

SEA-FIL-29
Distribution: General

Regional Strategic Plan for Elimination of Lymphatic Filariasis (2004-2007)



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CONTENTS

	<i>Page</i>
1. THE DISEASE	1
Formulation of Regional Strategic Plan	2
2. GOAL AND OBJECTIVES	2
Goal.....	2
Definition of LF Elimination as a Public Health Problem.....	3
Objectives.....	3
Specific Objectives (2004-2007 Plan).....	3
3. STRATEGIES.....	3
3.1 Specific Strategies to Achieve Objective 1: To Progressively Reduce and Ultimately Interrupt LF Transmission	3
3.2 Specific Strategies to Achieve Objective 2: To Prevent and Reduce Disability in the Affected Persons	4
3.3 Strategies Related to Both Objectives.....	5
4. PREPARATORY ACTIVITIES	7
Country Planning and Preparation Activities.....	7
5. CURRENT SITUATION IN SOUTH-EAST ASIA.....	8
5.1 General	8
5.2 Indian Sub-continent Group	9
5.3 Mekong Plus Group.....	18
6. REGIONAL AND NATIONAL TARGETS FOR MASS DRUG ADMINISTRATION	25
7. FUNDING	25
8. GLOBAL AND REGIONAL INITIATIVES FOR LYMPHATIC FILARIASIS ELIMINATION	26
8.1 Technical Advisory Group	27
8.2 Programme Review Groups	27

9.	FACTORS FAVOURABLE FOR ELIMINATION OF LYMPHATIC FILARIASIS	27
	Biological	27
	Cost-effective Tools	28
	Operational Feasibility	28
	Partners.....	28
	LF Support Centres	28
10.	FIVE-YEAR TARGETS FOR THE ELIMINATION OF LYMPHATIC FILARIASIS	29
11.	RELEVANT TECHNICAL SUPPORT	32
	11.1 Technical Guidelines	32
	11.2 Drug Quality, Drug Supplies and Logistics	32
	11.3 Surveillance Including Mapping and Programme Monitoring	33
12.	THE PARTNERS AND THEIR ROLES	33
	12.1 Local Partners.....	33
	12.2 Bilateral Agencies	34
	12.3 International Agencies	34
	12.4 Academic Institutions	35
	12.5 Private Sector	35
	12.6 Nongovernmental Development Organizations (NGDOs).....	35
	12.7 Others.....	35
13.	INTEGRATION WITH OTHER DISEASE CONTROL PROGRAMMES	36
	13.1 Intestinal Parasite Control Programmes	36
	13.2 Malaria Control Programme.....	36
14.	TIME-FRAME	36
	Regional Targets.....	36

1. THE DISEASE

Lymphatic Filariasis (LF) is one of the most debilitating and disfiguring scourges among all diseases. Worldwide 1.1 billion people are at risk of infection and some 120 million people are infected in 80 countries. It is one of the major public health problems in South-East Asia. Nine of the 11 countries in the Region are known to be endemic for filariasis. More than 60% of the global population and half of the infected cases are from this region which accounts for about 57% of the total global burden estimates of 5.1 million DALYs lost due to LF.

The infection is caused by three helminthic worms *Wucheraria bancrofti*, *Brugia malayi* and *Brugia timori* inhabiting the lymphatics. Though the disease is not fatal, it is usually acquired in early childhood and is responsible for considerable morbidity, causing social stigma among men, women and children. It predominantly afflicts poor people in both urban and rural areas as well as neglected populations. All the three human filarial parasites are prevalent in the Region with *W. bancrofti* being responsible for over 95% of cases. Transmission of these parasites is complicated with the involvement of all the four vector groups viz, *Culex*, *Anopheles*, *Aedine* and *Mansonia*.

Lymphatic filariasis is one of the only six infectious diseases considered by WHO as **eradicable** with the currently available tools. The programme aims at the reduction of mf rate <1% and ultimate interruption of transmission, thereby protecting future generations from this scourge. Simple self-help methods of hygiene are shown to provide great relief or prevent debilitating acute episodes. New surgical techniques have demonstrated speedy recovery from clinical manifestations. Disability prevention and care initiatives facilitate community support for drug compliance. Massive chronic manifestations are unfortunately irreversible.

Effective implementation of WHO recommended strategies over a period of 10-15 years can be expected to produce a significant reduction in mf rates and morbidity associated with the disease. In addition, it will have an impact on improvement in reproductive health, enhancement of child and maternal health, improved household income, and poverty alleviation. The

programme thus envisages improvement in the overall national health care and innovation in intra and intersectoral cooperation in uplifting multitudes of population above the poverty line.

The nine LF endemic countries in the SEA Region are Bangladesh, India, Indonesia, Nepal, Myanmar, Maldives, Sri Lanka, Thailand and Timor-Leste. The two non-endemic countries are Bhutan and DPR Korea. The nine LF endemic countries are allocated into two regional groups.

- Indian Sub-continent Group: Bangladesh, India, Maldives, Nepal and Sri Lanka.
- Mekong Plus Group: Indonesia, Myanmar, Thailand and Timor-Leste

Formulation of Regional Strategic Plan

An Informal Consultation on Lymphatic Filariasis in South-East Asia was held in Orissa, India, 23-25 February 2000. Based on the global target and strategies (WHO/FIL/99-198) and consensus obtained from the above mentioned consultation, the Regional Strategic Plan for Elimination of Lymphatic Filariasis was developed for the period 2000-2004. This Strategic Plan was successfully implemented in the SEA Region. Consequently, the plan was further reviewed and revised for the period of 2004 –2007 with the consensus reached at the Bi-Regional Programme Managers' Meeting held in Bali, Indonesia, 22-24 July 2002. This document represents the Regional Strategic Plan for the WHO South-East Asia Region, with emphasis on LF elimination in the Indian sub-continent group of countries. The Mekong Plus group has developed a separate Strategic Plan for the period 2004-2010 which includes the four countries of the SEA Region that are part of Mekong Plus.

2. GOAL AND OBJECTIVES

Goal

Elimination of lymphatic filariasis (LF) as a public health problem from the SEA Region, by the year 2020.

Definition of LF Elimination as a Public Health Problem

LF elimination as a public health problem is defined as:

- Microfilaraemia rate <1%.
- Evidence that there is no new parasitic infection in the community i.e. 5-year cumulative incidence in children born in a given implementation unit (IU) after the start of Mass Drug Administration (MDA), is less than 1 per 1000 children.

Objectives

- (1) To progressively reduce and ultimately interrupt the transmission of lymphatic filariasis.
- (2) To prevent and reduce disability in affected persons through disability alleviation and appropriate management.

Specific Objectives (2004-2007 Plan)

- To complete the mapping of the distribution of LF;
- To implement or sustain and scale up mass drug administration (MDA) with DEC and albendazole in all endemic countries;
- To implement activities for prevention and alleviation of disability in all endemic countries;
- To conduct operational research on important elements of elimination activities.

3. STRATEGIES

3.1 Specific Strategies to Achieve Objective 1: To Progressively Reduce and Ultimately Interrupt LF Transmission

- (1) Mass drug administration (MDA) of two drugs – DEC + albendazole to the entire population at risk – single one-time administration once a year for a minimum of 5 years.
- (2) DEC fortified salt to the entire population at risk for one year.

Choice of mass drug administration

WHO recommends the use of single-dose yearly treatment with two drugs (DEC+albendazole). Use of DEC fortified salt for 1-2 years in selected areas will also be a single strategy of choice or supplementary to the low coverage areas of MDA.

Note: All endemic countries of the SEA Region have selected MDA as the strategy.

(3) Selective vector control.

Vector control, wherever in operation under vector-borne disease control programmes, will continue to be the supplementary method for accelerating the process of elimination of LF. Bio-environmental control methods, advent of new formulations such as biocides and larvicides and source reduction through active participation of the community constitute potential methods for successful implementation of vector control.

3.2 Specific Strategies to Achieve Objective 2: To Prevent and Reduce Disability in the Affected Persons

- (1) Home-based self-care measures to prevent/reduce lymphoedema.
- (2) Management of acute episodes.
- (3) Surgical facilities for Hydrocolectomy.
- (4) Early recognition and prompt preventive measures to minimize lymphoedema.

Prevention and alleviation of disability due to LF

Disability prevention and control will be an essential component of LF elimination. The main approach will be community and home-based management of lymphoedema cases and appropriate surgical treatment for hydrocele provided through the already existing infrastructure of hospitals and other institutions. Such facilities need to be continued after the elimination goal is achieved.

Early recognition and prompt treatment of acute manifestations and treatment and prevention of clinical consequences of lymphatic filariasis in infected individuals will be emphasized.

Training modules and health education material prepared for health workers would be translated into the local languages by respective countries in the Region. Establishment of an international training centre in the Region will be explored, and an international workshop for morbidity control held in the Region.

3.3 Strategies Related to Both Objectives

Social mobilization and advocacy

The success of LF Elimination Programme, including MDA implementation, achievement of high coverage and disability prevention/alleviation will largely depend on community awareness, involvement and support and also advocacy at all political, social and administrative levels. All available ways and means of information, education and communication (IEC) and all avenues of advocacy will have to be used to obtain the highest reach to the population. Communication for Behaviour Impact (COMBI) approaches can also be used. The Social Mobilization and Advocacy plan should be formulated in a way that all sections of the community can be reached and involved.

Partnerships

It is an accepted fact that no health programme can succeed solely through governmental efforts. National programmes should pro-actively identify and mobilize partners for LF elimination – these can be other government ministries, UN agencies, bilateral/multilateral donors, non-governmental Organisations (NGOs), the private sector, local community groups, media, religious leaders, service clubs like Rotary or Lions etc. Coordination and leadership of the partnership should be provided by the countries and the ownership vested with all the stakeholders.

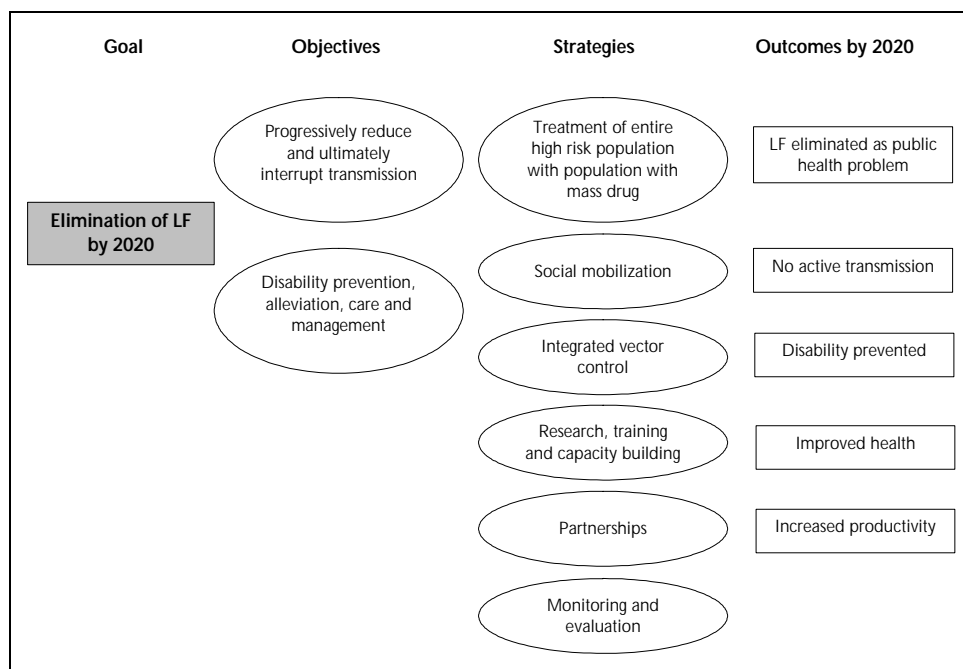
Operational research

The implementation of MDA, disability prevention and other activities should be subjected to operational research in order to improve programme management, monitoring and evaluation, identification of technical and operational problems and appropriate solutions and assessment of impact. The main aim of operational research is to obtain the best impact and cost-effective implementation.

Monitoring and evaluation

Monitoring and evaluation should be in-built into all aspects and all stages of the programme. It includes assessing results of mapping, prevalence before, during and after MDA, reported and actual coverage, mid-term evaluation and impact assessment, including impact of social mobilization, disability alleviation and other activities.

Elimination of lymphatic filariasis – schematic diagram of goal, objectives strategies and outcomes



4. PREPARATORY ACTIVITIES

Country Planning and Preparation Activities

Preparation of national plans of action

Preparation of national plans of action by the ministries of health, covering various facets of the objectives, strategies, activities, implementation, administration, management, proposed budget and possible external assistance such as free supplies of albendazole, is a prerequisite for the elimination of LF.

Formation of a National Task Force (NTF)

Formation of a national task force in each country is important. NTF can play a major role in guiding and monitoring LF elimination. It is proposed that NTF meet at six-monthly intervals to review the progress of LF elimination in the country, identify the strengths and weaknesses and advise on corrective measures as needed. NTF will also review the annual reports and re-applications for the supply of albendazole before they are submitted to the Regional Programme Review Group (RPRG) for consideration.

Methods of mapping

- Morbidity surveys
- ICT Cards
- Night Blood surveys

Depending on the results of mapping, areas are marked as:

- Red – Endemic
- Green – Non – Endemic
- Gray – Uncertain

Identification of sentinel and spot check sites

The sentinel sites will help to ascertain the baseline indicators – parasitological and clinical, and also monitor the trend and impact of MDA rounds on

parasitological indicators. Both the sentinel and spot check sites will serve to cross-check the reported coverage of MDA by being the sites for assessment of "observed coverage".

Each implementation unit (IU) should have a minimum two sentinel sites and a minimum of two Spot Check sites.

Capacity building of health staff and volunteers to be involved in LF elimination activities

This will be an important component of the programme. It includes the development of appropriate training materials and training packages for health staff and volunteers to be involved in mapping, MDA, disability prevention/alleviation and social mobilization and capacity building of programme managers at various levels.

5. CURRENT SITUATION IN SOUTH-EAST ASIA

5.1 General

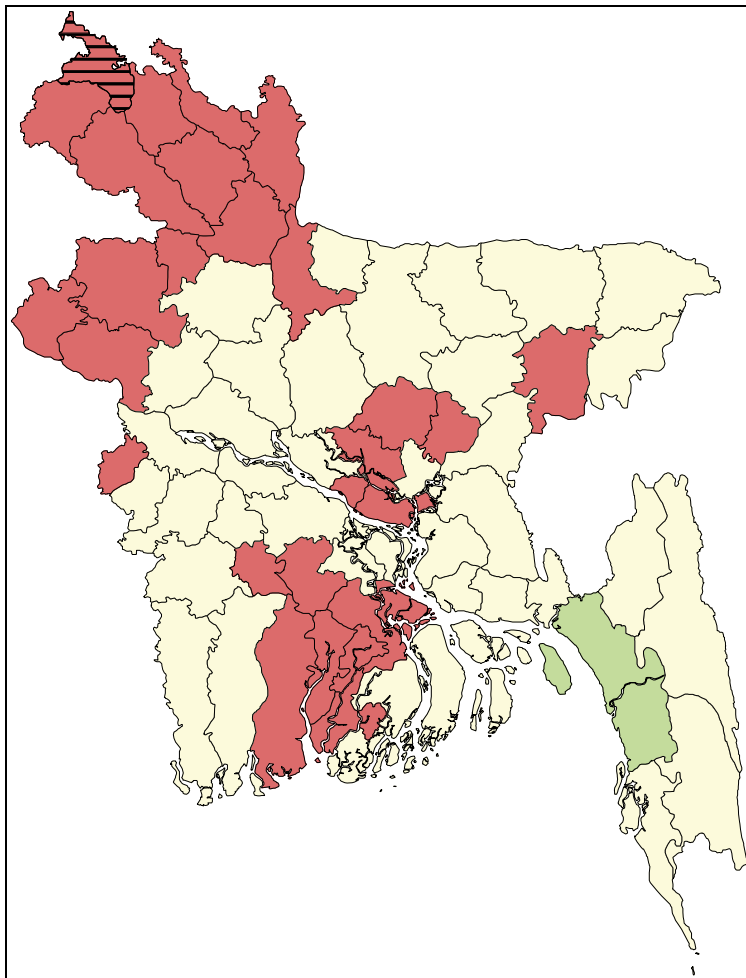
It is estimated that there are about 700 million people living in endemic areas in the South-East Asia Region, constituting 63% of the global population at risk, with about 60 million persons either harbouring microfilaraemia or suffering from clinical manifestations which make up half of the global number of cases. All the three lymphatic filaria parasites viz. *W. bancrofti*, *B. malayi* and *B. timori* are prevalent in the Region. Bancroftian filariasis transmitted by the ubiquitous principal vector, *Culex quinquefasciatus*, is the most predominant infection in continental Asia while Brugian infections transmitted by *Mansonia* and *Anopheles* vectors predominate in the Indonesian Archipelago.

Filariasis control programmes are in operation in eight of the nine endemic countries and national plans of action have been formulated in each of these countries except Timor-Leste. Also National Task Forces for the elimination of LF have been fully functional by 2003 in eight countries. The country-wise filariasis situation is given below:

5.2 Indian Sub-continent Group

Bangladesh

LF endemic areas in Bangladesh



- (1) Total population of the country: 137 439 000
- (2) Population at risk of LF: 50 000 000 (mapping of endemic areas is in progress)

- (3) Administrative units:
- No. of states/provinces/divisions: 6
 - No. of districts or townships: 64
- (4) Administrative units selected for implementation of MDA (implementation unit): 5 (by 2003)
- (5) LF parasitic species : *W. bancrofti*
- : *B. malayi*
- : *B. timori*
- (6) Main vectors: *Culex quinquefasciatus*
- (7) Mapping status: In progress , 38% complete by 2003
- (8) MDA implementation status

Year	2001	2002	2003
No of IUs covered	1	4	5
Pop. covered (millions)	0.808	4.86	6.17

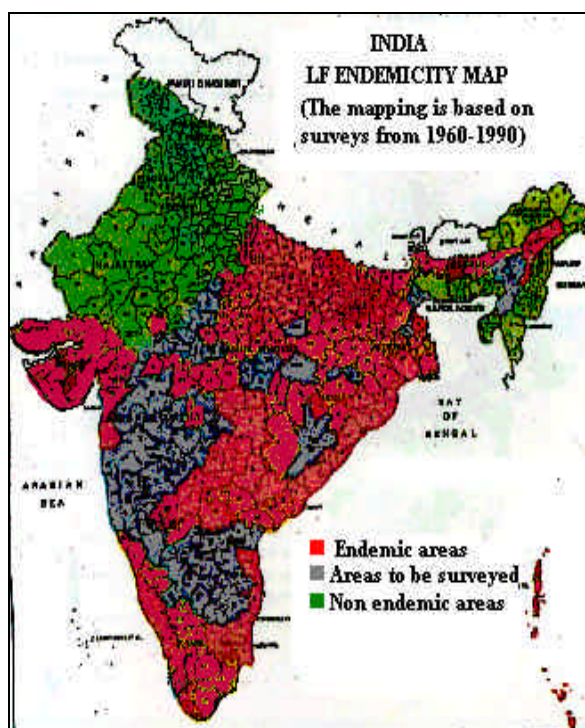
W. bancrofti with nocturnal periodicity is the only filarial species prevalent in Bangladesh. About 70 million people in 23 out of 64 districts in the country are at risk of infection. The estimated number of microfilaria (mf) carriers was one million while another half a million cases were afflicted with clinical manifestations.

Mapping of the distribution of mf cases is expected to be complete by 2004. By 2003, 23 of the 41 districts (IUs) where mapping has been completed were found to be endemic.

Bangladesh commenced MDA with DEC and albendazole in 2001 in Panchagar district covering 808000 people and scaled up in 2002 to cover 4.9 million people in four districts.

India

LF endemic areas in India



- (1) Total population of the country: 1 048 279 000
- (2) Population at risk of LF: 454 000 000
- (3) Administrative units:
 - No. of states/provinces/divisions: 35 States (20 are endemic)
 - No. of districts or townships: 616 (250 are endemic)
- (4) Administrative units selected for implementation of MDA (implementation unit): 201
- (5) LF parasitic species : *W. bancrofti*
: *B. malayi*
: *B. Timori*
- (6) Main vectors: *Culex quinquefasciatus* and *Mansonia* species

(7) Mapping status: 44% completed by 2003

(8) MDA implementation status

Year	2001	2002	2003
No of IUs covered (with DEC + Alb)	7	8	7
Pop. covered (with DEC + Alb) millions	14.6	21.1	12.8
Pop. covered (with DEC alone) millions	29.8	40.4	38.4

Filariasis is a major public health problem next only to malaria. According to recent estimates, about 454 million people with 28 million mf carriers and 21 million clinical cases were spread in 15 states and five union territories. More than 40% of the country's population lives in these endemic states. India accounts for about 64% of the endemic population and 80% of the disease burden in the Region. *W. bancrofti* is the most predominant infection comprising 99.4% of the problem in the country while *B. malayi* was confined to the western coast of Kerala and a few pockets in six other states. Both the infections were nocturnally periodic. In the Nicobar group of islands, diurnally subperiodic infection of *W. bancrofti* transmitted by *Aedes (Finlaya) niveus* group was detected about three decades back.

The first pilot project in India for the control of LF was undertaken in Orissa from 1949-1954 and in the subsequent year the National Filaria Control Programme was launched to delimit the area endemic for LF. India has also undertaken large scale control operations and trained professionals and ancillary staff to run the programme. Currently, a comparative study is being carried out under the auspices of the Indian Council of Medical Research on the feasibility, safety and efficacy of DEC plus albendazole versus DEC alone.

Mapping of LF distribution was completed in 232 IUs in 2003 and 135 of them were found endemic whilst 97 IUs had either no mf cases or prevalence rates <1%.

India however adopted the policy of single drug strategy with DEC for MDA and opted to pilot-test the two-drug strategy in three states, namely, Tamil Nadu, Kerala and Orissa. In these three states, in 2001 and 2002, India targeted 21 million to be covered with MDA comprising DEC + albendazole.

Maldives

LF endemic areas in Maldives



- (1) Total population of the country: 286 680
- (2) Population at risk of LF: 14 000
- (3) Administrative units:
 - No. of states/provinces/divisions: 16 Atolls
 - No. of districts or townships: 200 inhabitant islands
- (4) Administrative units selected for implementation of MDA (Implementation Unit): 2
- (5) LF parasitic species : *W. bancrofti*
: *B. malayi*
: *B. timori*
- (6) Main vectors: *Culex quinquefasciatus*
- (7) Mapping status: Complete
- (8) MDA implementation status: Not commenced yet

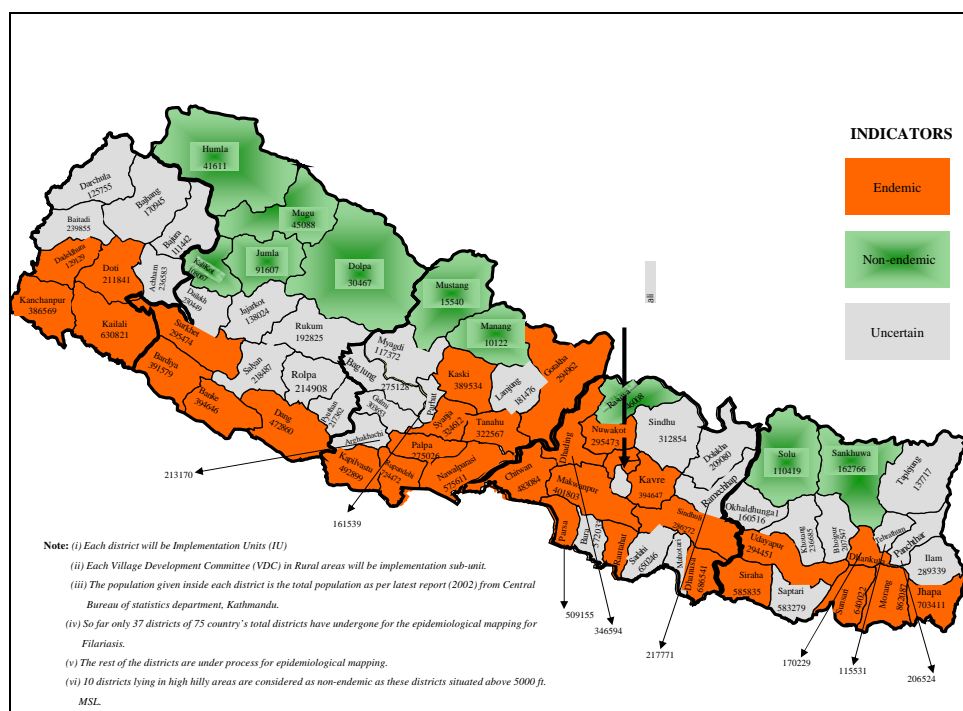
W. bancrofti infection was prevalent for several decades in the country. Two out of 20 atolls have been found to be still endemic. During the last five

decades, there had been a declining trend after selective DEC therapy. Though there was no separate programme, control activities had been in operation since 1968. The country plans to bring down microfilaraemia to zero level through the vector-borne Diseases Control Programme, laying emphasis on environmental engineering and intersectoral collaboration for mosquito abatement.

Recent assessments have shown that two of the previously endemic atolls have a mf rate > 1%. A National Task Force has been formed.

Nepal

LF endemic areas in Nepal



- (1) Total population of the country: 24 122 310
- (2) Population at risk of LF: 10 000 000 (mapping was not complete by 2003)

- (3) Administrative units:
- No. of states/provinces/divisions: 5
 - No. of districts or townships: 75
- (4) Administrative units selected for implementation of MDA (implementation unit): One (Parsa district) by 2003
- (5) LF parasitic species : *W. bancrofti*
- : *B. malayi*
- : *B. timori*
- (6) Main vectors: *Culex quinquefasciatus*
- (7) Mapping status: 37 of the 75 districts have been mapped
- (8) MDA implementation status

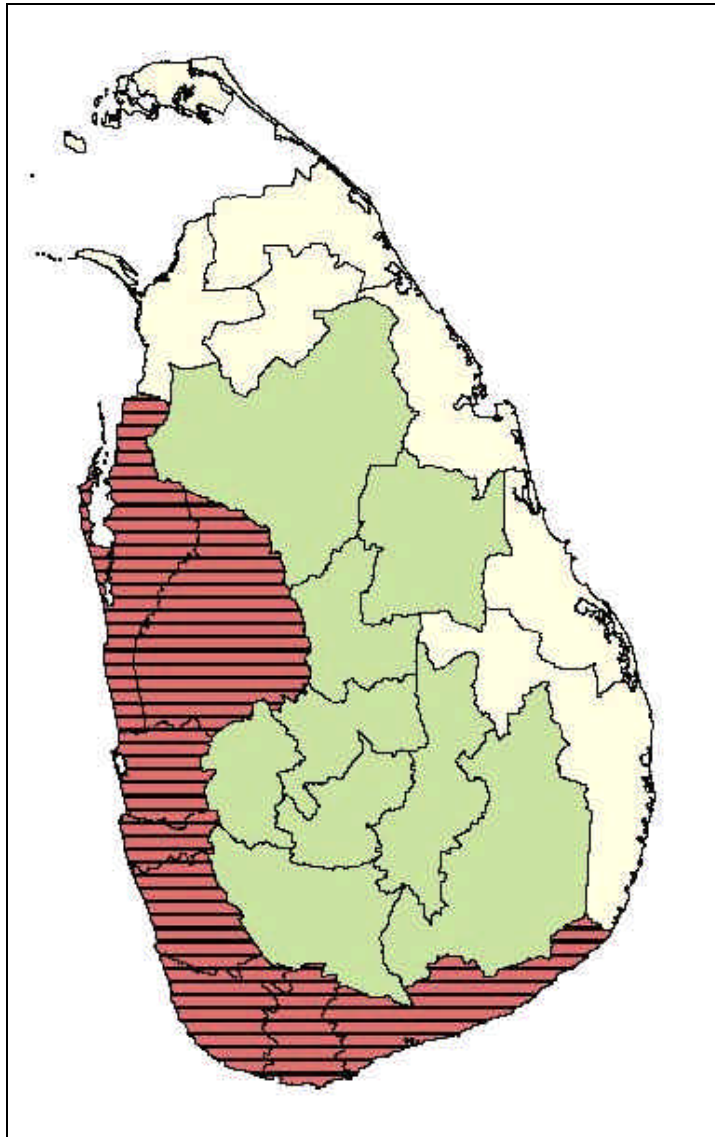
Year	2001	2002	2003
No of IUs covered	–	–	One
Pop. covered (millions)	–	–	0.413

Filariometric data from Nepal have been very scanty. Very limited information on the disease prevalence is available from hospital records. No large-scale epidemiological surveys on disease prevalence covering the country has been conducted. Active transmission of *W. bancrofti* through *C. quinquefasciatus* was detected. It is estimated that about 5-10% of the population living in areas below 600 metres MSL are infected. Mapping of the distribution of LF cases is expected to be completed by 2004.

The control of filariasis is integrated into the general health care system. Mass drug administration with DEC+albendazole was conducted in Parsa district in May 2003 targeting 500000 people. A plan for social mobilization was formulated in 2003 using COMBI (Communication for behavioural impact) approach to promote compliance with MDA.

Sri Lanka

LF endemic areas in Sri Lanka



(1) Total population of the country: 18 968 489

(2) Population at risk of LF: 10 180 000

- (3) Administrative units:
- No. of states/provinces/divisions: 9
 - No. of districts or townships: 25 (8 districts in 3 provinces are endemic)
- (4) Administrative units selected for implementation of MDA (implementation unit): 8 (All known endemic districts are under MDA)
- (5) LF parasitic species : *W. bancrofti*
- : *B. malayi*
- : *B. timori*
- (6) Main vectors: *Culex quinquefasciatus*
- (7) Mapping status: All traditionally known endemic areas are mapped. Mapping in North-East of the country was delayed due to civil disturbance
- (8) MDA implementation status

Year	2001	2002	2003
No of IUs covered	1	8	8
Pop. covered (millions)	2.1	8.6	8.58

W. bancrofti is the only prevalent species in the country. According to recent estimates, about 9.5 million people are at risk in three provinces. The Anti-Filaria Programme was started in 1947 with selective chemotherapy and morbidity control through health education and recurrent antilarval measures. Financial constraint is the major bottleneck after devolution of programme activities to the provincial councils. Nevertheless, a revised control programme based on single annual doses of DEC was commenced in 1999 in one district and this was later replaced with DEC + albendazole in 2001. MDA was further scaled up in 2002 to cover the entire population at risk totalling 9.6 million in three provinces. The COMBI plan was also implemented in 2002 to improve MDA coverage.

Mapping of the distribution of LF cases was completed in 2002. Eight districts (IUs) out of 17 were found to be endemic. However, in the mapping exercise, the northern and eastern parts of the country, where no indigenous transmission had been observed in the past, remained as unclear areas. Assessment of endemicity in these areas was expected to be completed in 2003.

5.3 Mekong Plus Group

Indonesia

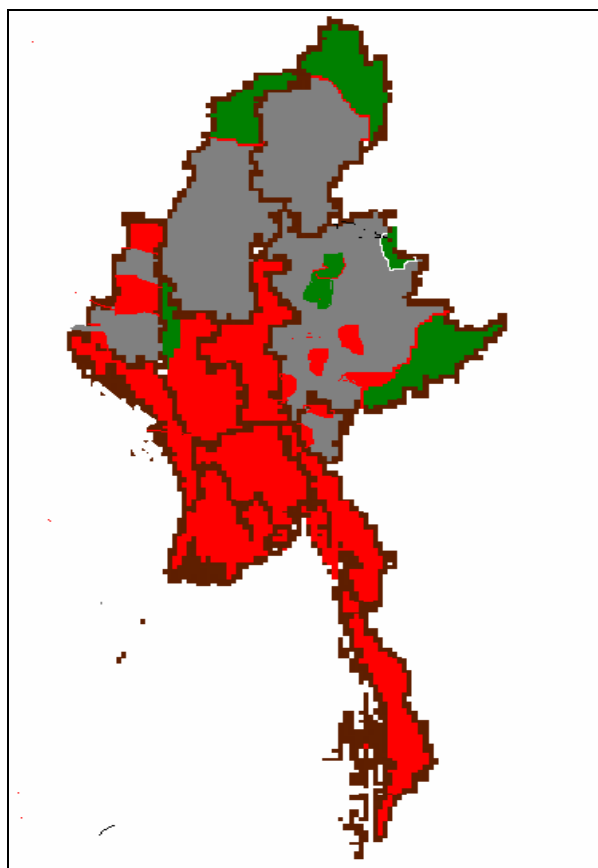
LF endemic areas in Indonesia



- (1) Total population of the country: 213 904 200
- (2) Population at risk of LF: 150 000 000 (mapping is in progress)
- (3) Administrative units:
 - No. of states/provinces/divisions:30
 - No. of districts or townships: 593
 - No. of subdistricts: 5 150
- (4) Administrative units selected for implementation of MDA (implementation unit):

Myanmar

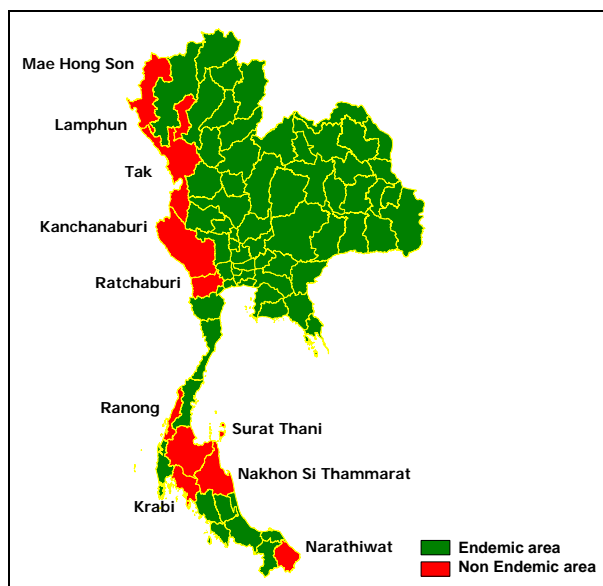
LF endemic areas in Myanmar



- (1) Total population of the country: 50 100 000
- (2) Population at risk of LF: 46 000 000
- (3) Administrative units:
 - No. of states/provinces/divisions: 16
 - No. of districts : 75
 - No. of townships: 324

Thailand

LF endemic areas in Thailand



- (1) Total population of the country: 61 612 840
- (2) Population at risk of LF: 126 000
- (3) Administrative units:
 - No. of states/provinces/divisions: 5
 - No. of districts or townships: 73
 - No. of subdistricts
- (4) Administrative units selected for implementation of MDA (implementation unit):
- (5) LF parasitic species : *W. bancrofti*
: *B. malayi*
: *B. timori*
- (6) Main vectors: *Aedes* species and *Culex quinquefasciatus* for *Bancrofti* infections and *Mansonia* species for *B. malayi* infections
- (7) Mapping status: All endemic areas have been mapped

(8) MDA implementation status

Year	2001	2002	2003
No of IUs covered	–	10	10
Pop. covered (millions)	–	0.118	0.18

W. bancrofti and *B. malayi* continued to be prevalent in the intercountry borders with an estimated 126000 people exposed to the risk. Filariasis control is undertaken by the Department of Communicable Diseases Control.

Filaria control programme is integrated with the Vector-Borne Diseases Control Programme. Surveillance is intensified in low compliance areas in the entire endemic belt.

Mapping was completed in Thailand. Due to the extreme focal nature of the distribution of the infection in the country, sub-village unit was considered an implementation unit. In the mapping exercise 336 of the 10307 IUs were found to be endemic. These are in border areas inhabited by approximately 126000 people. Thailand commenced the MDA with DEC+albendazole in 2002 targeting the people living in the entire endemic area, covering 118000 people.

Timor-Leste



- (1) Total population of the country: 850 000
- (2) Population at risk of LF: 850 000
- (3) Administrative units:
 - No. of states/provinces/divisions:
 - No. of districts or townships: 13
 - No. of subdistricts
- (4) Administrative units selected for implementation of MDA (implementation unit):
- (5) LF parasitic species : *W. bancrofti*
: *B. malayi*
: *B. timori*
- (6) Main vectors: *A. barbirostris*
- (7) Mapping status: Complete. All districts are considered endemic
- (8) MDA implementation status: Not commenced yet.

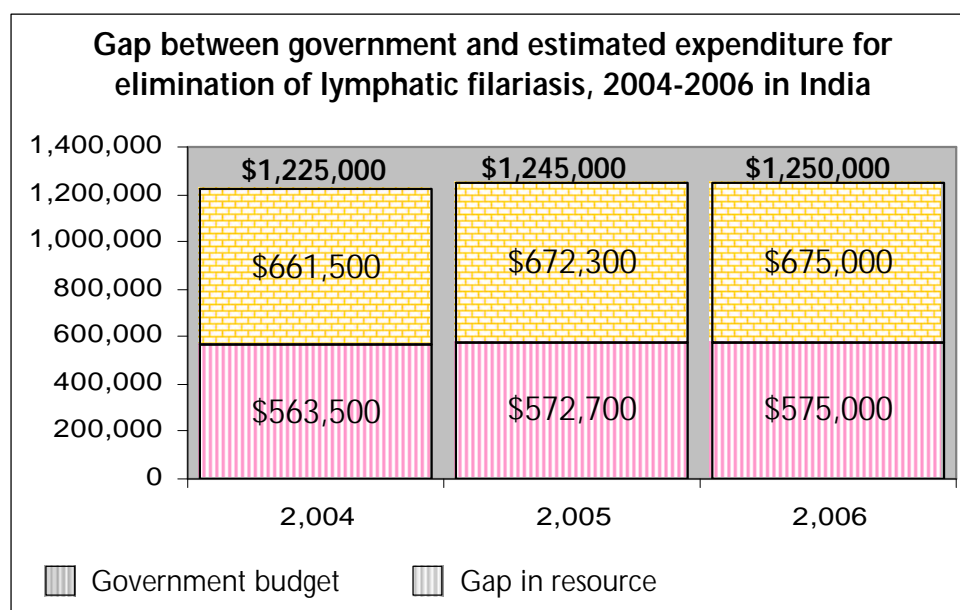
Timor-Leste is the newest country included in the WHO's South-East Asia Region. The estimated population in 1999 was about 850 000. Timor-Leste comes within the purview of the Mekong Plus RPRG.

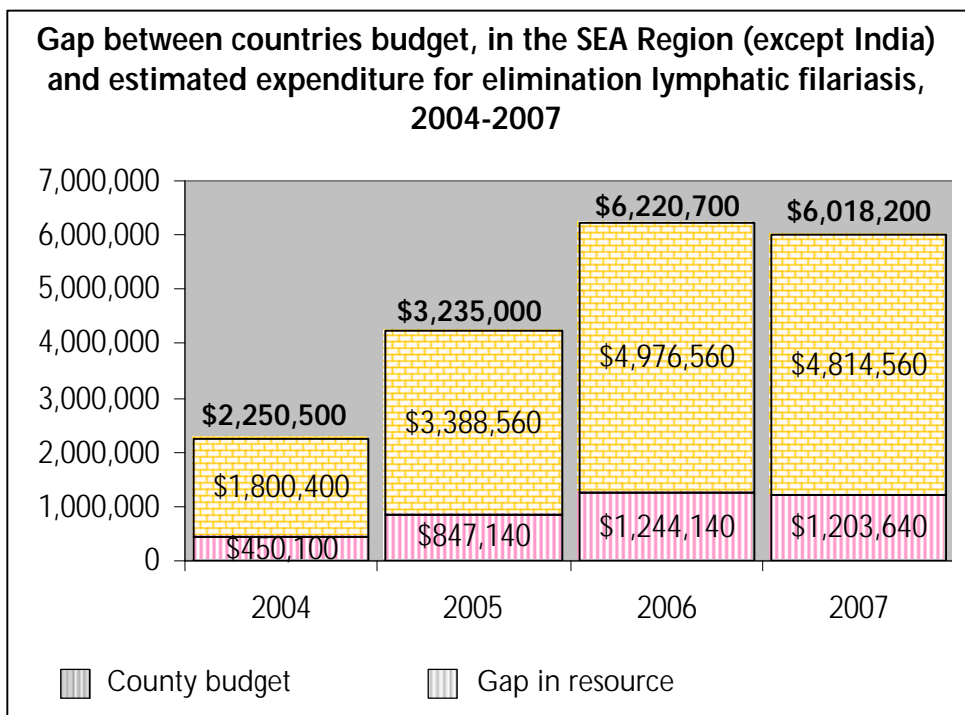
Timor-Leste is endemic with all the three species viz. *W. bancrofti*, *B. malayi* and *B. timori*. A recent assessment of endemicity in the country has shown an overall MF rate of 12% in the general population. Historically, *B. timori* is considered to be the most prevalent species accounting for about 95% of cases. The only known vector of *B. timori* is *A. barbirostris* which breeds in clean water flowing from fresh water springs and has a particular affinity for irrigated rice-paddy fields. The disease control programmes are yet to be fully established but the country is in the process of organizing its health infrastructure.

6. REGIONAL AND NATIONAL TARGETS FOR MASS DRUG ADMINISTRATION

Country	Total pop.	Pop. at risk	MDA target			
			2004	2005	2006	2007
Bangladesh	135 683 700	50 000 000	15 000 000	25 000 000	49 000 000	44 000 000
India	1 048 279 000	454 000 000	24 500 000	24 900 000	25 000 000	0
Indonesia	211 716 400	150 000 000	746 000	18 100 000	26 200 000	31 600 000
Maldives	286 680	14 000	14 000	14 000	14 000	14 000
Myanmar	48 895 000	46 000 000	17 000 000	27 900 000	32 100 000	34 600 000
Nepal	24 122 310	10 000 000	2 000 000	3 400 000	6 500 000	9 300 000
Sri Lanka	18 968 480	10 180 000	10 000 000	10 000 000	10 000 000	0
Thailand	61 612 840	100 000	100 000	100 000	100 000	
Timor-Leste	850 000	850 000	150 000	200 000	500 000	850 000
Total	1 550 414 410	728 794 000	69510 000	109 614 000	149414000	120 364 000

7. FUNDING





8. GLOBAL AND REGIONAL INITIATIVES FOR LYMPHATIC FILARIASIS ELIMINATION

The fiftieth World Health Assembly (1997) adopted a resolution WHA50.29 calling upon Member states to consider the problem of LF and work towards its elimination. Along with the preparations for this massive public health undertaking, the Global Alliance to Eliminate Lymphatic Filariasis (GAELF), which is a partnership of many organizations including major donors and national governments, was formed to support this effort. The first meeting of GAELF was held in Santiago, Spain, in May 2000, while the second meeting was held in New Delhi, India on 2-3 May 2002. During these meetings attention was focused on support for effective country action, empowering countries and their people to design and manage public health programme and pursue poverty alleviation through the elimination of LF, as an important component.

8.1 Technical Advisory Group

The Technical Advisory Group (TAG) advises WHO on key issues such as policy, strategy and operations that are relevant to elimination efforts. This Group meets annually and makes recommendations for further improvement of the programme. The Strategic Plan would be modified in the future based on TAG recommendations and modifications to the Global Strategic Plan.

8.2 Programme Review Groups

A Global Regional Programme Review Group was set up with the task of reviewing applications of member states for donated drugs. With the rapid increase in programme activities it became necessary to regionalize this activity; thus six Regional Programme Review Groups (RPRG) were formed. The countries of the Region were grouped into Mekong Plus and Indian subcontinent RPRGs.

In addition to reviewing the initial applications and subsequent re-applications, RPRGs also review the annual reports on LF submitted by countries and make recommendations for improving of elimination activities.

9. FACTORS FAVOURABLE FOR ELIMINATION OF LYMPHATIC FILARIASIS

There are a number of factors are favourable for the elimination of LF.

Biological

Man is known to be the only reservoir host for bancroftian filariasis in the Region. A prolonged exposure with multiple infective mosquito bites is required to establish infection in a new human host. Further, the parasite does not multiply in intermediate mosquito host and the infective larvae are not inoculated into the human host directly, but deposited on the skin where the majority would get killed. The incubation interval is prolonged to many months and it would take many years to establish active transmission in a new area.

Cost-effective Tools

Low-cost, safe and very effective drugs are available for prevention of infection and treatment of morbid cases. Diagnostic kits and monitoring tools are acquirable and within the reach of endemic countries to detect infection in man and mosquito. Cost-effective control technology has been developed for elimination of lymphatic filariasis in many endemic countries.

Operational Feasibility

Many countries have rich experiences in time-bound successful elimination of lymphatic filariasis. Community cooperation was found to be very encouraging when the LF elimination programme was integrated with the control of intestinal helminthic infections. Deworming among children following albendazole treatment created immense confidence in the community about the benefits of the programme.

Infrastructure for implementation of the programme is available in most of the endemic countries in the South-East Asia Region. Commitment by governments is encouraging. Eight endemic countries included LF elimination goal in the national health policy and also formed National Task Forces for ELF.

Partners

GlaxoSmithKline is willing to support the programme in the South-East Asia Region with free and adequate supply of albendazole until the elimination target is achieved. The Global Alliance and bilateral/multilateral agencies are actively supporting the programme.

LF Support Centres

WHO has recognized three internationally renowned institutions as LF support centres – CDC-Atlanta, Emory University and Liverpool School of Tropical Medicine. In addition there are WHO collaborating centres such as

VCRC Pondicherry, and James Cook University in Transville, Australia. The support centres and WHO CCs have appropriate expertise to advise and assist the endemic countries in research, training and other LF related activities. Participation by other centres of research within and outside the country is also encouraged.

10. FIVE-YEAR TARGETS FOR THE ELIMINATION OF LYMPHATIC FILARIASIS

THE box below prepared after consultations with the national programme managers of endemic countries gives the most critical targets to be achieved during each of the five years.

By the end of 2003

- Mapping of LF distribution will be completed in, Maldives, Sri Lanka and Thailand.
- Implementation of community and home-based care for the prevention and alleviation of disability of LF will be initiated in all endemic countries in a scaling up manner.
- Social mobilization to effect the desired behavioural level will be implemented in the endemic countries for MDA and morbidity control.
- Coverage of 48 million people under DEC plus albendazole will be undertaken in the Region.
- Feasibility of introducing DEC fortified salt in the endemic countries will be explored (India and Indonesia).
- Applications from the last remaining endemic countries for cost-free supplies of albendazole will be initiated (Timor-Leste)
- Surgical treatment facilities for hydroceles will be strengthened in major hospitals in endemic areas (India, Maldives, Sri Lanka and Thailand)
- It will be ensured that all countries in the region including Timor-Leste incorporate their elimination goal in the national health policy.

By the end of 2004

- Regional meeting of national programme managers will be held to review progress.
- MDA will commence in Timor-Leste.
- Coverage of 121 million people under DEC plus albendazole will be undertaken in the Region.
- Mapping of LF distribution will be completed in three of the remaining countries (Bangladesh, Myanmar and Timor-Leste).
- COMBI strategy will be adopted in three more endemic countries (Indonesia, Myanmar and Timor-Leste).
- Training for morbidity control will be in place in all endemic countries up to the level of peripheral health worker.
- Feasibility of introducing DEC fortified salt in Bangladesh, Nepal and Maldives will be explored.
- Surgical treatment facilities for hydroceles will be established and strengthened in major hospitals in endemic areas (Bangladesh, Myanmar and Nepal).

By the end of 2005

- Coverage of 225 million people under DEC plus albendazole will be undertaken in the Region.
- Mapping of LF distribution will be completed in all remaining countries (India, Indonesia and Nepal).
- Implementation of vector control measures as appropriate in urban and rural endemic areas will be encouraged.
- Surgical treatment facilities for hydroceles established and strengthened in major hospitals in endemic areas (Indonesia and Timor-Leste).
- Feasibility of introducing DEC fortified salt in the endemic countries will be explored in two more countries (Bangladesh and Nepal).

By the end of 2006

- Regional meeting of National Programme Managers will be held to review the progress.
- Regional review of revised strategy and implementation will be conducted and a plan for 2008–2012 will be formulated at the Programme Managers Meeting.
- IEC and where appropriate, the COMBI plan to effect the desired behavioural change for compliance with MDA and prevention and alleviation of disability caused by LF, will be implemented in all endemic areas at country the level.
- Coverage of 275 million people under DEC plus albendazole will be undertaken in the Region.
- Verification of elimination status in Sri Lanka and Thailand will be carried out.
- Morbidity control activities with hydrocelectomy offered to at least 25% of the cases in all endemic areas in the countries through the existing health care delivery system including other health care providers, will be conducted.
- Independent evaluation of MDA coverage will be conducted in all countries.

By the end of 2007

- Implementation of IEC and social mobilization with COMBI package in all endemic areas at country level.
- Implementation of community and home-based care for the prevention and alleviation of disability of LF will be scaled up to cover all endemic areas in all endemic countries.
- Verification of the elimination status in Myanmar will be carried out.
- Coverage of over 300 million people under single dose DEC plus albendazole will be undertaken in the Region.

11. RELEVANT TECHNICAL SUPPORT

11.1 Technical Guidelines

WHO has already distributed necessary guidelines to the programme managers. They included comprehensive guidelines, for preparing and implementing a national plan to eliminate LF, community home-based prevention of disability due to LF and guidelines and training modules for drug distributors. Programme managers will be updated on new guidelines, additions and modifications to the existing ones. They will be encouraged to follow these guidelines by adapting to the local situation.

11.2 Drug Quality, Drug Supplies and Logistics

The quality of drugs used in the programme is essentially a key factor for the success of elimination activities. While albendazole is donated to the programme by a single source, DEC was procured from a number of sources of varying quality. Proper monitoring of the quality of DEC for which technical assistance will be available from WHO and other relevant partners constitutes an essential element of monitoring of the elimination programme. The timely supply of albendazole and DEC constitutes essential components of the programme. WHO and other partners will provide assistance to Member states for free access and distribution to the endemic communities and also help in the alternative method of DEC fortified salt distribution wherever warranted. Principal issues and strategies are as follows:

- Linkage between programme managers and drug companies
- Availability of information on reliable sources for supply of DEC
- Logistics of drug supply;
- Monitoring and reporting mechanism;
- Distribution mechanism from national level to individuals;
- Annual stock-taking and replenishments, and
- Preparatory and planning process for drugs requirement by the Ministry of Health.

11.3 Surveillance Including Mapping and Programme Monitoring

Surveillance and programme monitoring are essential to achieve the elimination of LF, delimit the problem, identify the endemic groups, evaluate ongoing interventions and process validation methods. These also help in using appropriate technology.

Objectives

- Precise determination of distribution of LF to define where national elimination programmes should be active.
- Establishment of both infection and process indicators to evaluate programme activities and ensure that these indicators and other management information are received at all programme levels.
- Establishment of sentinel surveillance sites at IU level to monitor programme outcomes.
- Establishment of spot check sites to monitor drug coverage.

12 THE PARTNERS AND THEIR ROLES

The prerequisite for successful partnership is mutual respect, trust, transparency and free sharing of credit.

12.1 Local Partners

National health authorities

The local health authorities are the focal partners to define and prioritize the problem, strengthen surveillance capabilities and improve drug distribution system.

Intersectoral role

The ministries of local government, information and broadcasting, education, agriculture, environment, rural welfare and urban development play a definite role in the successful implementation of strategies for the elimination of LF.

Local NGOs

The national task force will manage the involvement of local NGOs in the successful implementation of the programme.

12.2 Bilateral Agencies

The National Task Force will coordinate the work of bilateral agencies, such as Japanese International Cooperation Agency (JICA), Australian Agency for International Development (AUSAID) and UK Department of International Development (DFID).

12.3 International Agencies

Global alliance

International agencies will contribute towards elimination through the Global Alliance for Elimination of Lymphatic Filariasis (GAELF). The Global Alliance is a partnership forged between many organizations, including national governments and many donor agencies each with different mandates but with a common goal to eliminate LF. The second meeting of GAELF was held in New Delhi in India 2-3 May 2002. WHO will continue to serve as the secretariat for GAELF.

WHO

WHO will be the Secretariat to RPRG and the coordinating agency in planning, monitoring, assessment, importation of drugs and NGOs activities for the elimination of LF among partners.

Through the RPRGs of Mekong Plus and the Indian Subcontinent, the SEA Regional Office would provide technical support and formulate regional action plans. It would also participate in regular assessment, including basic risk factors analysis, mapping, support programme managers' meetings, training, evaluation, research and surveillance activities.

WHO headquarters would provide technical leadership, mobilize resources, develop training modules and teaching guidelines, promote

improved surveillance, monitoring and evaluation, IEC, support national regulatory authorities, management methods, operational research, ensure annual and periodic review of strategic plan and certify elimination of LF wherever applicable.

12.4 Academic Institutions

National research and academic institution in endemic countries will provide technical support related to planning and implementation during the coming five years. They will also assist in identifying areas for operational and applied research, capacity building and monitoring and evaluation in the initial stage.

12.5 Private Sector

GlaxoSmithKline Beecham (GSK): GSK and WHO pledged in January 1998 to work together through a Collaboration Coordinating Committee (CCC) to launch the global effort to eliminate LF. GSK is a partner of GAELF. GSK will donate 5 billion tablets of albendazole that may be required over a period of 20 years. GSK would also support with grants and additional help with coalition-building, planning, training and communication initiatives.

12.6 Nongovernmental Development Organizations (NGDOs)

NGDOs would play a critical role in offering their experience and skills for the management of the programme, through GAELF and participating in the National Task Force, providing support for morbidity control and providing co-funding to country programmes to overcome the constraints. Individual NGDOs will plan their role in LF activities through the National Task Force. The NGDOs in LF countries would be made aware and convinced of the importance of mobilizing and supporting local community activities for LF elimination.

12.7 Others

The door is open for inducting a wide range of organizations and individuals who can recognize that important opportunities are available to make a major public health and economic impact through their active participation and contribution to the LF elimination programme.

13. INTEGRATION WITH OTHER DISEASE CONTROL PROGRAMMES

The fundamental prerequisite for accelerating the elimination of lymphatic filariasis is the integration of the programme with other disease control/eradication programmes. The two programmes mentioned below are ideal for integrating with LF elimination.

13.1 Intestinal Parasite Control Programmes

The strategies for control/elimination of filariasis and control of intestinal nematodes have many similarities; in the former, a two-drug regimen once a year is given, while in the latter, single-drug regimen is followed 2-3 times a year. Attempts will be made to integrate strategies for intestinal parasite control among school going children and other high-risk groups (pre-school children and pregnant women) with LF elimination programme at every level.

13.2 Malaria Control Programme

Malaria control activities will provide synergistic benefits for the ELF programme from IRS and use of ITNs in endemic areas where the disease is transmitted by anopheline mosquitoes or in areas co-endemic with malaria. LF programmes will be encouraged to establish links between LF and malaria control programmes.

14. TIME-FRAME

Regional Targets

By the end of 2003

- All endemic countries except Timor-Leste will continue MDA at various stages of scaling up towards achieving the elimination status of lymphatic filariasis
- COMBI plan will be implemented to increase compliance of MDA in India, Nepal and Sri Lanka.

By the end of 2004

- All endemic Member states will continue MDA at various stages of scaling up.
- MDA will have commenced in Timor-Leste

By the end of 2005

- Mapping would have been completed in all endemic countries.

By the end of 2006

- Interruption of transmission would be achieved in Sri Lanka and Thailand.

By the end of 2007

- Interruption of transmission would be achieved in Myanmar.

By the end of 2010

- Interruption of transmission will have been achieved in Bangladesh, Timor-Leste, Maldives and Nepal
- Validation of elimination of LF from Bhutan and DPR Korea would be carried out ,

By the end of 2015

- Last remaining LF transmission areas would be identified.

By the end of 2020

- All countries in the Region will have been verified of the elimination status.