed a microfilaraemia prevalence of 38–48.7%, while mapping with ICT cards in 2001 showed a prevalence of 36–48%.

The first round of MDA under PELF began in 2001. In 2002, only two of three IUs were covered by MDA – Grand Comoros and Anjouan. For logistic reasons, Moheli was not covered. An at-risk population of 245 971 was covered (reported coverage 59.3%, range 51–65%) (Map 4.3). Geographical coverage

was 66.7% of IUs and 41.7% of the total population of all endemic IUs.

The drug distribution strategy was door-to-door, schools, and points of distribution in workplaces. WHO provided technical and financial support.

### Ghana

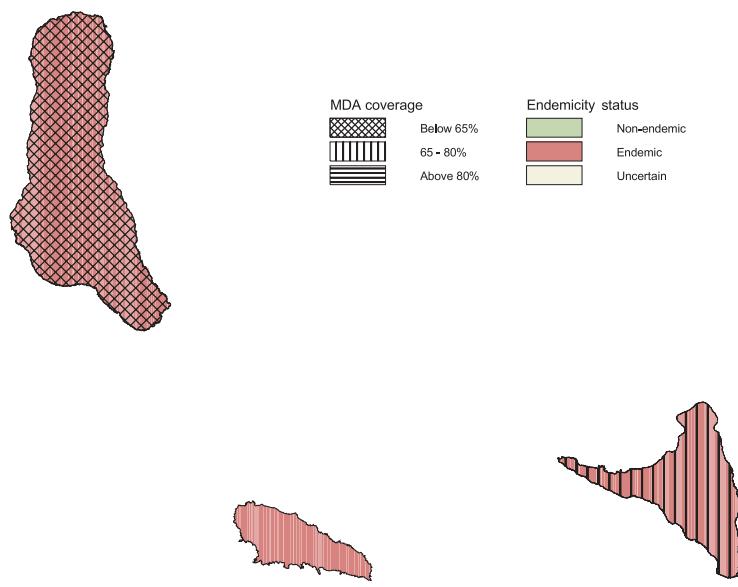
Mapping of LF in Ghana was completed in 2001. Of the 110 IUs (districts) in the country, 41 were considered endemic for LF with an at-risk population of 6.02 million, with an estimated microfilaraemia prevalence of 9% (range 2.1–20%). At the same time, the prevalence of hydrocele and lymphoedema was estimated at 12.4% and 8.4% respectively. In 2002, MDA covered an at-risk population of 1.22 million in 14 IUs; reported coverage was estimated as 74.1% (range 62.9–83.3%) (Map 4.4).

Technical problems in the field prevented the measurement of microfilarial prevalence in the sentinel sites in 2002. The prevalence of hydrocele and lymphoedema evaluated in a sample of 100 people from sentinel sites was in the range 0–2.7% and 0–2.5% respectively. Geographical coverage was 34.1% of the IUs, and 20.3% of the total population in all endemic IUs were covered. Some of the problems precluding maximum MDA coverage were absenteeism, refusal to ingest the drugs, and requests by volunteers for incentives.

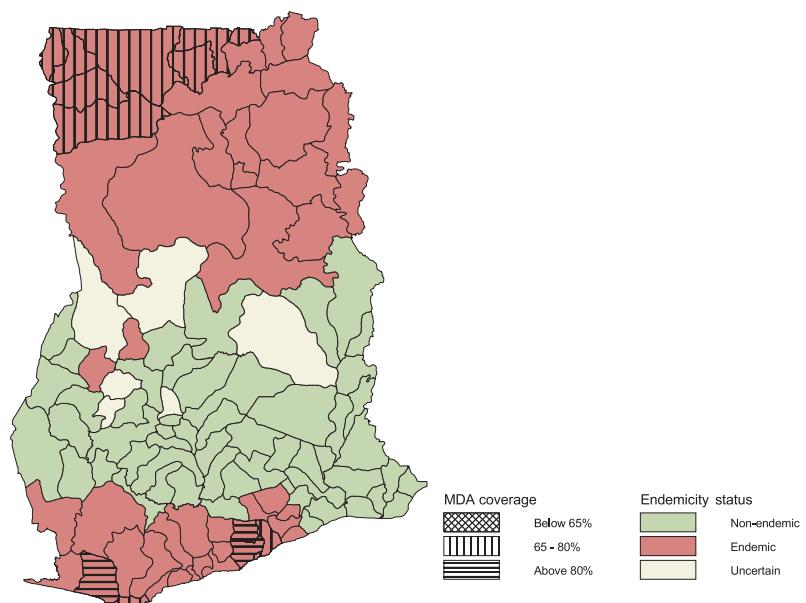
The drug distribution strategy was door-to-door. The Catholic Medical Missions Board in the Upper-West Region assisted with all programme activities; Health Development

International supported the national programme; and the Liverpool LF Support Centre helped with training and logistics at the national level.

Map 4.3 The Islamic Federal Republic of Comoros



Map 4.4 Ghana



## Kenya

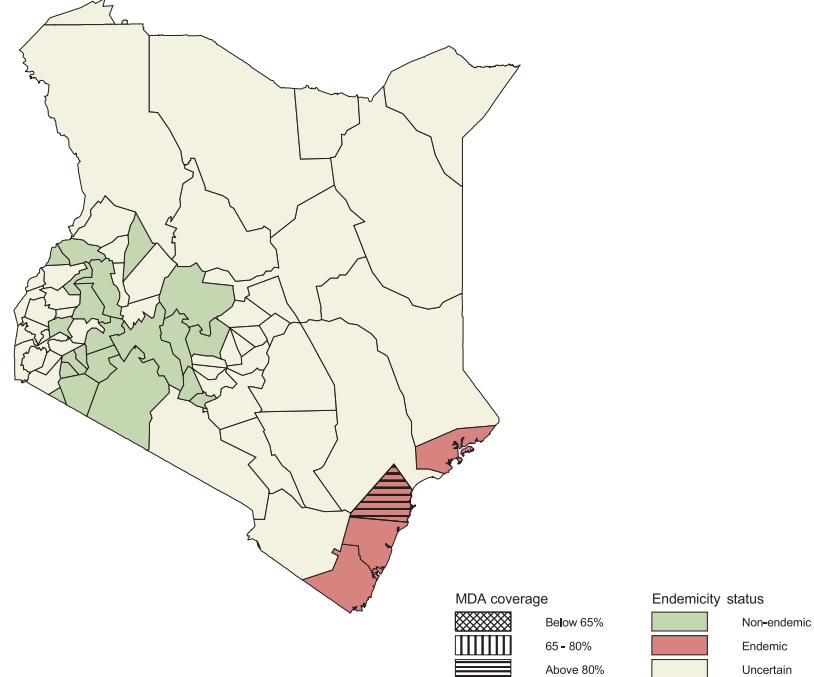
Mapping of LF continued in Kenya in 2002. Six IUs (districts) from the coastal region – Lamu, Kilifi, Kwale, Malindi, Mombasa, and Tana River – are known to have long been endemic for LF. Prevalence of microfilaraemia between 1984 and 2000 was in the range 9.2–27.8% and the average rate of hydrocele ranged from 10% in Lamu to 40% in Kilifi.

In the sentinel sites of Jaribuni and Mitserini, microfilarial prevalence evaluated before the first year of MDA was 14.4% and 1.7% respectively. Kenya started the first round of MDA

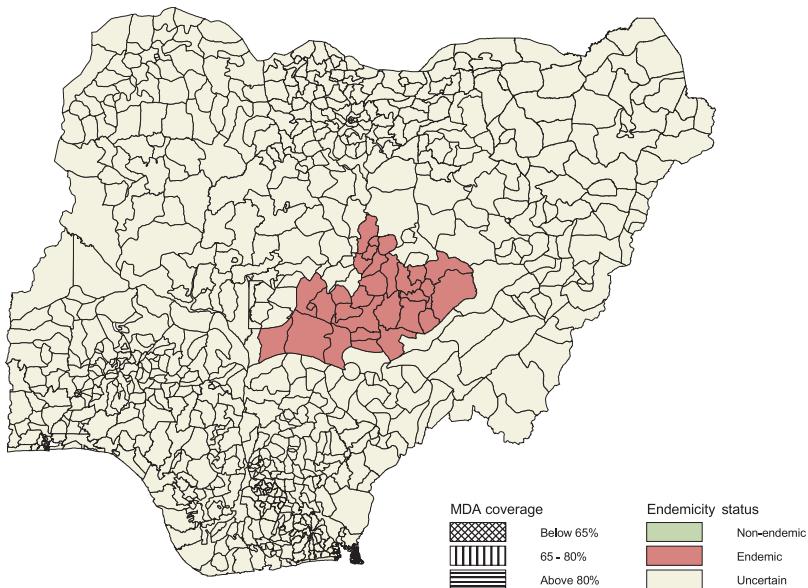
in 2002 in the IU of Kilifi. An at-risk population of 480 900 was covered with DEC + albendazole; reported coverage was 81% (range 68–87%) of the total population (Map 4.5).

The drug distribution strategy was door-to-door. WHO provided technical and financial support.

Map 4.5 Kenya



Map 4.6 Nigeria



## Nigeria

Mapping of LF in Nigeria was carried out in only two states – Plateau with 17 IUs (Local Government Areas or LGAs) and Nasarawa with 13 IUs – with an estimated at-risk population of 4.3 million. The pre-MDA prevalence estimated by circulating filarial antigen (CFA) ranged from 5 to 64%. Previously 960 of 3440 villages were treated only for onchocerciasis.

The first round of MDA under PELF began in 2000 with ivermectin + albendazole and covered four IUs. The second round in 2001 covered 13 IUs. In 2002, an at-risk population of 2.17 million was covered in 26 IUs in Plateau and Nasarawa. There was no report of the coverage in comparison with the total population, but an estimate of the eligible population was more than 89% (Map 4.6).

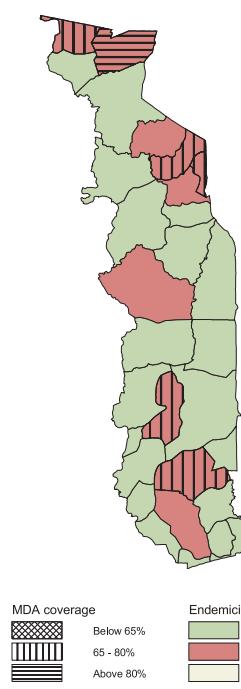
The Carter Center's Global 2000 River Blindness Program collaborated with the Federal Ministry of Health in using the river blindness model of drug distribution to eliminate LF and control schistosomiasis.

## Togo

In 1999, Togo developed a Plan of Action for PELF. Mapping of LF was completed in 2000, where 7 of 30 IUs (préfectures) with an at-risk population estimated at 1.12 million were considered endemic for LF. The microfilarial prevalence in endemic areas was 2.6%.

In 2000, the first round of MDA covered one IU; in 2001 three were covered. In 2002 six IUs were covered – Amou, Binah, Doufelgou, Halo, Kpendjal, and Tone. An at-risk population of 556 974 was covered with ivermectin + albendazole; reported coverage was at 78.5% (Map 4.7). Geographical coverage was

Map 4.7 Togo



85.7% of the IUs and 50.9% of the total population of all endemic IUs.

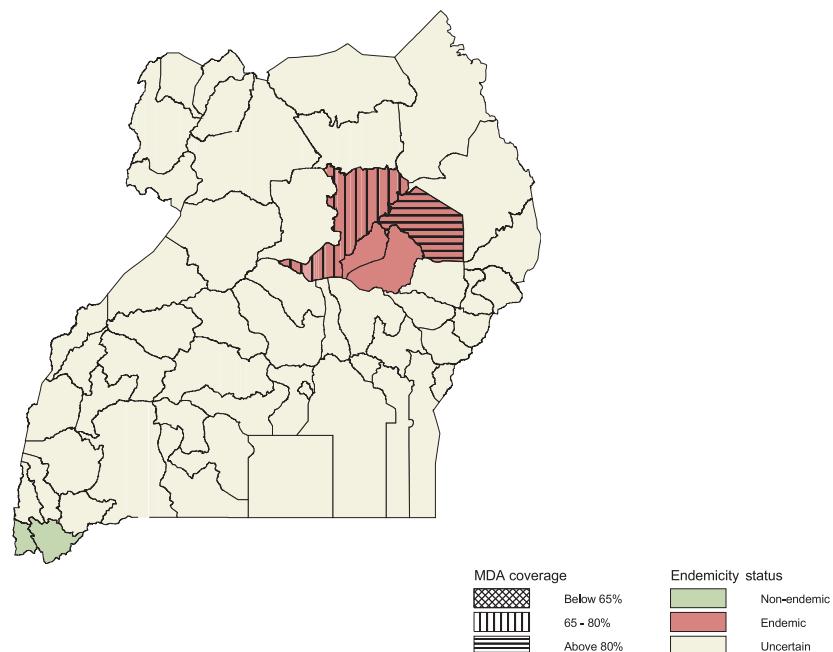
The drug distribution strategy was house-to-house. WHO, the Department for International Development (DFID), and Health and Development International provided technical and financial support.

### **Uganda**

Mapping of LF in Uganda started in 2002 and was expected to be completed by April 2003. Districts were chosen as the IUs. ICT cards showed a microfilarial prevalence in some communities of 20–40%, with a 28% prevalence of hydrocele.

The first round of MDA under PELF began in 2002 in two districts, Katakwi and Lira, and covered an at-risk population of 733 375 with ivermectin + albendazole; the reported coverage was 75.9% (range 60.4–77.9%) (Map 4.8). Two sentinel sites, Asamuk and Barr, were identified, with a microfilarial prevalence of 5.8% and 9.5% respectively. Prevalence of lymphoedema and hydrocele was estimated at 2.0% and 3.6% respectively. WHO provided financial and technical support, and the Liverpool LF Support Centre financed advocacy, training, and social mobilization efforts.

Map 4.8 Uganda



## United Republic of Tanzania

**Mainland.** Mapping of LF continued in 2002 with 50 of 110 IUs (districts) found endemic for LF. Baseline data showed that microfilarial prevalence was in the range 38.2–63.9%. In 2000, the first round of MDA under PELF covered one IU with ivermectin + albendazole. Coverage in 2001 was 6 IUs and in 2002, 11 IUs with an at-risk population of 1.26 million; reported coverage was 62.4%. Two sentinel sites, Newala and Tandahimba, were established in Mtwara and showed a microfilarial prevalence of 14% and 4.5% respectively (Map 4.9).

**Zanzibar.** Mapping of LF has been done since 1989. Microfilaraemia prevalence in Unguja and Pemba Island was 8% and 12% respectively, with an estimated at-risk population of 941 546. In 2001, the first round of

MDA under PELF covered all 12 districts on both islands with ivermectin + albendazole. The second round in 2002 resulted in good coverage as confirmed by a cluster sample survey from an at-risk population of 22 070. The second round in 2002 covered an at-risk population of 818 155 with a reported coverage of 83.1% (range: 60–98%) (Map 4.9, detail in orange box).

The two sentinel sites of Kizimkazi and Kwahani reported a microfilaraemia prevalence of 4% and 1.4% respectively and the sentinel site of Kizimkazi had a lymphoedema prevalence of 15.6%. The geographical coverage showed that 100% of the IUs and 86.2% of the total population of all endemic IUs were covered.

Map 4.9 United Republic of Tanzania

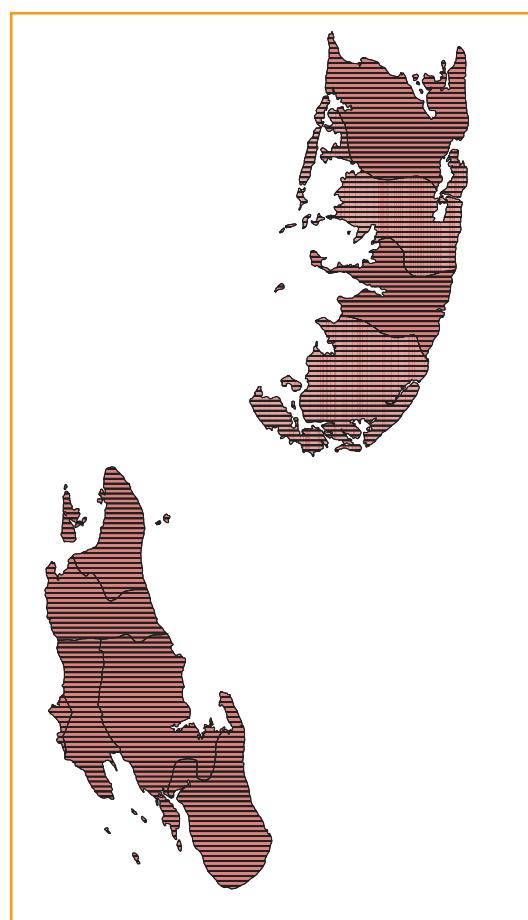
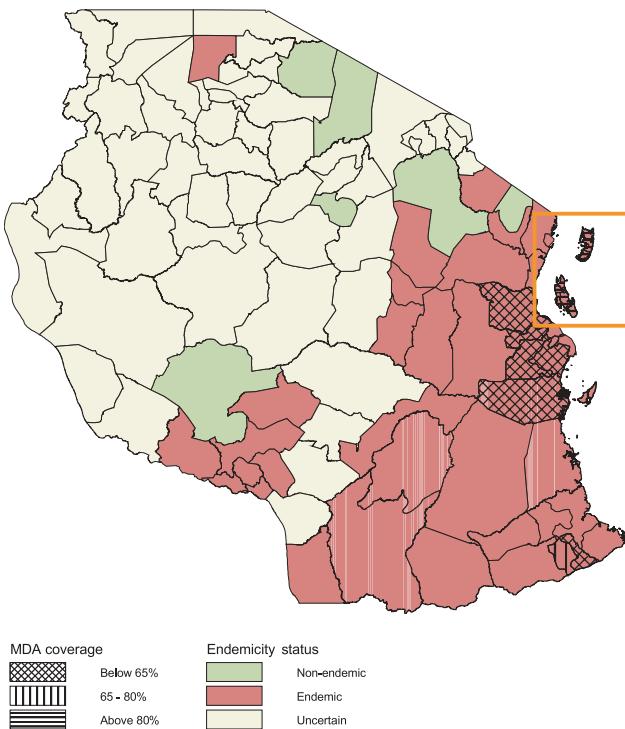
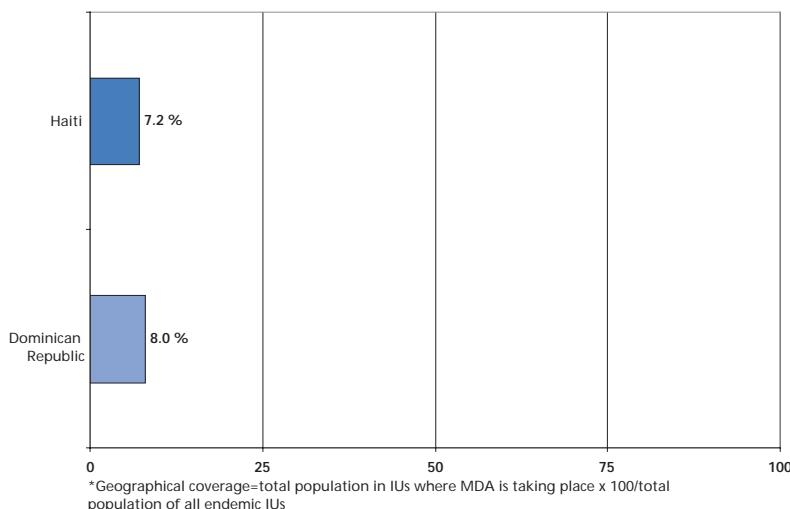


Figure 4.2 American PRG - Geographical coverage\* by country in 2002



## American Programme Review Group

Identifying the at-risk population was essential to the success of the American PRG programme to eliminate LF. Extensive mapping activities and use of ICT cards facilitated this effort by enabling the endemic countries to reassess the epidemiological situation of LF.

The countries of the American PRG accounted for only 2.5% of the 120 million estimated number of LF cases worldwide. Previous estimates indicated a decline in the at-risk populations of Brazil, Costa Rica, Dominican Republic, Suriname, and Trinidad and Tobago, but no change in the at-risk population of Guyana.

However, subsequent data from mapping activities and updated surveys conducted by national programmes provided more realistic estimates. Increases in both the total at-risk population and the estimated number of infected individuals in the PRG are significant, and further changes in the at-risk population figures are expected as ICT mapping activities continue in Brazil. The at-risk population in the PRG was

estimated at 8 870 722 and the number of infected individuals at 3 000 000. This was primarily because the at-risk population in Haiti, which had the highest LF prevalence in the PRG, was 6 million – a sixfold increase since the last assessment. Guyana, Haiti, Suriname, and Trinidad and Tobago completed assessment activities in 2002, with the Dominican Republic and Costa Rica expected to complete mapping in 2003.

Current evidence strongly suggested that Costa Rica, Suriname, and Trinidad and Tobago had reached the elimination goal. Belém, one of three foci in Brazil, may also have reached the goal, and Maceió, another of the three, appeared to be approaching it as well. Guyana planned to launch MDA using the DEC-fortified salt regimen, which means the country could reach the elimination goal within the next two years. The programme should provide a practical model for other countries.

The American PRG could be the first to reach the elimination goal, in part because of success in integrating control programmes with other ongoing public health initiatives and

implementing the programmes in a cost-effective, socially responsible manner through these links. There was significant progress in reassessing the status of infection and disease in the seven endemic countries, and this valuable information allowed the PRG to redefine the at-risk population, the treatment targets and the IUs.

All countries in the PRG, with the exception of Costa Rica, began assessing disability, and completion of the surveys is expected in the next few years. With a new government and the renewed commitment of the recently assigned Minister of Health in Costa Rica, it is expected that a disability assessment will soon be conducted in that country as well.

The estimated results of a disability prevalence assessment in Trinidad and Tobago ranged from 19% to 51%; because of the wide disparity the assessment will continue through January 2003 to re-examine the results. The disability assessment in a former LF clinic in Suriname identified 23 cases, mostly patients over 60 years of age, 78% of whom presented symptoms of lymphoedema.

Brazil completed a disability assessment in Maceió although the local programme manager planned to repeat the assessment because of sampling problems. Plans were made to conduct disability assessments in 2003 in Recife, the most important implementation unit in the country. Overall, there remained much for the PRG to do in assessing the status of disability and developing a proper response to this problem.

National programmes were advised to hold regular National Task Force (NTF) meetings, at least four times per year, and NTFs were encouraged to increase their involvement in programmatic efforts, especially in Brazil, the Dominican Republic, Guyana and Haiti. Task Force meetings took place in each country except Costa Rica.

Among the biggest challenges were the need to implement MDA as soon as possible and to scale up efforts in those countries where MDA had already begun. Overall, MDA did not progress as expected; this was especially true in Haiti, which faced significant obstacles, including logistic difficulties and a lack of financial and human resources, although much was done to address these problems. Brazil committed to launching a pilot MDA campaign in Recife with the expectation that it would spur a broader initiative to scale up the programme. However, IUs (called "micro areas" in Recife) needed to be redefined before progressing. Social mobilization efforts were well established in Brazil and the Dominican Republic and were initiated in Guyana and Haiti.

Costa Rica was unable to reassess its elimination programme, which it has not done since 1978. Although completion of mapping was considered to be one of the first tasks,

the use of ICT cards has not yet been implemented.

Trinidad and Tobago completed an LF assessment and found no evidence of infection. Surveys conducted with ICT cards included the historical focus and surrounding areas. Several different parts of both islands were surveyed and all results were negative.

Suriname completed a prevalence survey in Nickerie, a town near the border with Guyana, which presented a risk for continued transmission of LF into areas of Suriname where elimination may have been achieved. Suriname will maintain surveillance in Nickerie.

The national programmes faced obstacles, including the lack of both human and financial resources and, at times, political commitment, and were confronted with the challenge of conducting intensive advocacy among agencies capable of taking action, including ministries of health, nongovernmental organizations (NGOs), bilateral agencies and WHO. Among the most important assets sustaining the regional LF elimination efforts were the partnerships and alliances that have evolved among the countries, the international community, the private sector and NGOs. In order to retain the interest of partners and sponsors, the regional initiative needed to quickly consolidate a rational disability prevention and rehabilitation programme.

The geographical coverage of the countries of the American PRG implemented in 2002 can be seen in Figure 4.2.

## Country activities

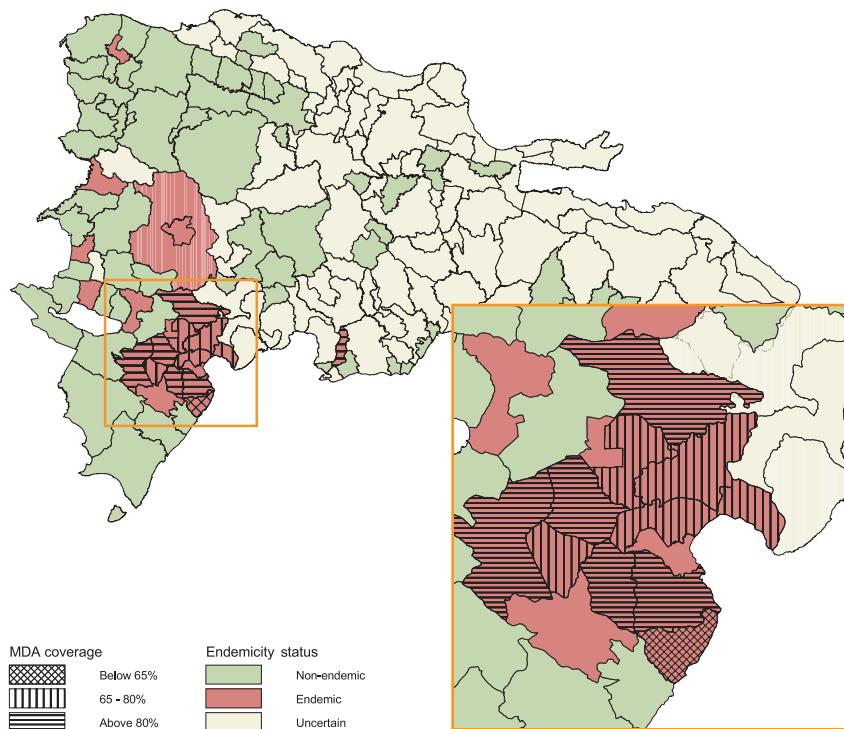
### Dominican Republic

Mapping of LF in the Dominican Republic started in 2001 and continued throughout 2002, with 9 of 13 IUs (municipalities) considered endemic for LF. The Ministry of Health estimated that 30% of the total population was at risk for LF. The first round of MDA under PELF began in 2002 in the south-west region and covered an at-risk population of 117 791 in 13 IUs with DEC + albendazole. Baseline estimates of

prevalence using ICT cards ranged from 4% to 13%. The reported coverage was 83.1% (range 79.7–92.2%) (Map X). Three sentinel sites, Bo Pueblo Nuevo, Bo La Sombra, and Batey 7, were identified, with a microfilarial prevalence from 3.5 to 13.8 % (Map 4.10).

The drug distribution strategy was door-to-door. Financial and technical support was provided by WHO and the Bill and Melinda Gates Foundation through Emory University and CDC, Atlanta. A partnership was developed with the local Jaime Mota Hospital for the treatment of disability due to LF.

Map 4.10 Dominican Republic



## Guyana

Mapping of LF in Guyana was completed in July 2001; all 10 IUs (regions) were considered endemic, with an at-risk population of 0.65 million. The prevalence estimated by ICT cards was 9%.

Guyana chose DEC-fortified salt as the MDA strategy throughout the country but, because of operational problems, postponed implementation until 2003. An intensive social mobilization programme was initiated to prepare for the application of DEC-fortified salt. A KAP study completed in June 2002 showed that 82% of the population knew about filariasis and understood it was transmitted by mosquitoes, and more than 40% thought that filariasis was a problem in their community.

WHO and the Bill and Melinda Gates Foundation through Emory University and CDC, Atlanta, UNICEF and Liverpool LF Support Centre provided financial and technical support.

## Haiti

Mapping of LF in Haiti was completed in 2002, and 73 of 133 IUs (communes) with an at-risk population of 6 million were considered endemic. Prevalence evaluated by ICT cards was 3.9% (range 1.3–13.4%) (Map 4.11).

The first round of MDA under PELF started in 2001 and covered one IU with DEC + albendazole. For the second round in 2002, 9 IUs and an at-risk population of 434 896 were covered. Reported coverage was 85.1% (range 70.6–89.2%). The IUs of Arcahaie, Tabarre and Gressier, with an at-risk population of 350 000, were targeted for the DEC-fortified salt strategy.

WHO, the University of Notre Dame, through the Bill and Melinda Gates Foundation, and the Centers for Disease Control and Prevention provided technical and financial support.

Map 4.11 Haiti

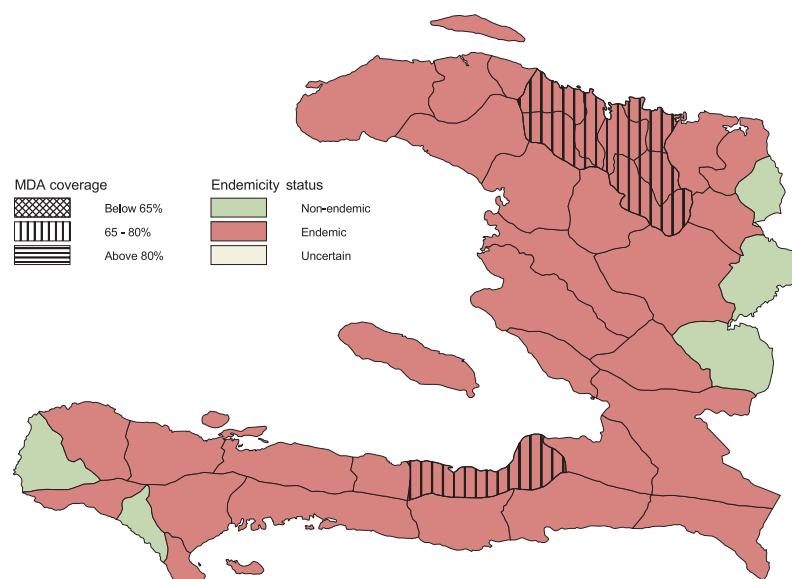
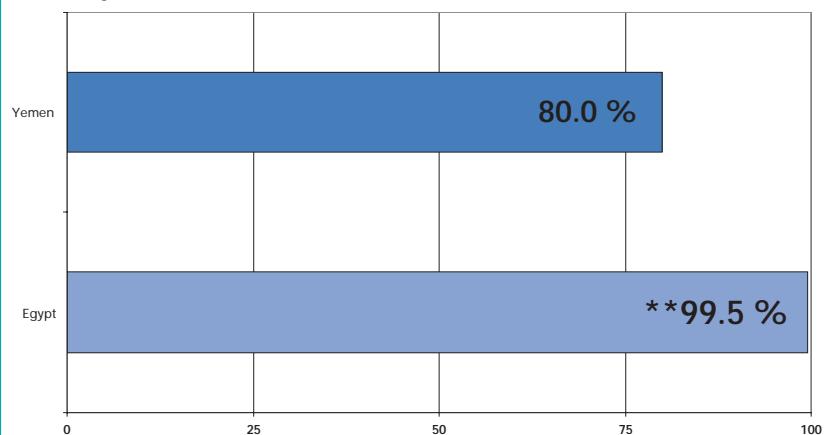


Figure 4.3 Eastern Mediterranean PRG - Geographical coverage\* by country in 2002



\*Geographical coverage=total population in IUs where MDA is taking place x 100/total population of all endemic IUs  
\*\*Coverage of the eligible population

### Eastern Mediterranean Programme Review Group

The WHO Regional Office for the Eastern Mediterranean organized the second meeting of the Eastern Mediterranean PRG in November 2002, with participants and national managers from Egypt, Oman, Pakistan, Saudi Arabia, Sudan and Yemen. The participants reviewed and evaluated progress in the surveillance and elimination of LF in member countries, approved annual reports and reapplication forms from Egypt and Yemen, identified operational problems and discussed detailed strategic planning for the scaling up of mapping activities in Sudan and other countries.

Before the third round of MDA in Egypt, training courses were organized for members of the drug distribution teams using the WHO training module on lymphatic filariasis for drug distributors. A total of 900 doctors and nurses were trained. A video film, television broadcast and new poster were produced, explaining the importance of MDA and compliance with it. Social mobilization activities at national and regional levels were organized with assistance and support from the

Egyptian office of GlaxoSmithKline. The process of planning, organizing and implementing Egypt's national LF elimination programme was recorded for publication.

The health authorities in Oman used a questionnaire to conduct a rapid assessment of the prevalence of LF in 59 IUs. The incidence of lymphoedema and hydrocele was reported by 3% of those interviewed. A WHO consultant visited Oman in September 2002 to assist with preparations to conduct surveys with ICT cards in suspected LF-endemic areas during 2003.

In Saudi Arabia, a total of 51 clinical cases of lymphoedema or hydrocele were identified in the areas of Asir, Jizan and Mecca. In March 2002, a WHO consultant assisted with the training of 34 laboratory technicians in the use of ICT cards. Plans for conducting surveys of schoolchildren in suspected LF areas were made; however, a lack of ICT cards meant that the surveys were delayed until 2003.

A National Task Force on Lymphatic Filariasis Elimination was formed in Sudan. A limited number of surveys using ICT cards showed a prevalence of antigenaemia of up to 50% in some

areas. Approximately 3% of the population in surveyed communities presented with chronic clinical manifestations of lymphoedema and hydrocele. The epidemiological situation will be studied more precisely after implementation of systematic ICT card surveys planned for 2003.

The mapping workshops and surveillance activities in Oman, Saudi Arabia, Sudan and Yemen were postponed until 2003 because of a lack of reliable ICT cards suitable for use in field conditions.

Challenges remained for the national programmes in scaling up of mapping and LF elimination activities. These included difficulties in organizing surveillance and elimination activities over scattered areas; a lack of awareness about LF among the population; primary health care staff with inadequate knowledge to diagnose, treat and prevent LF; the danger of introducing LF from other endemic countries; and the highly active migration pattern of the population in endemic areas.

The geographical coverage of the countries of the Eastern Mediterranean PRG can be seen in Figure 4.3.

## Country activities

### Egypt

Egypt has an estimated 179 endemic villages in 8 governorates, with an estimated at-risk population of 2.4 million. Baseline prevalence of microfilaraemia ranged from 0.2% to 4.2 % in the sentinel sites.

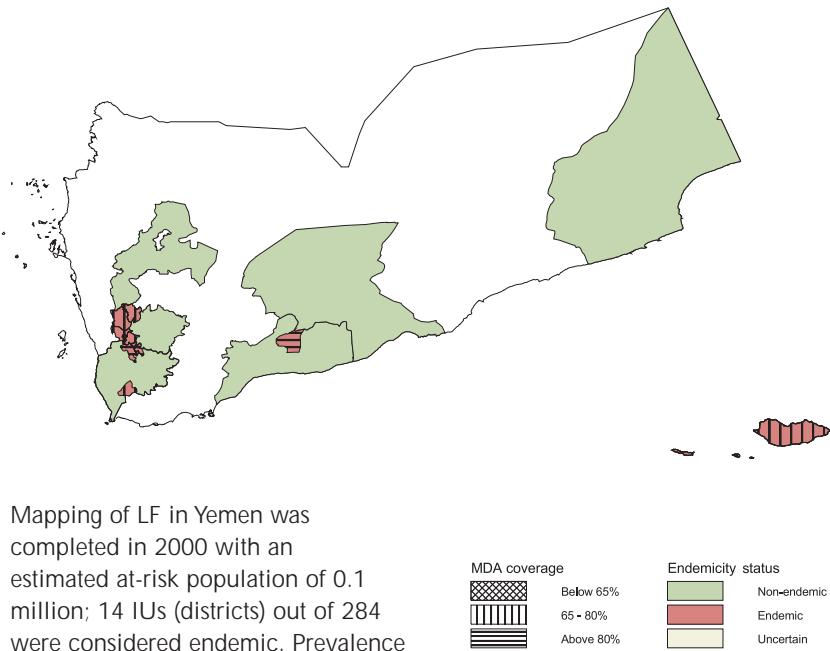
The first round of MDA under PELF began in 2000 and covered 90% of the IUs. The second round in 2001 covered 99.4% of the IUs, and 100% of the IUs, with an at-risk population of 2.4 million, were covered in 2002. Reported coverage of the eligible, though not the total, population was 95% (Map 4.12).

Longitudinal assessment was undertaken before the third round in 7 sentinel sites; 6 of them showed reduction in levels of microfilaraemia to below 1% (range 0–0.6%), while the Gezira Khadra site showed a microfilaraemia prevalence of 1.03%, which was evaluated in a sample of 631 people. Geographical coverage was 99.5% of the IUs and 99% of the eligible population of all endemic IUs.

Drug distribution strategy was door-to-door. WHO and the Arab Fund for Economic and Social Development provided financial and technical support.

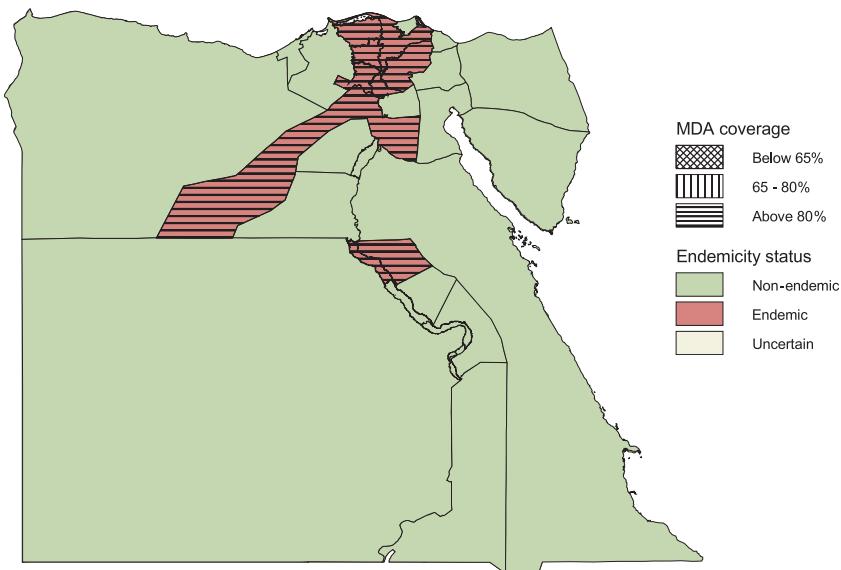
### Yemen

Map 4.13 Yemen



Mapping of LF in Yemen was completed in 2000 with an estimated at-risk population of 0.1 million; 14 IUs (districts) out of 284 were considered endemic. Prevalence

### Map 4.12 Egypt



evaluated by ICT cards in endemic areas was in the range 14–40%. The first round of MDA under PELF began at the end 2001 and covered 2 IUs. The second round, in 2002, covered an at-risk population of 79 119 in 8 IUs with ivermectin + albendazole; reported coverage was 72.3% (range 66–86%) (Map 4.13). Geographical coverage was 57% of IUs and 80% of the total population of all endemic IUs. Certain difficulties, such as the inaccessibility of some villages, absenteeism, and logistic problems prevented maximum coverage being achieved.

The drug distribution strategy was door-to-door. WHO and the Arab Fund for Economic and Social Development provided financial and technical support.

### **Indian Subcontinent Programme Review Group**

Almost half of the global at-risk population lives in the five LF-endemic countries of this PRG – Bangladesh, India, Maldives, Nepal and Sri Lanka. India alone accounts for 89% of the total at-risk population in the PRG.

The first PRG meeting, was held on 14–15 January 2002 in New Delhi, India. The second meeting was held on 27–29 July 2002 in Bali, Indonesia, and was back-to-back with the Mekong-Plus PRG meeting, giving the members of both groups an opportunity to meet and exchange views on geographically specific issues. The second meeting of GAELF (GAELF2) was hosted by India in New Delhi in May 2002.

The National Task Force (NTF) for the elimination of LF operated in every

country of the PRG. WHO assisted with Task Force meetings and attempts were made to increase the active involvement of the NTF in the national programmes. The PRG recommended that NTF become involved in fundraising at the national level and that it review annual reports, applications and reapplications before they are submitted to the PRG.

The Bi-Regional Meeting of LF Programme Managers of WHO's South-East Asia Region and Western Pacific Region was held on 22–25 July 2002 in Bali, Indonesia. The meeting was attended by all the country managers, chairpersons of Mekong-Plus and Indian Subcontinent PRGs, representatives from the Liverpool LF Support Centre and GlaxoSmithKline, and WHO staff. The principal outcomes of the meeting were methodologies for scaling up community home-based prevention of disability due to LF and the development of country-specific 5-year (2003–2007) strategic plans for the elimination of LF.

The Indian Subcontinent faced two important challenges in achieving the LF elimination goal – the size of the population to be covered and the unresolved issue of scaling up MDA with combination drugs. However, the PRG indicated strong interest in and commitment to expanding its role in order to expedite individual country's activities for the elimination of LF. After reviewing the progress made so far, the PRG recommended supply of albendazole to Nepal for its first round of MDA, which was postponed from the previous year, and to Bangladesh, India and Sri Lanka for the second round of MDA.

The use of DEC-fortified salt was acknowledged as a sound MDA strategy for prophylactic treatment against infection and is especially

effective for children. The best example of its use is in China. However, there are few acceptable sources of this drug combination, and quality assurance, competitive pricing and creation of demand are challenges that have to be met.

Adverse reactions to individual drugs were uncommon throughout the PRG and no SAEs were attributed to the drug combinations. The few adverse reactions that did occur did not hinder MDA. However, the national programmes were cautioned to ensure proper surveillance to avoid under-reporting and to minimize the gap between reported and actual administration of the drugs.

The PRG strongly supported the use of COMBI as a highly effective, evidence-based social mobilization tool, directed not only at the community in general but also at top management and decision-makers within the community. The most effective COMBI plans involved cooperation between the private sector and LF national programme for advertising MDA programmes. Use of COMBI, along with an increased understanding of the effects of combination drugs on intestinal parasites, was the main reason for wider acceptance of the drugs and subsequent success of the programmes. Tamil Nadu, India and Sri Lanka, for example, credited COMBI with a significant increase in MDA coverage.

Mapping of the distribution of LF cases was completed in Sri Lanka and progressed well in other countries despite problems with the stability and availability of ICT cards. All the national programmes used other methods for mapping, such as night blood surveys and disability surveys. Mapping is expected to be completed in all endemic countries by 2005.

To minimize LF transmission, it was important to coordinate vector control activities with other disease management programmes, such as those for malaria and dengue. Although many vector control interventions for LF are not considered to be cost-effective, their efficacy is enhanced when they are used in conjunction with other disease-control programmes. The general opinion was that vector control has a role in the elimination of LF and will become more accepted, especially when controlling other diseases that co-exist in the same endemic areas proves a more effective use of resources.

Compared with the progress made with MDA, there has been less success in preventing disability due to LF. The PRG emphasized that training on disability prevention and management must be critically assessed and that national governments must take full advantage of international training efforts. To accomplish this, it is necessary to prepare a critical mass of trainers to work in each country and to develop a model for disability and lymphoedema management at the community/village level that can be expanded and implemented throughout the country. An international workshop on the prevention of disability is planned for mid-2003. The basic principle of lymphoedema management is to enable patients to manage their condition effectively in the home and through the community since life-long care is necessary. Lymphoedema management services were offered to affected patients through health institutions as well as at the community and household level in many locations in Bangladesh, India and Sri Lanka. While approximately 90% of hydrocele cases are uncomplicated, the condition should be treated as a

public health issue. Surgical hydrocelectomy was offered to patients through general health services in India and Sri Lanka and also through special programmes in Bangladesh and the state of Kerala in India. There was substantial NGO participation in the community home-based disability activities, and the national programmes increasingly encouraged this collaboration.

Despite several NGOs contributing significantly to elimination activities in the endemic countries, limited funding from national governments and external resources was a difficulty faced by the national programmes, which were dependent on external funding for more than 80% of programme costs. In addition to maintaining current elimination efforts, the national programmes must scale up to meet elimination goals.

The geographical coverage of countries of the Indian Subcontinent PRG can be seen in Figure 4.4.

## Country activities

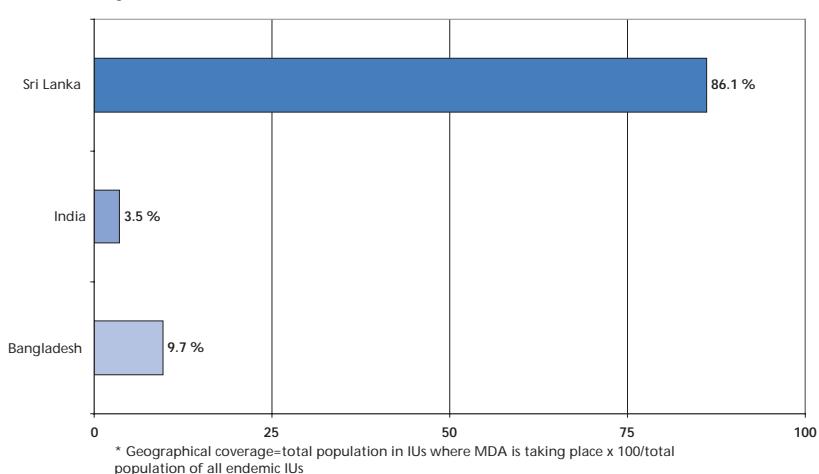
### Bangladesh

Mapping of LF in Bangladesh continued; 23 of the 25 mapped IUs (districts) were endemic with an estimated at-risk population of 49.9 million. The total number of IUs is 64. Pre-MDA baseline data showed the prevalence of microfilaraemia to be 1.3–15.5% and of lymphoedema 1.1–19.5%.

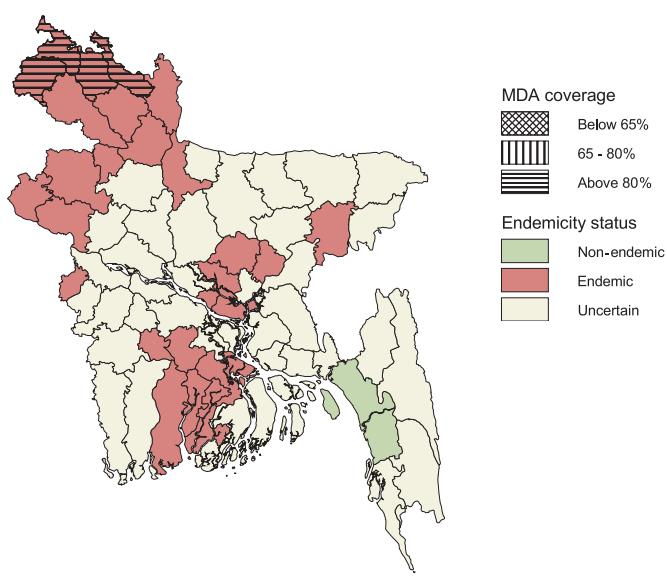
The first MDA began in 2001 and covered the IU of Panchagar. In 2002, four IUs were covered and an at-risk population of 4 860 402, with a reported coverage of 93.8% (Map 4.14). A cluster sample survey used to demonstrate the actual coverage in the four IUs showed a coverage of 87.3%, which was closer to that achieved in the sentinel sites (83.2%). A KAP study was conducted before and after a social mobilization campaign in three IUs. The pre-test survey found that people knew very little about LF and its mode of transmission, elimination, complications, etc. The post-test survey revealed an increase of more than 30% in knowledge of filariasis. Bangladesh trained 60 doctors in hydrocelectomy and made plans to expand the training in 2003.

The drug distribution strategy was door-to-door and seeking out special population groups (e.g. school, mosque, cinema hall, market, shopping complex, bus, road-sides). WHO provided technical and financial support and the Liverpool LF Support Centre provided financial assistance for MDA in the IU of Lalmonirhat.

Figure 4.4 Indian subcontinent PRG - Geographical coverage\* by country in 2002



Map 4.14 Bangladesh



## India

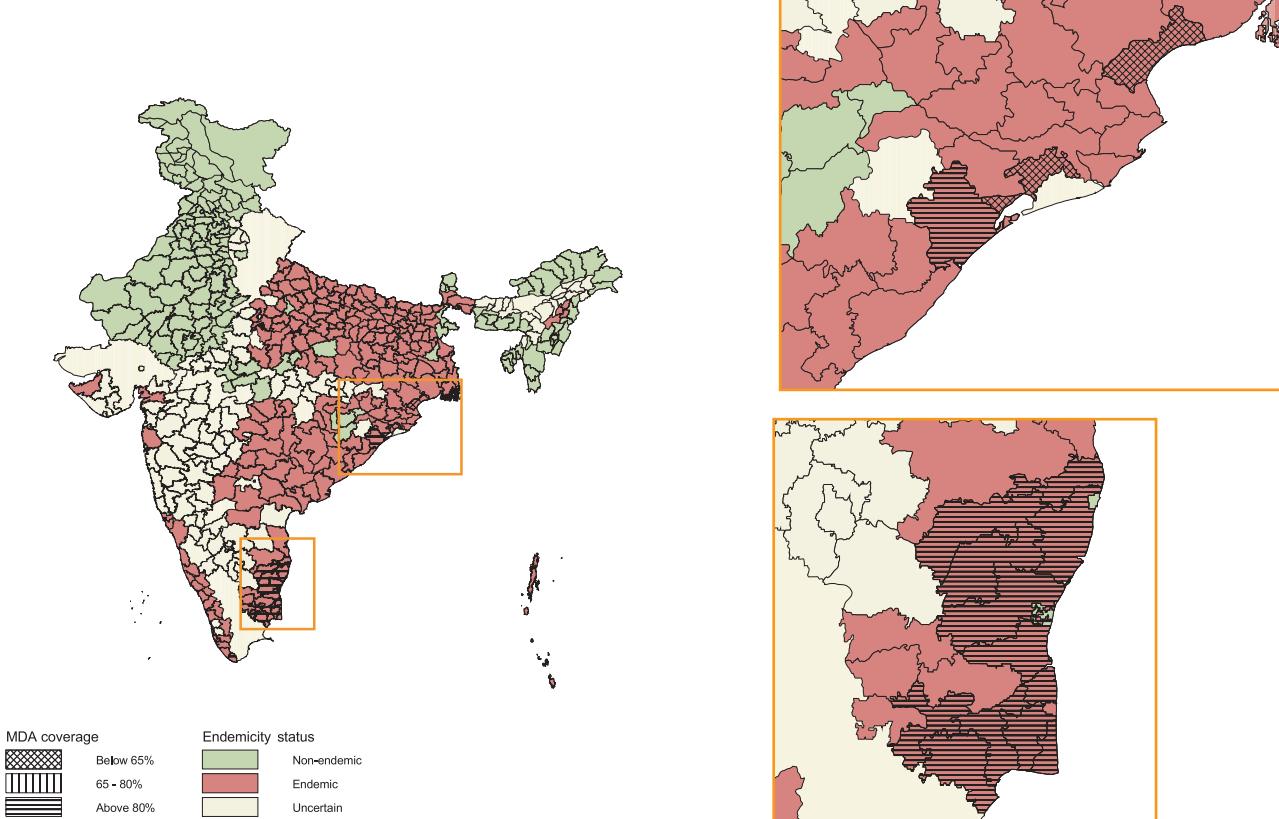
Mapping of LF in India was based on extensive historical data. The National Filaria Control Programme was launched in 1955 to conduct surveys to determine the degree of endemicity, to carry out pilot studies and to train the personnel required for the programme. Initially, the programme restricted control measures for filariasis to urban areas. In 1997, the Indian Filariasis Elimination Programme piloted a revised strategy based on an annual single dose of DEC that targeted an at-risk population of 40 million in 13 IUs.

In 2002, an estimated at-risk population of 454 million was spread over 261 IUs (districts).

The first round of MDA with co-administration of DEC + albendazole under PELF began in 2001 and covered an at-risk population of 13.4 million in 6 IUs. In 2002, MDA covered an at-risk population of 21.1 million with DEC + albendazole in 11 IUs and another 35.7 million with DEC alone in 19 IUs. Reported coverage for DEC + albendazole was 86.9% (range 50–99%) (Map 4.15). Geographical coverage for DEC + albendazole was 2.0% of the IUs and 3.5% of the estimated total population of all endemic IUs.

The drug distribution strategy was door-to-door. WHO provided technical and financial support in Orissa and Tamil Nadu while the Government of India provided funding for DEC and other operations.

Map 4.15 India



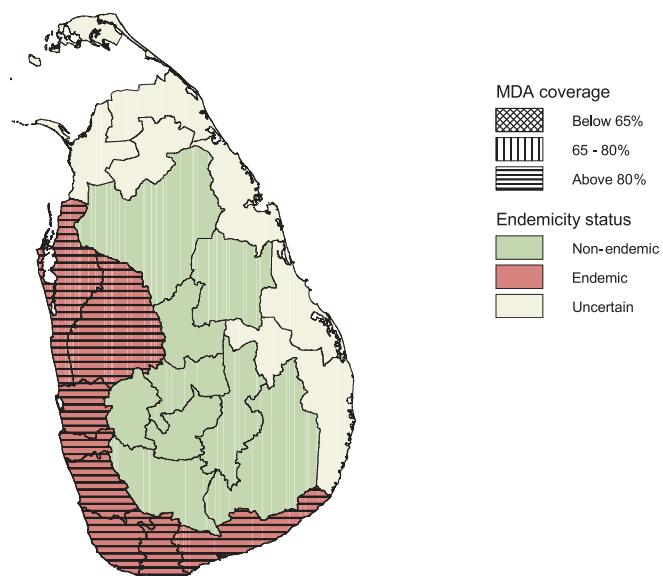
### Sri Lanka

Sri Lanka has an at-risk population of 10 million in 8 of 25 IUs considered endemic. In 1999, Sri Lanka started with a drug distribution of a twice-yearly single dose of DEC alone covering the total population of the 8 endemic IUs. In 2001, the MDA with DEC + albendazole was initiated. In 2002, an at-risk population of 8 637 505 in 8 IUs was covered; reported coverage was 86% (range 80–92.4 %) (Map 4.16).

The problems that prevented maximum coverage being achieved were the lack of sufficient volunteers for the drug distribution and time delays in the social mobilization campaign. A KAP study was carried out in July 2002 in two communities in the IU of Galle.

The drug distribution strategy was mainly door-to-door. WHO provided technical support on social mobilization together with the Liverpool LF Support Centre who provided financial support for MDA.

Map 4.16 Sri Lanka



## Mekong-Plus Programme Review Group

The Mekong-Plus PRG had considerably more responsibility this year in reviewing new applications from Cambodia and Malaysia and reapplications from Indonesia, Myanmar, the Philippines, Thailand and Viet Nam. Rapid scaling-up took place in Malaysia, Myanmar and the Philippines, while Indonesia made notable progress after earlier trials.

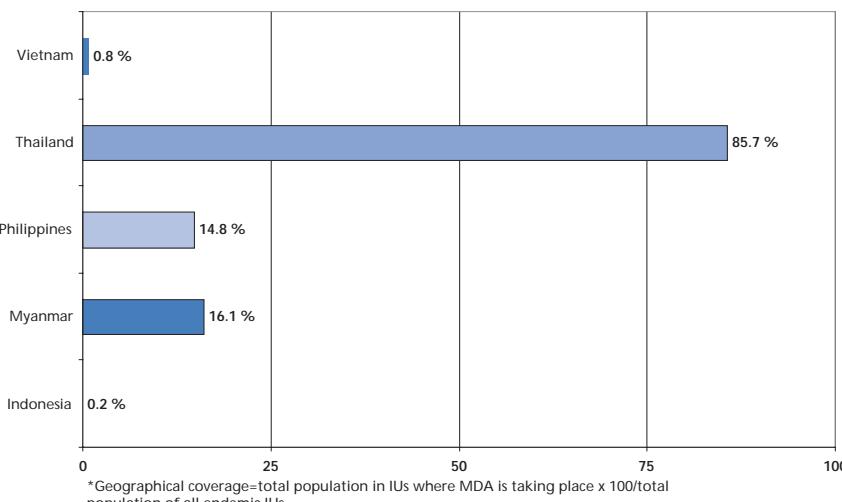
WHO assisted countries by providing social mobilization training to support national elimination programmes. For instance, in the Philippines, the outcome of the training will be a complete door-to-door MDA campaign in several provinces that will be used as a model for further scaling-up in 2003. Although efforts were substantial, programme managers agreed that current funding gaps hampered full implementation of LF elimination activities. However, innovative fundraising endeavours were

undertaken. For example, plans were under way for the Japanese government to fund Health Fairs in 2003 at which MDA will be offered to rural populations; it is hoped that these will become a model of programme integration for further elimination efforts. The Fairs will be limited to appropriate areas with nationwide door-to-door MDA becoming the norm.

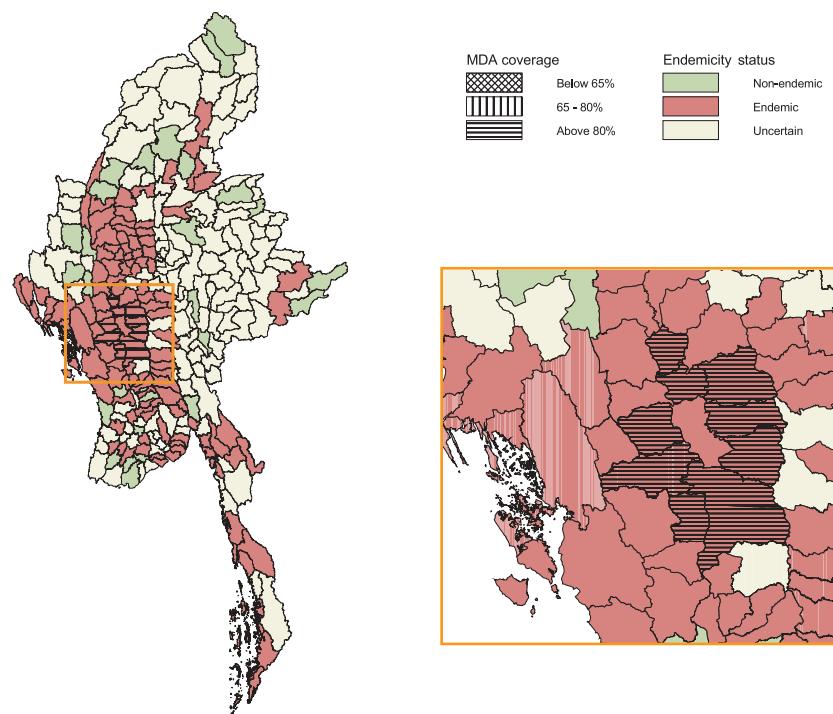
The Chair of the PRG reported that 5 of the 11 endemic countries conducted MDA campaigns and member countries achieved coverage of 17% of the 210 million at-risk population.

The geographical coverage of the countries of the Mekong-Plus PRG can be seen in Figure 4.5.

Figure 4.5 Mekong-Plus PRG - Geographical coverage\* by country in 2002



Map 4.17 Myanmar



### Country activities

#### Indonesia

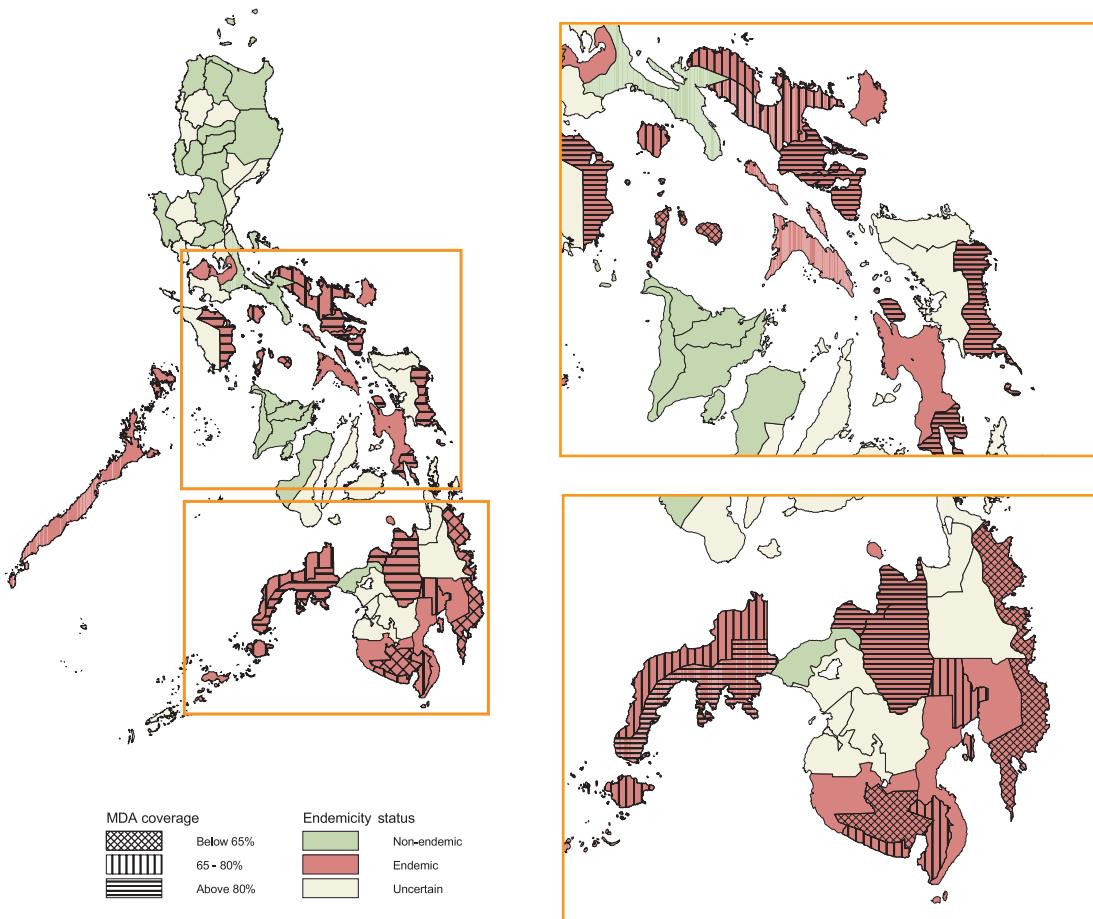
Mapping of LF in Indonesia has been in progress since 1970, resulting in numerous surveys of microfilaraemia prevalence in the villages. The Ministry of Health estimated an at-risk population of 150 million in 20 of 23 provinces. In 1975, a national filariasis control programme was established and started drug distribution with DEC alone. Since 1991, low-dosage DEC has been administered weekly for a period of 40 weeks. The first round of MDA under PELF began in 2002 and covered an at-risk population of 255 144 in 16 IUs (districts) with a reported coverage of 79.2% (range 58–96.5%). Some minor adverse experiences were reported and treated with analgesic and antipyretics.

The drug distribution strategy was door-to-door and booth distribution. WHO provided financial and technical support and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) supported social mobilization and advocacy.

#### Myanmar

The Ministry of Health estimated the at-risk population at more than 46 million. Mapping of LF identified an at-risk population of 28 million, in 176 IUs (townships). The status of endemicity in the remaining 131 IUs has yet to be ascertained. The pre-MDA baseline survey carried out in 20 sentinel sites showed a microfilaraemia prevalence of 0.5–15.1%; the microfilarial density ranged from 115 to 16 975/ml. The first round of MDA under PELF began in 2001 and covered 10 IUs.

Map 4.18 Philippines



The second round in 2002 covered an at-risk population of 7.47 million in 52 IUs with DEC + albendazole. Reported coverage was 86.5% (Map 4.17).

A KAP study in 2000 in the regions of Magway and Sagaing showed that people thought LF was a hereditary disease and were consequently reluctant to marry a person with lymphoedema. They also believed that hydrocele and lymphoedema were separate conditions caused by different factors; few people knew how the disease was transmitted.

The drug distribution strategy was door-to-door. WHO provided financial and technical support.

### Philippines

Mapping of LF in the Philippines continued in 2002 with 61 IUs (municipalities) mapped. Previously 351 of 1 566 IUs had been mapped. The first round of MDA under PELF started in 2000 and covered 26 IUs, and the second round in 2001 covered 91 IUs. The third round covered an at-risk population of 3.48 million in 185 IUs. MDA was discontinued in the IU of Boac with an at-risk population of 10 353. Reported coverage was 73.6% (range 2.0–100%) (Map 4.18).

The drug distribution strategy was door-to-door and booth distribution. WHO provided financial and technical support, the Development Bank of the Philippines and GlaxoSmithKline gave logistic support, and Guardian Brotherhood supported advocacy and logistics.

### Thailand

The mapping of LF in Thailand was completed in 1999; based on microfilaraemia data, 336 IUs (subvillages) with an at-risk population of 125 725 were considered endemic. Baseline data showed a microfilaraemia prevalence range of 0–49% and lymphoedema prevalence of 0.85–7.27 per 100 000 people.

The first round of MDA under PELF covered an at-risk population of 118 752 in 336 IUs. Reported

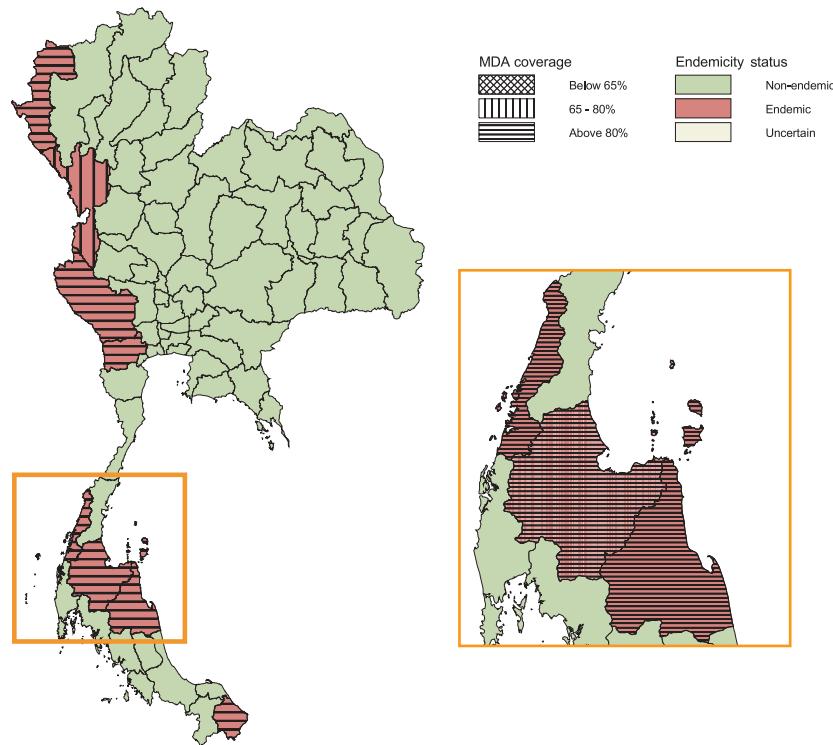
coverage was 91% (Map 4.19). Fifty-nine sentinel sites were chosen to evaluate the impact of the programme. Geographical coverage was 100% of the IUs and 85.7% of the total population of all endemic IUs.

The drug distribution strategy was door-to-door and booth distribution. WHO provided financial and technical support.

### Viet Nam

Mapping of LF continued in Viet Nam with 6 IUs (provinces) considered endemic. Other IUs needed to be reassessed because some of the data were more than 25 years old. The at-risk population was estimated at 10 million but required confirmation once mapping was completed. The province was chosen as the IU,

Map 4.19 Thailand



except in the Central province where the district was chosen. The first round of MDA under PELF started in 2002 in the IU of Phu Cu (Hung Yen province) and covered an at-risk population of 88 200; reported coverage was 86.6%.

The drug distribution strategy was door-to-door, plus a system for reaching people who worked away from their homes. WHO provided financial and technical support.

## PacCARE Programme Review Group

The Coordinating Body (CB) first met in December 1999 and evolved first into Super CB and finally into PacCARE (PacELF Coordinating and Review Group) or PacELF PRG. The Regional Director, WPRO, appointed members in compliance with the Terms of Reference of PacCARE, which were endorsed in February 2002. PacCARE members consist of regional representatives (Melanesia, Micronesia, and Polynesia), the PacELF secretariat and partners for PacELF.

PacCARE coordinates resources from its partners - Centers for Disease Control and Prevention, Atlanta, USA, Emory University, GlaxoSmithKline (GSK), James Cook University, Japan International Cooperation Agency (JICA), Japanese Overseas Cooperation Volunteers, Liverpool LF Support Centre, the Japanese Ministry of Health and Welfare, and Voluntary Service Overseas. At the local level, Mataika House in Fiji and Institut Louis Malardé in French Polynesia facilitate PacCARE activities.

The fourth annual meeting for PacELF programme managers was held in August 2002, in Rarotonga, Cook Islands. The workshop topics included monitoring and evaluation; social mobilization; Pacific guidelines and criteria; and entomology and integration.

PacCARE met on 17–18 February 2003, at the WHO Office in Suva, Fiji, following the formal appointments of PacCARE members by Dr Shigeru Omi, WHO Regional Director for the Western Pacific. The biggest concerns for the region were coordinating and networking with the PacCARE Secretariat on research activities, support of resources initiated by national ministries of health, and donors providing assistance directly to countries without involving PacCARE in the process. The countries of the region and donors were reminded of their responsibility to inform PacCARE of their activities in order to coordinate a trilateral communication channel under the PacCARE “umbrella”, thus providing clarity, transparency, coordination, facilitation and information-sharing for the programme.

The LF elimination programme was almost entirely dependent on MDA, but the significance of vector control as part of the elimination process increased, especially in the Pacific countries. The February meeting determined the most appropriate elimination criteria, considering the particular situation of *Aedes polynesiensis* as the principal vector in the endemic countries. Ensuing recommendations will be presented at the fifth annual meeting for PacELF programme managers, scheduled for 22–26 September 2003 in Fiji.

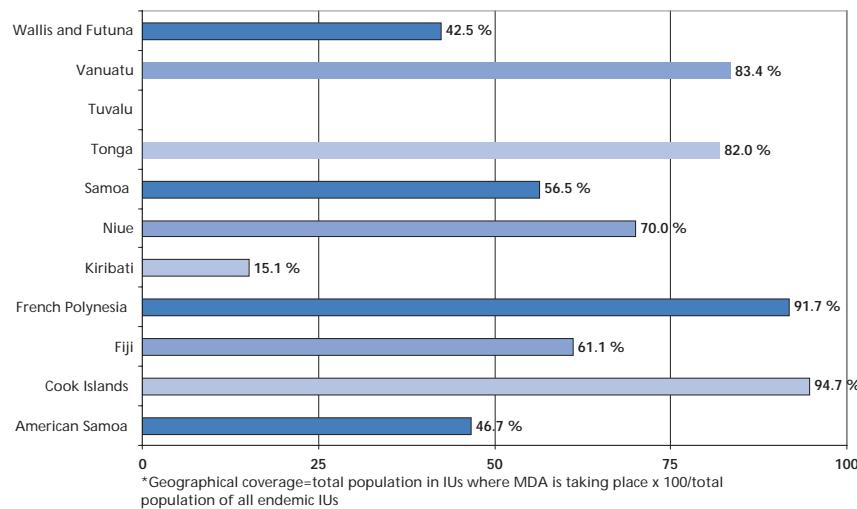
All 22 Pacific island countries and territories of the PRG participated in elimination programmes and completed baseline prevalence surveys. Based on preliminary assessment surveys, 6 countries were identified as non-endemic, 4 were partially endemic, and 12 were endemic. Determined from baseline surveys, the average LF prevalence rate was 6.0% of an estimated at-risk population of 6.9 million (excluding Papua New Guinea).

Sizeable immigrant communities in the region frequently moved among the Pacific island countries, particularly in Australia, Hawaii, USA and New Zealand, making effective implementation of MDA programmes difficult. Because reaching and motivating these transient communities to participate in elimination programmes was complex, and because of the importance of maintaining a high coverage rate for all five rounds of MDA, it was essential to implement social mobilization and awareness campaigns to ensure compliance with the programmes.

In 1999, Samoa was the first country in the PRG to implement the LF elimination programme. By the end of 2002, the 13 countries with active LF transmission had prepared national plans of action and 11 of these countries had begun annual MDA. So far, Samoa has completed four rounds of MDA; American Samoa, Cook Islands, French Polynesia, Niue and Vanuatu have completed three rounds; Kiribati, Tonga and Tuvalu have completed two rounds; and Fiji and Wallis and Futuna have completed their first round. New Caledonia and Papua New Guinea will start MDA in 2003.

The elimination programme was scaled up to maximum level to cover IUs throughout the PRG. In 2004, it will scale down after Samoa has completed five rounds of MDA. However, when Papua New Guinea begins elimination activities, substantial scaling up of the programme will be required. An efficient stock and supply system is in place, with ICT cards and drugs ready for distribution to countries as needed. A total of 42 500 ICT cards,

Figure 4.6 PacCARE PRG - Geographical coverage\* by country in 2002



12 850 000 DEC tablets and 1 442 300 albendazole tablets were distributed in 2002. ICT cards and DEC were provided by JICA and albendazole by GSK.

The "Star Connection Network" is an information system established by the WHO office in Fiji to facilitate the exchange of information, provide technical assistance and distribute supplies within the region. In October 2002, the PacELF Web site, [www.pacelf.org](http://www.pacelf.org), was launched in Suva.

In 2002, PacELF developed and published a PacELF atlas, annual meeting reports, posters/leaflets, scientific papers and video programmes. These materials are available in PDF format from the PacELF web site.

The geographical coverage of the countries of the PacCARE PRG can be seen in Figure 4.6.

## Country activities

### American Samoa

The pre-MDA baseline survey in American Samoa showed a microfilarial prevalence of 2.6% with a CFA prevalence of 11.5%. Mapping showed that the entire country was endemic, with an estimated at-risk population of 57 291 in 73 villages. MDA was carried out in 1962 and 1966 using DEC 72 mg/kg.

The first round of MDA under PELF began in 2000 and covered 23.7% of the total population with DEC + albendazole. The second round in 2001 had a reported coverage of 52%. In 2002, the third round covered an at-risk population of 28 489 with a reported coverage of 49.7%.

WHO and the Centers for Disease Control and Prevention provided technical support; the Research Corporation of the University of Hawaii provided financial support.

## Cook Islands

In 1965, a survey in Pukapuka showed a lymphoedema prevalence of 3.8%. Drug distribution, started on the island of Aitutaki in 1968, reduced microfilaraemia from 30% to 0.8%. In 1999, the entire country was endemic and the pre-MDA survey using ICT cards showed a prevalence of 8.6%. The first round of MDA under PELF started in 2000, with reported coverage of 58.7%. The second round in 2001 had a reported coverage of 64.1% and the third round covered an at-risk population of 17 676 with a reported coverage of 98%.

The drug distribution strategy was door-to-door and booth distribution. WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

## Fiji

In the 1950s Fiji implemented vector control measures. Distribution of DEC alone from 1969 to 1975 resulted in a reduction of microfilaraemia rates to 1%. In 1995, the prevalence of lymphoedema was 0.2%. In 2002, the entire country was endemic, with an at-risk population of 775 077 and an LF prevalence of 16.6% as surveyed by ICT cards. The first round of MDA under PELF began in 2002 and covered an at-risk population of 545 780; reported coverage was 70.4%.

The drug distribution strategy was door-to-door and booth distribution. WHO and the Centers for Disease Control and Prevention provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

### **French Polynesia**

French Polynesia was considered endemic. In 1974, the prevalence of lymphoedema in the Leeward Islands (Iles sous le Vent) was 1.3%. From 1997 to 2000, ICT cards showed prevalence levels ranging from 2.4% to 17.7%. The first round of MDA under PELF started in 2000, with a reported coverage of 93.2%. In 2001, the second round had a reported coverage of 95.1%; the third round in 2002 covered an at-risk population of 211 052 with a reported coverage of 93.3 %.

WHO and the Institut Louis Malardé provided technical support.

### **Kiribati**

Kiribati was endemic with an estimated at-risk population of 90 700; use of ICT cards estimated microfilarial prevalence at 6.8%. The first round of MDA started in 2001. The second round in 2002 covered an at-risk population of 13 175 with a reported coverage of 15.7%, although these data excluded South Tarawa and Betio.

WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

### **Niue**

Niue was endemic, with an estimated at-risk population of 1900. The CFA prevalence in 1999 was 3.1%. Distribution of DEC alone was carried out in 1972 and of DEC + ivermectin in 1977. In 2000, the first round of MDA began under PELF with DEC + albendazole; reported coverage was 94%. In the second round, reported coverage was 89.2%. The third round in 2002 covered an at-risk population of 1469 people with a reported coverage of 82.2%.

The drug distribution strategy was door-to-door. WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

### **Samoa**

Samoa was endemic: pre-MDA baseline data in 1998 showed a CFA prevalence of 1.06% and a lymphoedema prevalence of 2%. Samoa carried out drug campaigns from 1964 to 1999, the first seven using DEC alone and the others DEC + ivermectin. The first round of MDA under PELF started in 1999 with DEC + albendazole and a reported coverage of 90.5%. The second and third rounds had reported coverages of 56.8% and 68.4% respectively. In 2002, an at-risk population of 96 301 was covered, with a reported coverage of 55.3%.

WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

## Tonga

Tonga, with an estimated population of 100 200, was endemic. Reports dating back to 1965 mentioned the common occurrence of lymphoedema and hydrocele among the population. Drug distribution campaigns in 1975–1976 showed that DEC reduced the prevalence of microfilaraemia from 17% to 1%; the pre-MDA CFA prevalence was 2.7%. The first round of MDA under PELF began in 2001 with DEC + albendazole and a reported coverage of 81.6%. In 2002, an at-risk population of 82 023 was covered with a reported coverage of 90.4%. The drug distribution strategy was booth distribution through churches. WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

## Tuvalu

Tuvalu was endemic. In 1972 and 1992, two drug administration campaigns were conducted with DEC alone. The pre-MDA CFA prevalence was 22.3%. The first round of MDA under PELF began in 2001 using DEC + albendazole with a reported coverage of 81.2%. The second round took place in 2002.

The drug distribution strategy was booth distribution. WHO provided technical support and the Japanese International Cooperation Agency provided support for DEC and ICT cards.

## Vanuatu

Vanuatu, with a population of 186 678, was endemic, but there was no history of drug distribution campaigns. In 2000, the first round of MDA started under PELF using DEC + albendazole with a coverage of 82.9%; the second round in 2001 covered 83.3%. In 2002, the third round covered an at-risk population of 156 368 with a reported coverage of 83.8%.

WHO provided technical support, the Japanese International Cooperation Agency provided support for DEC and ICT cards and the Liverpool LF Support Centre assisted with MDA.

## Wallis and Futuna

The whole of Wallis and Futuna was considered endemic. There is a long history of vector control and two drug distributions using DEC alone were conducted in 1987. The pre-MDA CFA prevalence was 1% in Wallis; the first round of MDA under PELF began in 2002 and covered an at-risk population of 8522 with DEC + albendazole. Reported coverage was 60.2%.

WHO and the Institut Louis Malardé provided technical support.



"Based on projections and estimates from national control programmes, at least US\$ 100 million will be needed to scale up LF elimination activities at the national level to cover a global at-risk population of 350 million by 2005."

## Chapter 5

### Financial Aspects



## Financial resources and expenditures

In 2002, contributions of US\$ 3 326 518 were received by WHO for GPELF. The total carry-over from 2001 was US\$ 2 403 824. Funds in the amount of US\$ 2 986 158 were obligated from the Bill and Melinda Gates Foundation grant. A total of US\$ 523 712 was obligated from the Department for International Development (DFID), United Kingdom grant, and a total of US\$ 241 530 was obligated from the Arab Fund for Economic and Social Development. All figures are provisional and WHO will release audited financial figures for the 2002–2003 biennium in May 2004.

Based on projections and estimates from national control programmes, at least US\$ 100 million will be needed to scale up LF elimination activities at the national level to cover a global at-risk population of 350 million by 2005. These funds are required for activities such as social mobilization, training, MDA, monitoring and evaluation of MDA, and supply of DEC tablets at country level.

## Ways and means of achieving targets

Following the Ad-hoc Strategic Planning Workshop held in Liverpool, England, in December 2002, a Task Force on Advocacy and Fundraising was created with the aim of expanding the donor base for the Global Programme and to strengthen relationships with current donors. This task force will also conduct advocacy and fundraising with particular focus on enabling the affected countries and regions to

engage directly in fundraising efforts. The task force will also work closely with the Task Force on Communications and GAELF3 which was created at the same time to take responsibility for developing a communications strategy, enhance the profile of the disease and be responsible for organizing GAELF3 in Cairo, Egypt, in 2004. (See full terms of reference in Chapter 3.)

The Global Alliance to Eliminate Lymphatic Filariasis must generate political commitment at national, regional, and local levels, as well as strengthen awareness of the importance of supporting the vital efforts being made to cover all at-risk populations in endemic countries. To accomplish this, national and local authorities in the endemic countries must assume direct responsibility for their own LF elimination programmes. Fortunately, elimination programmes benefit from the support of the partners of GAELF. GlaxoSmithKline will continue to make albendazole available free of charge until LF is eliminated. Merck & Co., Inc., expanded the Mectizan® Donation Program for onchocerciasis to cover the countries co-endemic with LF and targeted for MDA in all of the African countries where the diseases co-exist. Partners from the public sector (such as the Arab Fund for Economic and Social Development, DFID, and the Ministry of Health and Social Welfare of Japan), from the private sector (such as the Bill and Melinda Gates Foundation), and from academia (such as the Liverpool LF Support Centre) have provided funds to initiate and continue both global and national programmes.

Members of GAELF will seek necessary additional funding from bilateral agencies and private sources even while making special efforts to access available international

financial institutions/World Bank funds that could be quickly applied to GPELF activities.

The Global Alliance has achieved a great deal since its first meeting in Santiago de Compostela, Spain, in 2000. The future should be devoted to moving ahead quickly and efficiently with the actions needed to achieve the goals it has set, particularly in terms of scaling up national LF elimination programmes and the ultimate eradication of the disease.



"To achieve the goal of eliminating LF as a public health problem by 2020, transmission needs to be reduced to a point where the 5-year cumulative incidence in children born in a given area after the start of MDA is less than 1 per 1000 by the year 2015."

## Chapter 6

### Facing future challenges and next steps



To achieve the goal of eliminating LF as a public health problem by 2020, transmission needs to be reduced to a point at which the 5-year cumulative incidence in children born in a given area after the start of MDA is less than 1 per 1000 by the year 2015. The 5-year period 2015–2020 is reserved for surveillance of LF incidence in children born after cessation of MDA.

## Objectives and priorities

The challenges facing GPELF are substantial. National elimination programmes need to scale up in order to cover an at-risk population of 350 million by the end of 2005 (Chart 6.1). Limited human and financial resources make it necessary to strike a balance between scaling up programmes to cover entire at-risk populations in countries that have already started MDA, so that transmission is interrupted, and offering support to endemic countries that have not yet started elimination programmes. Although expanding the programmes that have started MDA in order to cover the entire at-risk population will have the most significant epidemiological impact in the shortest period of time, it is difficult to deny any at-risk population relief from an eradicable disease or its disabling consequences.

## Objectives established by GAELF2 for 2003–2005

- Scale up MDA to cover an at-risk population of 350 million.
- Establish strategies for the prevention of disability due to LF in at least 50% of the endemic countries that have initiated elimination programmes.
- Develop technical and management capacities in all Regional Programme Review Groups and improve national health systems to provide adequate support for elimination activities.

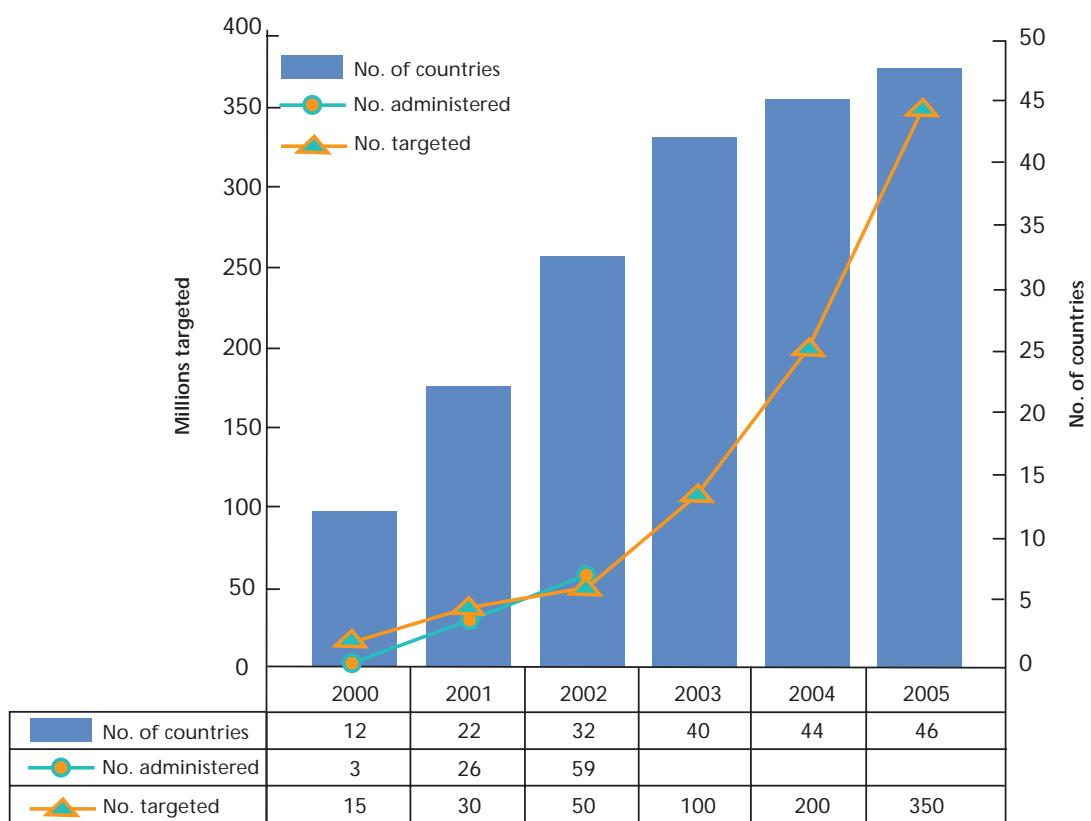
## Priorities within specific objectives

- Complete mapping in all known endemic countries.
- Continue MDA in all areas where it has been started, with special focus on areas where coverage is not yet effective.<sup>1</sup>
- Scale up the geographical coverage of MDA in countries that have initiated MDA in order to rapidly cover the entire at-risk population.
- Countries that have not yet started MDA should begin MDA only after disease mapping is completed for the entire country and a comprehensive national programme, including scaling up, has been developed.

<sup>1</sup> Simulation models indicate that to achieve interruption of transmission, a minimum effective drug coverage of 65% must be achieved.

- Integrate strategies for the prevention of disability into the national programmes at national, regional, and local levels.
- Identify and fulfil training requirements at national, regional, local, and, in particular, IU levels.
- Start DEC-fortified salt programmes in selected countries.

Chart 6.1 Global scaling up required 2003–2005





# Chapter 7

## Further Documentation

Weekly Epidemiological Record 2002, 77, 125-132, No. 16

Weekly Epidemiological Record 2002, 77, 177-179, No. 22

Defining the roles of vector control and xenomonitoring in the global programme to eliminate lymphatic filariasis (WHO/CDS/CPE/PVC/2002.3)

Lymphatic Filariasis Elimination – The Story of Zanzibar  
(WHO/CDS/CPE/SMT/2002.15)

Surgical approaches to the Urogenital Manifestations of Lymphatic Filariasis  
(WHO/CDS/CPE/CEE/2002.33)

Annals of Tropical Medicine & Parasitology, The Elimination of Lymphatic Filariasis: Public-health Challenges and the Role of Vector Control. Guest Editors: G.B. White and M.B. Nathan, Volume 96, Supplement 2, December 2002.

Report of the Second Meeting of the Global Alliance to Eliminate Lymphatic Filariasis, New Delhi, May 2002 (WHO/CDS/CPE/2002.34)

4 advocacy videos:

Lymphatic Filariasis: A Winnable Battle (duration 18') available in English and French;

A Movement For Hope (duration 4') available in English and French;

A Fair For Health, A Fair For Hope (duration 14') available in English only;

Lymphatic Filariasis: Meeting the Challenge (duration 12') available in English only.

Lymphatic Filariasis Elimination – The Story of Egypt (WHO/CDS/CPE/2003.1)

Four-part training package on community home-based prevention of disability due to lymphatic filariasis:

Training module on community home-based prevention of disability due to lymphatic filariasis, Part 1 Learner's Guide;

Training module on community home-based prevention of disability due to lymphatic filariasis, Part 2 Tutor's Guide;

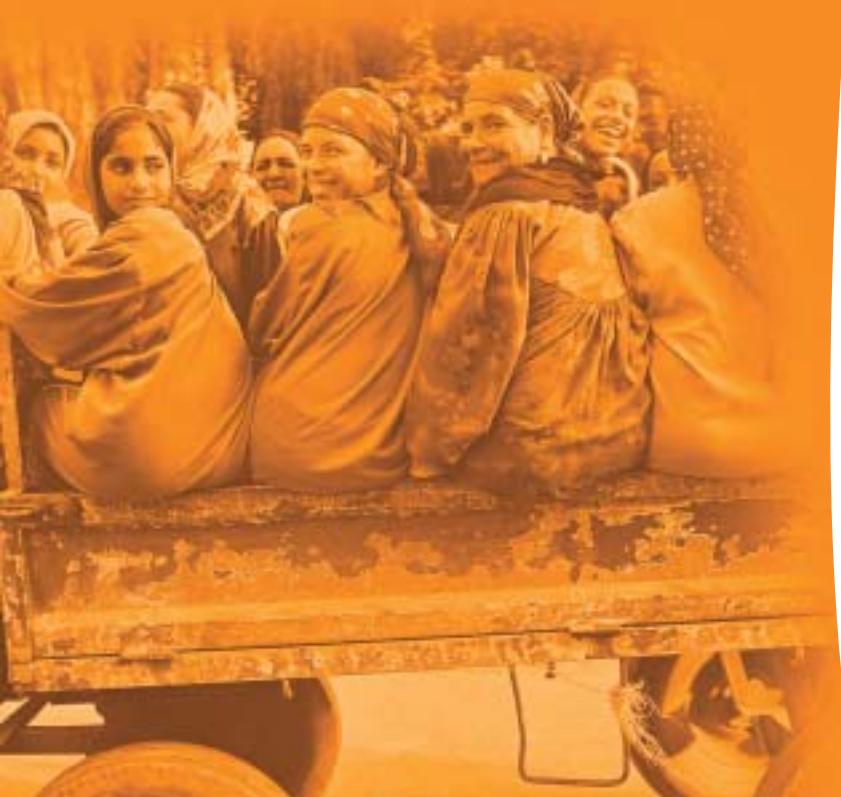
Flipchart on community home-based prevention of disability due to lymphatic filariasis, Part 3;

Poster on community home-based prevention of disability due to lymphatic filariasis, Part 4

Weekly Epidemiological Record 2003, 78, 171-179, No. 20

Global defence against the infectious disease threat (WHO/CDS/2003.15)

# Annexes



### **Arab Fund for Economic and Social Development**

The Arab Fund for Economic and Social Development (AFESD) is an Arab regional financial institution. Its function is to assist the economic and social development of Arab countries by financing development projects, with preference given to Arab development and to joint Arab projects; encouraging the investment of private and public funds in Arab projects; and providing technical assistance services for Arab economic and social development.

AFESD supports LF elimination activities in the WHO Eastern Mediterranean Region, including disease detection, mapping, disability prevention, control activities and logistic support.

In 2002, through the financial support of AFESD, WHO conducted the following activities:

- Supported the Eastern Mediterranean Programme Review Group meetings and Programme Managers meetings.
- Initiated mapping of LF distribution in Sudan and expanded mapping activities in Yemen.
- Supported LF programme activities in Egypt, Oman, Saudi Arabia, and Yemen.
- Developed *The Story of Egypt*, an advocacy document that highlights the success of the MDA programme in Egypt (which is in print and will be available through the CDS Information Resource Centre, WHO Geneva).

### **Department for International Development of the United Kingdom**

The Department for International Development, a United Kingdom Government department, is responsible for promoting development and reducing poverty worldwide. The current goal of DFID is to assist the effort to reduce by half the proportion of people living in extreme poverty by 2015. Parallel objectives are providing basic health care and access to primary education for all by the same date. DFID seeks to work in partnership with governments, business, civil society, and the research community committed to these targets. DFID also works with multilateral institutions such as the World Bank, United Nations agencies including WHO, and the European Community.

In August 1999, DFID made its first contribution to the WHO Lymphatic Filariasis Programme and has continued to be a generous donor to the Programme since that date. In 2002, as a result of funding from DFID, WHO accomplished the following:

- fostering of additional private/public and country partnerships;
- formulation of technical and policy guidelines and assessment of national programmes through the Technical Advisory Group and the Regional Programme Review Groups;
- Technical Advisory Group meetings and Regional Programme Review Group meetings;
- developing and promoting the use of standardized LF training modules;
- technical and financial support to regions and countries;

- initiation of action plans for the elimination of LF in endemic countries;
- support for the implementation of national LF elimination programmes.

### **Bill and Melinda Gates Foundation**

In November 2000, the Bill and Melinda Gates Foundation made a generous contribution of US\$ 20 million towards the elimination of LF. Funds are held pending disbursement from a trust fund through the World Bank. The organizations that benefited from the grant are: the Atlanta USA group (LF Support Center of Emory University, Centers for Disease Control and Prevention, and the Carter Center); the LF Support Centre in Liverpool, England; the nongovernmental development organizations group led by InterChurch Medical Assistance; and WHO. Collectively, this group formed the Gates Grant Review Committee and agreed to the following strategic outline for the application of the Gates grant:

- To develop demonstration projects that show interruption of LF transmission; to move towards national-level mass drug administration coverage; to develop, implement, and evaluate disability prevention strategies; and to evaluate cost-effectiveness of national elimination programmes.
- To ensure national momentum by providing support to countries for mapping and scaling up the implementation of national elimination programmes.
- To ensure global momentum through a development strategy covering regionalization, increase

in the number of partners, and advocacy to bring about additional funding and support.

- To evaluate and monitor demonstration projects, national elimination programmes and partnership development.

The implementation of the Gates grant is in its third year and the Gates Foundation has expressed its satisfaction with the current level of progress.

### **GlaxoSmithKline**

GlaxoSmithKline (GSK) is an active partner in the global effort to eliminate LF. At GAELF2 in New Delhi, India, in May 2002, JP Garnier, GSK's Chief Executive Officer, announced the donation of the first 100 million albendazole treatments since the inception of the LF elimination effort four years earlier. He also reconfirmed GSK's fervent dedication to working with WHO, ministries of health of endemic countries, Merck & Co., Inc., and Global Alliance partners to help achieve the goal of global elimination of LF.

In 2002, GSK supplied 66 million albendazole tablets to 31 countries for MDA programmes. In addition, more than US\$ 1 million were granted to support partnerships, including three university LF Support Centres and joint LF staff at the Mectizan® Donation Program in Atlanta. Financial support was also provided for NGO disability prevention efforts, regional meetings, WHO's social mobilization training, Global Alliance communications, and monitoring and evaluation activities.

Following GAELF2, where the critical need for fundraising was highlighted, GSK committed resources and

personnel to support the work of the Global Alliance Advocacy and Fundraising Task Force. The work of this Task Force is expected to result in a strategic framework and fundraising materials for use by the Regional Programme Review Groups, national programmes, and partner organizations.

#### **NGO Lymphatic Filariasis Node of the Gates Grant Review Committee**

A significant part of the NGO LF Node activities in 2002 involved continuing support of the well established national elimination programmes in Ghana and United Republic of Tanzania.

The Ghana programme completed two rounds of MDA. The first covered five endemic IUs – Ahanta West in the Western region, Awutu-Efutu Senya in the Central region, Sissala in the Upper-West region, and Kassena-Nankana and Builsa in the Upper-East region.

The second MDA round covered nine additional IUs – Nzema East in the Western region, Gomoa and Agona in the Central region; Bongo and Bolga in the Upper-East region, and Wa, Nadowli, Jirapa, and Lawra in the Upper-West region. The 14 IUs included 2439 communities with a total population of 1 650 058. Of a total eligible population of 1 495 600, the number that received treatment was 1 223 122, i.e. there was 74.1% coverage of the at-risk population. A total of 154 458 people out of the total population were pregnant or severely ill or were children under 90 cm tall and were therefore ineligible for treatment. Some 36 570 people refused treatment and 155 733 were absent. Additional aspects of the Ghana programme included

provision of logistics, supplies, and funds; surveillance methods; training activities; social mobilization; and disability control.

In most IUs of the programme in the United Republic of Tanzania, MDA for 2002–2003 began in early October. MDA was expanded to cover an at-risk population of 2 million in the new region of Mtwara with five IUs. The launch ceremony in Mwtara was attended by several dignitaries, including Her Excellency Mrs Abdulla, the Minister of Health, and the LF team from GlaxoSmithKline. The event was a success and was highlighted by speeches and the now traditional washing of the affected limbs of lymphoedema patients. The Minister supervised the distribution of drugs at the launch and her enthusiastic participation was instrumental in the distribution of the drugs throughout the community.

The United Republic of Tanzania programme also conducted two surveys to determine the clinical effects of MDA and the existence and effects of inadvertent treatment.

Several measures were taken to improve the management of the programme, including scheduling regular management meetings, hiring an accountant, producing forms, developing a management calendar, employing staff to assist in programme management, and planning a meeting with Regional and District Managers.

The hydrocelectomy and hygiene programme was expanded. The Tanzanian Disease Alleviation Programme (DAP) supported hydrocelectomies and encouraged hygienic procedures in several IUs. The frequency of operations on the island of Mafia increased from less

## Annex 1 Reports of major international supports and partners

than one to approximately 19 per month.

Other supportive activities included distribution to communities of soap donated by UniLever and assistance from the International Skincare Nursing Group (ISNG) in developing an educational pamphlet for patients suffering from lymphoedema. With a US\$ 10 000 grant from the NGO LF Node, the ISNG developed patient education information on lymphoedema. The objective was to adapt the "Hope Club" booklet, produced by Dr Gerusa Dreyer and the Centers for Disease Control and Prevention, for an African context. A draft of the booklet was produced in October 2002 for pilot testing in the field. The national LF team viewed the concept positively and generally agreed that the practice of using very few words was particularly appropriate for the target audience. The booklet is intended as a teaching tool for health care workers and as educational material for patients and the general public. There are plans to produce it in a poster format. The project was expected to be completed by early March 2003.

International Volunteers in Urology (IVU) was very active on a number of fronts and took advantage of new opportunities to teach people about hydrocele and other disabilities due to LF. IVU sponsored and coordinated lectures and workshops in several countries, including Brazil, Cameroon, Cuba, Ghana, and Togo.

The NGO LF Node approved a US\$ 15 930 grant for the Common Heritage Foundation in Yola, Nigeria. Activities scheduled to begin in early 2003 include collaborating on disability management with the Federal University of Technology in Yola and on various projects in the districts of Zing, Yorro and Lau in north-east Nigeria.

The National Coordinator recommended that the NGO LF Node approve two projects in Burkina Faso. For the first, Helen Keller International (HKI) received approval for a 3-year US\$ 75 000 grant to develop IEC skills for the national primary health care system and to expand IEC materials. HKI will work primarily in the health region of Gaoua and collaborate closely with Handicap International to bring together all aspects of the programme in the region.

The second project to receive funding approval was the Fondation pour le Développement communautaire (FDC), which received a 2-year US\$ 50 000 grant for activities scheduled to begin in early 2003. Headquartered in Ouagadougou, FDC is an affiliate of several Save the Children organizations in north America and Europe and will now add LF elimination and treatment activities to its integrated health and development work in the region of Sapone.

Planning began for NGO-funded disability management activities in India; these are projected to start in some 20 villages of a Panchayat (administrative demarcation of a group of villages) in an endemic IU in the state of Orissa. The completed proposal, expected in early 2003, will support the work of a New Delhi-based Task Force Committee consisting of representatives of the Government of India, nongovernmental agencies, the State Government of Orissa, and others as required. Key objectives of the project are: increasing awareness among the local population of LF and how it is transmitted through IEC; disability surveys; training of medical and paramedical professionals; grassroots training for lymphoedema management; and advising and assisting affected persons in the prevention of repeated acute attacks of LF.



Interchurch Medical Assistance, Inc. (IMA), with the continuing support of the LF Elimination and Morbidity Management Programme in the North Department of Haiti, collaborated with the Haiti National LF Programme, several local NGOs, and other international organizations to provide elimination activities. In late 2002, MDA covered 125 000 people in four IUs in the North Department. Also, about 700 patients with mild to severe lymphoedema were enrolled in self-treatment training activities. Work is under way to create a series of LF support groups throughout the North Department. IMA also served as the treasurer and administrator of all funds provided from the Gates Foundation through the NGO LF Node in 2002.

Health and Development International (HDI) helped to distribute ivermectin and albendazole to 1 223 122 people in Ghana and 574 526 in Togo. Togo completed its scaling-up process by covering its entire at-risk population, making it the first country in Africa to reach this milestone in LF elimination.

## Annex 1 Reports of major international supports and partners

A grant from the Bill and Melinda Gates Foundation allowed HDI to produce the book *Basic lymphoedema management*.<sup>1</sup> In this valuable training and health education resource, the authors effectively balanced the need for uncomplicated language with the need to avoid an over-simplistic presentation. The book received very favourable reviews in the medical press.

### **Lymphatic Filariasis Support Centre, Liverpool School of Tropical Medicine, England**

With funding from the Department for International Development, United Kingdom, the Bill and Melinda Gates Foundation, and GlaxoSmithKline, the Centre supported activities in 20 LF-endemic countries designed to ensure that each endemic country worked toward its goal of elimination, including:

- collaboration with WHO to map LF distribution in the African and South-East Asian Regions;
- operational research with countries and nongovernmental development organizations;
- skin care nursing projects for the treatment of symptoms in the African and American Regions;
- Voluntary Service Overseas programmes in Guyana and Vanuatu;
- collaboration with WHO/TDR on priority research for programme activities;
- evaluation of the effectiveness of

interventions;

- providing on-site personnel for LF efforts in Fiji, Guyana, and the United Republic of Tanzania.

Additionally, through the School of Tropical Medicine, the Centre:

- supported seven advanced degree students;
- launched Filaria Journal – an electronic, free access, scientific journal;
- produced a training CD for national programme managers.

### **The Atlanta Group**

The Atlanta Group consists of the Carter Center, the U.S. Centers for Disease Control and Prevention (CDC), and the Lymphatic Filariasis Support Center (LFSC) at Emory University. As a Global Alliance partner, the principal mission of the Group is to ensure the success and to document the impact of the Global Programme to Eliminate Lymphatic Filariasis (GPELF) by providing necessary expertise, technical tools and support for appropriate and cost-effective programming including the following:

- programme implementation in selected "model" or "demonstration" endemic countries,
- programme monitoring and evaluation strategies for the elimination of lymphatic filariasis (LF) in all endemic countries,
- programme impact assessment (health, social, economic) throughout GPELF

<sup>1</sup> Dreyer G et al. *Basic Lymphoedema Management Treatment and Prevention of Problems Associated with Lymphatic Filariasis* Hollis, NH, Hollis Publishing Co., 2002.

### Programme implementation in selected countries.

"Model" programme activities are supported by the Atlanta Group in three countries: the Dominican Republic, Guyana and Nigeria (the states of Plateau and Nasawara). In addition, the CDC supports the government of American Samoa in its LF elimination efforts and supports both programmatic and implementation research activities in collaboration with the Ministry of Health and the University of Notre Dame in Haiti.

Throughout 2002, the Dominican Republic engaged the support of the community, health workers and collaborating institutions in preparing the national LF elimination programme. Mass drug administration (MDA) began in December using albendazole plus DEC and successfully covered 85% of an at-risk population of 118 000.

Guyana opted to base its LF elimination programme on the drug strategy of DEC-fortified salt, a decision unique among the 32 countries undertaking elimination programmes in 2002 and therefore making Guyana's a truly "model programme" that may become a model for others. During 2002, Guyana conducted an important series of steps to prepare for the DEC-fortified salt intervention.

These included Knowledge, Attitude and Practice (KAP) studies to measure current public awareness about LF and attitudes toward prevention of its transmission by using DEC-fortified salt; establishing the legal framework for DEC-fortified salt and its quality assurance; establishing production capacity and cooperation among importers; and developing a marketing and social mobilization programme. Sentinel sites were identified and epidemiological data was collected immediately prior to the launch of the programme.

Lymphoedema treatment activities progressed and were established throughout the country. The Guyana national LF elimination programme maintains a strong partnership with the CDC, Emory University, Liverpool School of Tropical Medicine, Ministry of Health (MOH), Pan American Health Organization (PAHO), St. George's University and UNICEF.

Nigeria's "model" programme activities took place in the states of Plateau and Nasawara as a collaborative effort principally with the National MOH, the State Ministries of Health and the Carter Center. The Programme's goal is to interrupt the transmission of LF through annual MDA using albendazole plus ivermectin through cost-effective integration of programme activities with related public health initiatives (specifically where onchocerciasis, schistosomiasis and intestinal helminthic infections are co-endemic with LF).

A concurrent disability treatment and prevention programme is also envisioned. In 2002, MDA covered an at-risk population of 2.17 million in Plateau and Nasawara , which was 71% coverage of the total population. Full geographic coverage of approximately 3.6 million people is anticipated in 2003. Obtaining detailed health, social and economic measures of the impact of the elimination programme are important for future planning.

Haiti, through its long-standing collaborations in LF research and control with CDC and the University of Notre Dame, was among the first countries to initiate a "model" MDA programme and to annually follow the progress at sentinel sites.

An at-risk population of more than 400 000 was covered by MDA in 2002. The national programme will scale-up to target an at-risk population of 1 million in 2003. The disability control programme for managing and preventing lymphoedema and hydrocele was greatly expanded from its initial

research-orientation into a very active programme and training (national and international) mode.

American Samoa initiated LF elimination activities in 2000 as part of the wider Pacific Islands LF elimination initiative. Lack of sufficient resources initially slowed the development of the national programme, but in 2002 the CDC's direct involvement in activities to support the Department of Health resulted in enhanced social mobilization, MDA and surveillance capacity.

#### Monitoring and Evaluation (M&E).

An instrument created to profile M&E systems and to identify specific needs for individual national LF elimination programmes was used successfully in four countries in 2002. Meeting these identified needs through technical and funding assistance and by expanding such efforts to all "model" programme countries and disseminating M&E practices to all country programmes is a high priority for 2003.

Responding to Global Programme needs identified by the Technical Advisory Group (TAG) and WHO, the Atlanta Group convened a TAG/WHO-appointed M&E working group to recommend approaches to currently vexing problems and took the lead in defining the best approaches to four especially challenging issues: assessing programme coverage, identifying criteria for determining when MDAs should end, verifying absence of transmission, and initiating additional M&E applied research necessary for programme success. TAG will act on these recommendations in 2003.

The Atlanta Group served as a focal point for developing consensus and initiating multi-centre trials to develop more effective diagnostic tools and approaches for M&E. In 2002, these measures included a

new PCR-based technique to detect LF in vector mosquitoes, new antibody assays to detect early exposure to infection, and the performance characteristics of the current immuno-chromatographic test (ICT). Support for the development of new tools will be expanded in 2003.

#### Socio-economic studies of LF elimination programmes.

The Emory LF Support Center responded to the Global Alliance's urgent need for programme cost data by developing a standardized, broadly agreed upon protocol and supported its use in four national programmes (Burkina Faso, Dominican Republic, Egypt, Ghana) to define costs for MDA and disability management programmes. These efforts will be extended to five additional countries in 2003, which is expected to provide the data essential for estimating total Global Programme costs for LF elimination.

In 2002, four socio-economic and quality-of-life impact studies were initiated in three countries: Dominican Republic, Haiti, and Ghana. These studies examined the impact of LF-related disability on all aspects of individual, household and community life as well as the use of instruments that can measure the effectiveness of intervention in improving health-related quality of life either through preventing LF or through treating its clinical manifestations. The data will permit quantitative assessments and allow more accurate national and global estimates of both disease burden and programme impact.

The information regarding programme costs and impact is essential for estimating Global Programme needs for potential donor support. Parallel to acquiring this information, a strategic analysis of fund-raising and advocacy potential was

undertaken and completed in 2002, and its implications will be pursued in 2003.

### **Merck & Co., Inc.**

Merck & Co., Inc. is a global research-driven pharmaceutical products and services company that discovers, develops, manufactures and markets a broad range of products to improve human and animal health, directly and through its joint ventures.

Merck established the Mectizan® Donation Programme in 1988 to provide medical and technical support for its worldwide donation of Mectizan® for the treatment and control of onchocerciasis, commonly known as river blindness. In 1998 this donation was expanded to include mass treatment for the elimination of lymphatic filariasis (LF) in countries where onchocerciasis and lymphatic filariasis co-exist. In 2002, Merck donated over 44.4 million tablets of Mectizan® for LF programmes in addition to 113 million tablets donated for onchocerciasis.

The mass co-administration of Mectizan® plus albendazole (donated by GlaxoSmithKline) on an annual basis for 5-6 years is the recommended drug regimen for LF in communities where onchocerciasis and LF co-exist. With only one annual treatment needed, the drug combination is well suited for distribution in urban as well as rural areas. This treatment is expected to prevent the development of the disease in those already infected and to prevent infection in those not yet infected, thus improving the public health and socio-economic situation now and for the future generations of infected communities.

The Mectizan® Expert Committee / Albendazole Coordination (MEC/AC), an independent group of experts in

tropical medicine and public health, determines policies and strategies for the safe and appropriate use of Mectizan® plus albendazole for LF elimination in countries where onchocerciasis and LF are co-endemic and reviews applications for Mectizan® plus albendazole mass drug administration (MDA) for the Programme to Eliminate Lymphatic Filariasis (PELF).

This initiative aims to prevent both the disfigurement and disability caused by the LF and to dramatically improve the quality and duration of life of millions of people. With the continued use of Mectizan® plus albendazole, Merck hopes that the interruption of LF transmission and the virtual elimination of the disease can be achieved in endemic countries.

### **Mectizan® Donation Program (MDP)**

#### **Background**

In January 1998, GlaxoSmithKline announced its donation of albendazole to WHO for use by governments and other collaborating organizations for the Global Programme to Eliminate Lymphatic Filariasis (GPELF). Later that year, Merck & Co., Inc. expanded its donation of Mectizan® to include lymphatic filariasis (LF) in African countries and Yemen where onchocerciasis and LF are co-endemic; 40 countries in Africa are believed to be LF-endemic, 28 of which are co-endemic with onchocerciasis.<sup>1</sup>

The Mectizan® Expert Committee/Albendazole Coordination (MEC/AC) and its Secretariat, the Mectizan® Donation Program (MDP), were charged with ensuring the safe and appropriate co-administration of Mectizan® plus albendazole for the elimination of LF.

## Annex 1 Reports of major international supports and partners

### Achievements

Since 2000, national elimination programmes in areas where LF and onchocerciasis are co-endemic have applied to the MEC/AC for donations for the dual therapy of Mectizan® plus albendazole. Approximately 20.4 million combined treatments were approved for mass drug administration (MDA) between 2000 and 2002. The number of combined treatments approved per year is shown in Figure 1.

Figure 2 illustrates the number of treatments approved for each country on an annual basis. In 2002, Ghana, Nigeria, Tanzania and Togo were in the third year of MDA, while Burkina Faso and Yemen were in the second year and Benin and Uganda completed the first year.

### Challenges

The greatest challenge faced by MDP in 2002 was the difficulty forecasting the number of Mectizan® and albendazole tablets required by the national programmes. The extent of overlap between LF and onchocerciasis was largely unknown in the countries eligible for both drugs except for five West African countries where mapping was completed and validated. Furthermore, during 2002, the anticipated rate of scaling-up MDA in the eight countries with active national programmes was uncertain due to limited funding and operational difficulties with immuno-chromatographic test (ICT) cards.

An ongoing challenge for the MEC/AC and other partners of GPELF was the inability to start elimination programmes in Loa loa endemic areas of Central and West Africa due to lack of safety data of the combination therapy in this epidemiological and ecological

setting where there is a known increased risk of neurologic complications following treatment of onchocerciasis with Mectizan® alone.

### Future Prospects

1. Further progress in fund-raising will permit the initiation of more national programmes and scaling-up of ongoing programmes.
2. A research study on the safety of Mectizan® and albendazole in L. loa-endemic areas is planned, and resulting data will enable MEC/AC and other members of GPELF to devise strategies for the safe expansion of national programmes in Central and West Africa.
3. Work is underway at MDP to integrate the drug application forms for onchocerciasis and LF programmes for countries where the diseases are co-endemic, which should streamline the process for the national programmes without negatively impacting the existing National Onchocerciasis Control Programmes.

<sup>1</sup> World Health Organization. *Lymphatic filariasis*. Weekly Epidemiological Record 2001; 76(20): 149-154.

## Annex 1 Reports of major international supports and partners

Figure1. Annual MDA treatments of Mectizan® & albendazole approved for PELFs in Africa and Yemen, by year.

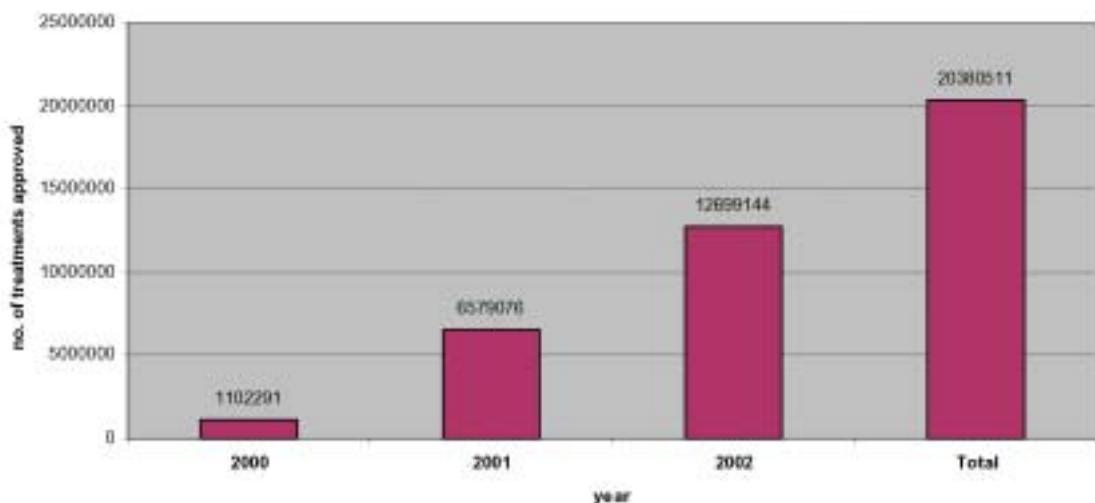
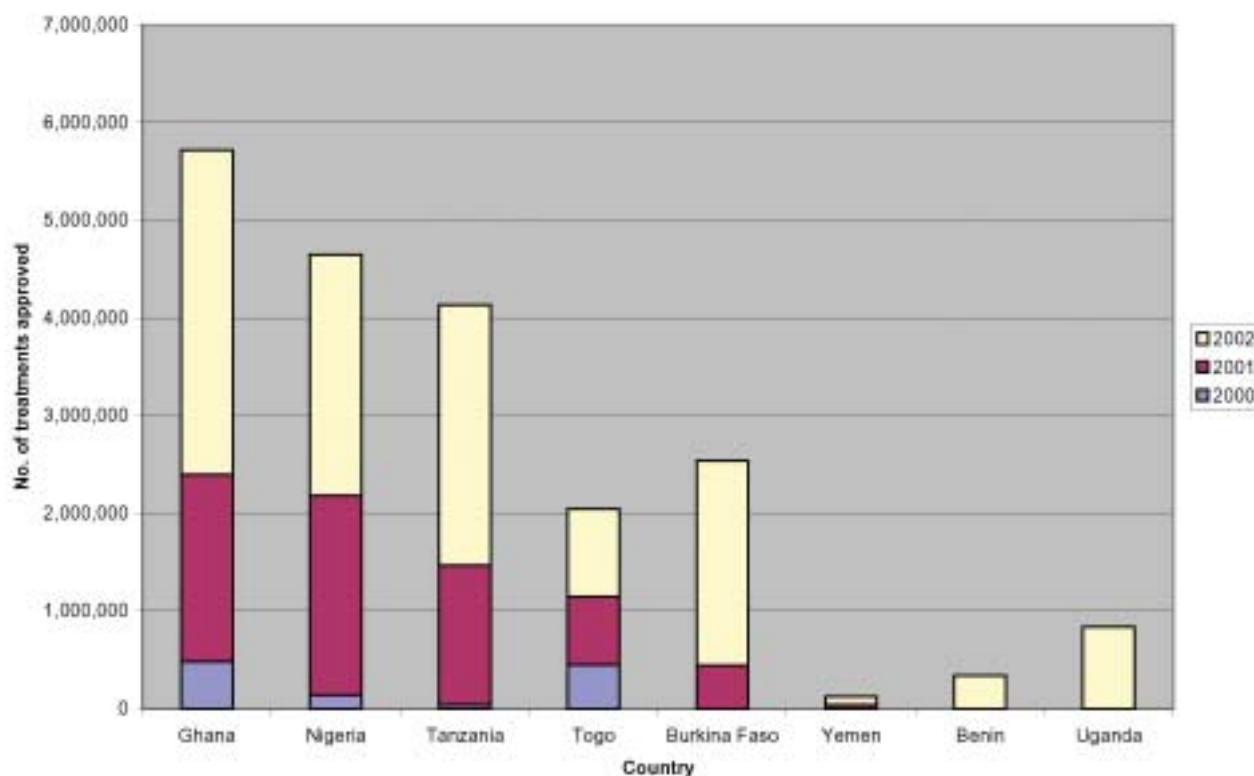


Figure2. Mectizan® & albendazole dual treatments approved for national programmes to eliminate lymphatic filariasis in Africa and Yemen, by country and year of implementation.



**Annual Report for the National Programme to Eliminate Lymphatic Filariasis**

**COUNTRY**

Reporting year (by calendar year):	<input type="text"/> / <input type="text"/> / <input type="text"/> to <input type="text"/> 31/12/ <input type="text"/> / <input type="text"/> dd mm yy dd mm yy (i.e. 31.01.02 to 31.12.02)
Is this the FIRST annual report being submitted to WHO?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If NO, give the date of the last annual report	<input type="text"/> / <input type="text"/> / <input type="text"/> to <input type="text"/> / <input type="text"/> / <input type="text"/> dd mm yy dd mm yy
Date of submission of this annual report	<input type="text"/> / <input type="text"/> / <input type="text"/> dd mm yy

**This Annual Report must be completed and sent to the RPRG through the WHO country office by 28 February of the following year**

Submitted by  
 The National Programme to Eliminate Lymphatic Filariasis  
 Ministry of Health  
 (modify as necessary)

### Annual Report for the National Programme to Eliminate Lymphatic Filariasis

Please submit one copy of this form to the Regional Programme Review Group (RPRG) through the WHO Representative (WR) at the appropriate address provided below by 28 February of the following year (eg. Annual report for the period 01.01.02 to 31.12.02 to be submitted on 28 February 03).

Americas	Africa	Eastern Mediterranean
World Health Organization Regional Office for the Americas/Pan American Health Organization (AMRO/PAHO)  525 23rd Street NW Washington DC 20037 USA  Tel: +1 202 974 3894 Fax: +1 202 974 3688 E-mail: ehrenbej@paho.org	World Health Organization Regional Office for Africa (AFRO)  Medical School C Ward Parirenyatwa Hospital P.O. Box BE 773 Belvedere Harare Zimbabwe  Tel: +1 321 733 9006 Fax: +1 263 4746 127 E-mail: roungouj@whoafr.org	World Health Organization Regional Office for the Eastern Mediterranean (EMRO)  WHO Post Office Abdul Razzak Al Sanhouri Street, Naser City Cairo 11371 Egypt  Tel: +202 670 2535 Fax: +202 670 2492 E-mail: postmaster@emro.who.int
Indian Subcontinent	Mekong-Plus	PacCARE
World Health Organization Regional Office for South-East Asia (SEARO)  World Health House Indraprastha Estate Mahatma Gandhi Road New Delhi 110002 India  Tel: +91 11 2337 0804 Fax: +91 11 2332 7972 E-mail: chusakp@whosea.org	World Health Organization Regional Office for the Western Pacific (WPRO)  P.O. Box 2932 1000 Manila Philippines  Tel: +632 528 9725 Fax: +632 521 10 36 E-mail: palmerk@wpro.who.int	World Health Organization Regional Office for the Western Pacific (WPRO)  PacELF Mataika House Tamavua Suva Fiji  Tel: +679 33 04 600 Fax: +679 30 04 62 E-mail: ichimorik@fij.wpro.who.int

For information and to obtain technical documents, consult the WHO Web site for LF elimination:

<http://www.who.int/ctd/filariasis/home/>

## Annex 2 Revised Annual Report Form

### Annual Report for the National Programme to Eliminate Lymphatic Filariasis

#### 1. Information from the reporting Ministry of Health

1.1 Division of the Ministry of Health responsible for reporting on the National Programme to Eliminate Lymphatic Filariasis:.....

Reporting official (Programme Manager):

Name .....

Title .....

Address .....

Country .....

Telephone ..... Fax ..... E-mail.....

#### 1.2 Programme Manager

Is the above Programme Manager the same as last year?

Yes  No

#### 1.3 Did the members of National Task Force (NTF) change during the year?

Yes  No

If yes, please give details:

.....  
.....  
.....  
.....  
.....  
.....

#### 2. Programme resources

##### 2.1 Has there been any change (increase/decrease) in financial or other resources to support PELF?

Yes  No

##### 2.2 If yes, briefly describe the changes:

.....  
.....  
.....

##### 2.3 Was additional external financial support obtained for the programme?

Yes  No

2.4 If yes, please list in the table below:

### 3. Report on PELF implementation

### 3.1 Update on mapping of the distribution of lymphatic filariasis

<sup>a</sup> List of population of each endemic IU.

## Annex 2 Revised Annual Report Form

3.1.2 Please attach or enclose a map of the country with the updated map of the implementation units (showing their status as endemic, non-endemic, or uncertain).

### 3.2 Interruption of transmission

3.2.1 Please choose the type of mass drug administration (MDA) used (tick applicable response):

In countries where onchocerciasis and LF are co-endemic:

- Single annual dose MDA with ivermectin and albendazole

In countries where onchocerciasis and LF are not co-endemic:

- Single annual dose MDA with DEC and albendazole
- DEC-fortified salt

3.2.2 Was any change made in the IUs for MDA compared with the last application? .....

.....  
Yes  No

3.2.3 If yes, state why it was necessary to make the change(s) and attach a map (on a separate sheet with scale and coordinates) of the revised programme area.

.....  
.....  
.....

3.2.4 Number of MDA IUs reporting to the national programme with MDA coverage data:

.....

3.2.5 Report of MDA by implementation unit (IU).

Concept of the IU for MDA: the IU is the administrative unit in the country, where the decision has been made to administer drugs to the entire population.

Region	IU (Name)	MD A type	MD A Period	IU				Total population of IU <sup>a</sup>	Reported by each IU	
				No. of villages covered	Total pop. in villages	No. of urban areas covered	Total pop. in urban areas		No. of individuals ingesting tablets <sup>b</sup>	Reported coverage (%) <sup>c</sup>
1	2	3	4	5	6	7	8	9	10	11
Example (Ndoko)	(Ayacucho)	DEC +alb	1 week	(2600)	(60 000)	(4)	(40 000)	(60 000)	(54 000)	80 (65-95%) <sup>d</sup>
TOTAL										

<sup>a</sup> The ideal denominator: to calculate the coverage it is recommended to use the total population, which can be obtained by census or estimation or total population counted by drug distributors. Do not use the eligible population. (eligible population = total population minus pregnant women and children).

<sup>b</sup>Coverage definition: coverage is the proportion of the total population who ingested the drugs and is evaluated by year and by MDA. It can be done for each IU and is based on reports received from reporting units/drug distributors.

<sup>c</sup>Coverage reported by IU = (number of people who ingested the drug / total population) X 100.

<sup>d</sup>Country coverage reported: % of variation of coverage. In brackets put the minimal and maximal coverage reported in the IU.

## Annex 2 Revised Annual Report Form

### 3.2.6 Surveys in sentinel sites (fixed) and spot check sites (mobiles)

Result of survey for microfilaraemia and disease prevalence in designated sentinel sites and spot-check sites in the programme area. (Indicate in the table below.)

<sup>a</sup> Year of MDA (i.e: 1 if first MDA, 2 if second MDA, etc.).

<sup>b</sup> CFA: Circulating filarial antigen tested by ICT card.

◦ Microfilaria density by ml: Volume of blood recommended for mf samples:  $20\mu\text{l}$  . If a different volume is used, the formula must be corrected.

<sup>d</sup> Coverage reported by drug distributors in sentinel sites (village).

<sup>a</sup> Coverage checked = (number of people who say they ingested the drug X 100 / population evaluated on site)

This coverage must be done each year in each site (sentinel or spot-check). Assessment of at least 500 people should be made 7–21 days after MDA to ascertain the number of individuals who actually ingested the drug. The recommended population to be evaluated is around 500 people per site.

### 3.2.7 Treatment strategies/approaches.

3.2.7.1 What drug distribution strategy was used for MDA to achieve high coverage? (E.g. house-to-house, booth distribution, special population groups, areas of community aggregation. See Programme Managers Guidelines for definitions.).....

## 3.2.7.2 Which method was used to determine the dose of DEC? Please select:

Height Weight Age 

Complete table below

Height	Weight	Age	No. of tablets

## 3.2.8 Implementation units in which MDA was discontinued, i.e. those that were treated until the year immediately prior to this calendar year, but not treated this year

Region	MDA IU (name)	Total population of the IU	No. of rounds MDA before this year	Criteria used for interruption <sup>a</sup>	Other reasons for discontinuation
TOTAL					

<sup>a</sup>As described in the guidelines for interruption of transmission, i.e. none of the sampled lot of 3000 children in the age group 1–5 years tested positive by ICT (or night blood smear in Brugian areas).

## Annex 2 Revised Annual Report Form

3.2.9 Map of the country indicating IUs, categorized by IUs with MDA coverage >80%, 65–80%, and <65%, and IUs that achieved interruption of transmission.

### 3.3 Disability management and prevention

No. of health facilities where health staff are trained to manage patients with filarial disease

Level of health care	No. of centres with skilled staff	No. of filarial patients managed	No. filarial hydrocelectomies undertaken under PELF
Regional facility			
Sub-regional facility			
District level facility			
Health centre level			

### 3.4 Training of health staff for the lymphatic filariasis elimination programme

Administrative level	Interruption of transmission		Disability prevention and control		Both interruption and disability	
	No. of courses organized	No. of staff trained	No. of courses organized	No. of staff trained	No. of courses organized	No. of staff trained
National						
Provincial or regional						
District						
TOTAL						

### 3.5 Social mobilization

#### 3.5.1 Were KAP studies carried out in the country? If so, briefly describe the results.

.....

.....

.....

#### 3.5.2 Briefly describe the IEC (Information, Education and Communication) campaign and activities carried out to mobilize the different communities towards achieving a high MDA coverage rate.

.....

.....

.....

### 4. Serious adverse experience (SAEs)

If SAEs are encountered during treatment, an SAE Report Form must be completed immediately and returned to WHO and GlaxoSmithKline. (In areas where albendazole is used in conjunction with ivermectin [Mectizan®], the Mectizan® Expert Committee's Serious Adverse Experience Form must be completed and returned to that Committee.)

Region	No. of individuals who developed SAE (attach a copy of each report)	Type of reaction	Clinical outcomes	Required hospital care	No. of SAEs reported to WHO/GSK

## 5. Inventory of drugs and diagnostic tests

Inventory	ICT cards	Albendazole tablets	DEC tablets			Ivermectin tablets (3 mg)
		(400 mg)	(50 mg)	(100 mg)	Others (specify)	
Available at the start of the reporting period						
Received during the reporting period						
Balance at the end of the reporting period						
Expiry date(s) of the remaining stock						

Were any diagnostics tests or drugs destroyed on or before the expiration date? If yes, explain:

.....

.....

## 6. Was an independent evaluation conducted during the calendar year?

Yes  No

If yes, please give details with regard to:

## 6.1 Constitution of the teams that carried out the independent evaluation

## 6.2 Areas of the programme that were evaluated and their main observations:

- Interruption of transmission
- Disability management and prevention
- Training
- Social mobilization or IEC campaign

7. Were any problems encountered in reaching maximal coverage (e.g. actual ingestion of the drugs)?  
Were they general or specific to any locations?

.....

.....

## 7.1 Describe how each problem can be solved for the next round of MDA

Region	Implementation unit (name)	Problems/issues	Proposed solutions

Signed:

**List of LF-endemic  
countries and territories  
by PRG**

**African PRG**

Angola  
Benin  
Burkina Faso  
Burundi  
Cameroon  
Cape Verde  
Central African Republic  
Chad  
Comoros  
Congo  
Côte d'Ivoire  
Democratic Republic of the Congo  
Equatorial Guinea  
Ethiopia  
Gabon  
Gambia  
Ghana  
Guinea  
Guinea-Bissau  
Kenya  
Liberia  
Madagascar  
Malawi  
Mali  
Mauritius  
Mozambique  
Niger  
Nigeria  
Réunion  
Rwanda  
Sao Tome and Principe  
Senegal  
Seychelles  
Sierra Leone  
Togo  
Uganda  
United Republic of Tanzania  
Zambia  
Zimbabwe

**American PRG**

Brazil  
Costa Rica  
Dominican Republic

Guyana  
Haiti  
Suriname  
Trinidad and Tobago

**Eastern Mediterranean PRG**

Egypt  
Sudan  
Yemen

**Indian Subcontinent PRG**

Bangladesh  
India  
Maldives  
Nepal  
Sri Lanka

**Mekong-Plus PRG**

Brunei Darussalam  
Cambodia  
China  
Indonesia  
Lao People's Democratic Republic  
Malaysia  
Myanmar  
Philippines  
Republic of Korea  
Thailand  
Viet Nam

**PacCARE PRG**

American Samoa  
Cook Islands  
Fiji  
French Polynesia  
Kiribati  
Micronesia (Federated States of)  
New Caledonia  
Niue  
Papua New Guinea  
Samoa  
Solomon Islands  
Tonga  
Tuvalu  
Vanuatu  
Wallis and Futuna

## Abbreviations and definitions

### Abbreviations

AF	antifilarial
AFESD	Arab Fund for Economic and Social Development
AFRO	WHO Regional Office for Africa
AMRO	WHO Regional Office for the Americas
API	active pharmaceutical ingredient
CDC	Centers for Disease Control and Prevention, Atlanta, GA, USA
CDS	Communicable Diseases Cluster of WHO
CFA	circulating filarial antigen
COMBI	communication for behavioural impact
DEC	diethylcarbamazine citrate
DFID	Department for International Development of the United Kingdom
EMRO	WHO Regional Office for the Eastern Mediterranean
GAELF	Global Alliance to Eliminate Lymphatic Filariasis
GPELF	Global Programme to Eliminate Lymphatic Filariasis
GSK	GlaxoSmithKline
HPLC	high-pressure liquid chromatography
ICT	immuno-chromatographic test
IEC	Information, Education, and Communication
IU	implementation unit
IVM	ivermectin
JICA	Japan International Cooperation Agency
KAP	Knowledge, Attitude and Practices
LF	lymphatic filariasis
MDA	mass drug administration
mf	microfilaria
MoH	Ministry of Health
NGO	nongovernmental organization
NTF	National Task Force
PacCARE	PacELF Coordinating and Review Group
PacELF	Pacific Initiative for the Elimination of Lymphatic Filariasis
PAHO	Pan American Health Organization
PELF	Programme to Eliminate Lymphatic Filariasis
PRG	Programme Review Group
RPRG	Regional Programme Review Group
SAE	serious adverse experience
SEARO	WHO Regional Office for South-East Asia
TAG	Technical Advisory Group
TDR	UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
UNDP	United Nations Development Programme
WPRO	WHO Regional Office for the Western Pacific

## Definitions

*serious adverse experience*

An event that is fatal, life-threatening, disabling, or incapacitating or that results in hospitalization, prolongs a hospital stay, or is associated with congenital abnormality, cancer or overdose (either accidental or intentional); any experience that the investigator regards as serious or that would suggest any significant hazard, contraindication, side-effect, or precaution that may be associated with the use of the drug should be reported as a serious event.

*Case classification*

*lymphatic filariasis case*

An individual currently infected with *Brugia malayi*, *B. timori* or *Wuchereria bancrofti*, whether or not microfilaraemic.

*clinical case*

An individual with any of the clinical findings of hydrocele, chylocele, lymphoedema, chyluria, haematochyluria, haematuria, hypereosinophilia, or tropical pulmonary eosinophilia syndrome, for which other causes have been excluded in a resident of, or long-term visitor to, an endemic area, plus specific antibody elevations in visitors to endemic regions.

*probable case*

A case that meets the clinical case definition.

*confirmed case*

A case confirmed by laboratory or ultrasound examinations. Laboratory criteria for diagnosis of infection are presence of microfilariae or circulating filarial antigen or detection of adult worm(s) by ultrasound or biopsy.

*Endemicity*

A country is classified into:

*implementation unit (IU) for MDA*

A designated administrative area in a country; if the area is identified as endemic or as having indigenous transmission, the entire population should be treated with recommended antifilarial (AF) drugs.

*endemic IU*

An IU or any population area (e.g. village or urban area) with an LF infection rate of 1% or more among its native population.

*endemic*

A country with any IUs known or reported to be endemic since 1980.

*never endemic*

A country with no history or evidence of endemic filariasis.

*post-endemic*

A country with a known history of endemic filariasis before 1980, but with no evidence of transmission or new infection since 1980.

*uncertain*

A country with a history of endemic filariasis before 1980 or with evidence of infection in immigrants but no clear evidence of indigenous transmission.

***Drug administration and monitoring****at-risk population*

Total population in an endemic implementation unit(s).

*[area]*

Refers to any geographical region up to the level of the designated IU; for example, if the designated IU is a district that is subdivided into counties/blocks, villages, or urban areas, [area] could refer to a county/block, village, or urban area.

*drug coverage for a designated [area]*

The proportion of all individuals of the [area] who ingested antifilarial (AF) drug(s) in the adequate dosage is calculated as:

$$\frac{\text{total individuals who ingested adequate dosage of AF drugs}}{\text{total population of the [area]}} \times 100$$

*drug coverage for administrative units*

For reporting coverage for administrative units above the level of the designated IU(s), the drug coverage is calculated as:

$$\frac{\text{total individuals in the targeted IU(s) who ingested adequate dosage of AF drugs}}{\text{total population of all targeted IU(s) in the administrative unit}} \times 100$$

*reported coverage*

The coverage based on reports received from reporting units is calculated as:

$$\frac{\text{total no. of individuals reported to have ingested the recommended dosage of AF drugs}}{\text{total population in the IU(s) where the programme is implemented}} \times 100$$

*geographical coverage*

The proportion of targeted IU(s) covered by MDA during the reporting years is based on reported data and calculated as:

$$\frac{\text{no. of IU(s) in which MDA takes place}}{\text{total no. of endemic IU(s)}} \times 100$$

and

$$\frac{\text{total population in IU(s) where MDA takes place}}{\text{total population of all endemic IU(s)}} \times 100$$

## Annex 4 Abbreviations and definitions

In addition to data on national geographical coverage, it is useful to provide geographical coverage data for each IU. Thus, for a given IU, geographical coverage is calculated as:

$$\frac{\text{no. of communities within the IU(s) in which MDA took place}}{\text{total no. of communities within the IU(s)}} \times 100$$

### *surveyed coverage*

A measure that complements and expands reported coverage by using active, population-based cluster survey methods; calculated as:

$$\frac{\text{no. of individuals identified by household survey who to have taken adequate dosage of AF drugs}}{\text{no. of individuals residing in all households surveyed}} \times 100$$

### *checked drug coverage*

The coverage based on actual verification by direct observation of individuals who ingested the drug(s) in the adequate dosage (done on a sample population) is calculated as:

$$\frac{\text{total individuals who ingested adequate dosage of AF drugs}}{\text{total individuals in the verified households}} \times 100$$

### *microfilaria (mf) prevalence*

The proportion of blood slides (20µl) found positive for microfilariae (*Brugia malayi*, *B. timori*, or *Wuchereria bancrofti*) species is calculated as:

$$\frac{\text{no. of individuals whose slides are positive for mf}}{\text{total no. of individuals examined for mf}} \times 100$$

### *microfilaria density (mfd)*

The average number of microfilariae in slides positive for microfilaria per ml of capillary blood (presuming 20 µl per slide) is calculated as:

$$\frac{\text{total count of microfilariae in the slides found positive}}{\text{total no. of slides found positive}} \times 50$$

### *antigen prevalence*

the proportion of individuals surveyed testing positive for circulating filarial antigen (CFA) is calculated as:

$$\frac{\text{no. of individuals testing positive}}{\text{total no. of individuals with a valid test result}} \times 100$$

*Note:* When lot quality assurance sampling is undertaken, as in initial assessment and mapping, and the survey is stopped when a positive result is found, it is inappropriate to calculate the prevalence because the result would indicate only that the antigenaemia is above the cut-off percentage.

*Grading of lymphoedema**Grade I*

Mostly pitting oedema; spontaneously reversible on elevation.

*Grade II*

Mostly non-pitting oedema; not spontaneously reversible on elevation.

*Grade III*

Gross increase in volume in a Grade II lymphoedema with dermatosclerosis and papillomatous lesions.





