

The Regional Strategic Plan for Elimination of Lymphatic Filariasis

2010-2015



**World Health
Organization**

Regional Office for South-East Asia

The Regional Strategic Plan for Elimination of Lymphatic Filariasis

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1. Introduction

1.1 Lymphatic Filariasis (LF):

LF is one of the most debilitating and disfiguring scourges among all diseases. It is the second leading cause of disability worldwide. Globally, 1.3 billion people are estimated to be at risk of infection and some 120 million people are infected in 83 countries. It is one of the major public health problems in South-East Asia. The Region accounts for the highest burden of the disease among WHO Regions, with nine out of the 11 Member countries in the Region being endemic.

The infection is caused by three helminthic worms *Wucheraria bancrofti*, *Brugia malayi* and *Brugia timori* inhabiting the lymphatic system and causing damage and blockage of the lymphatic vessels. The adult worms live for 5-7 years. The mating of adult worms produces millions of microscopic worms called microfilariae (Mf) which are released into the blood. The major clinical manifestations include lymphedema, hydrocoele in males and in later stages, elephantiasis of legs and arms. Acute episodes of local inflammation involving skin, lymph nodes and lymphatic vessels often precede or accompany lymphedema. 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 the marginalized and 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 mosquito vector groups in the transmission viz, *Culex*, *Anopheles*, *Aedine* and *Mansonia*.

Diagnosing LF was difficult in the past because of the need for taking night blood film since the microfilariae are nocturnally periodic i.e. they circulate in the blood only during the night. The development of serological tests such as the ICT (Immuno-Chromatographic Test) for *W. bancrofti* has made the diagnosis of LF easier and quicker since it detects circulating antigens of the parasite, using finger-prick blood.

1.2 WHO Goal

Lymphatic filariasis is one of the five infectious diseases targeted by WHO for elimination as public health problems with the currently available tools. They are: kala-azar, leprosy, yaws and Chagas diseases. In 1997, the World Health Assembly passed a resolution – WHA.50.29, calling for “the elimination of LF as a public health problem”. This involves reduction of the Microfilaraemia (Mf) rate to less than 1% in all areas of a endemic country using mass drug administration (MDA) as the core strategy. Subsequently the Global Alliance for Elimination of Lymphatic Filariasis(GAELF) set the target date for achieving elimination as 2020.

The programme initially 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 much relief and can prevent or reduce debilitating acute episodes. Simple techniques have demonstrated speedy relief and recovery from some of the clinical manifestations. Disability prevention and care initiatives facilitate community support for MDA implementation. Massive chronic manifestations are unfortunately irreversible.

Effective implementation of WHO-recommended strategies in many countries has already produced a significant reduction in mf rates and morbidity associated with the disease. As of 2008, nearly 2 billion treatments have been administered globally, covering over 560 million people in 48 countries. It is estimated that MDA would have globally protected 9.5 million people from LF and prevented 800,000 cases of lymphedema and 1.4 million cases of LF-related hydrocele.

Collateral benefits include control of soil transmitted helminthic infections which impact the physical and mental growth of children, prevention of anaemia and other consequences of worm infections. 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 inter-sectoral cooperation in uplifting multitudes above the poverty line and improvement in the overall health status of the community.

1.3 Regional burden of LF

The South-East Asia Region (SEAR) accounts for the highest burden of LF among the six WHO Regions. All the three lymphatic filarial parasites, namely *W.bancrofti*, *B.malayi*, and *B.timori* are prevalent in the Region but *W.bancrofti* accounts for 95% of the infections. Of the 1.3 billion people globally at risk of LF, 871 million reside in SEAR, of whom 297 million (34%) are children. Of the 120 million infected people globally, 60 million are in the Region. The Region thus accounts for about 65% of the global population at risk and 50% of the infected people. The Region also accounts for about 57% of the total global burden estimates of 5.1 million DALYs lost due to LF. Thus, the achievement of the LF elimination goal in South-East Asia will have a significant impact on the reduction of the global burden.

The nine LF endemic countries in the Region are: Bangladesh, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. The two non-endemic countries are Bhutan and DPR Korea. Filariasis elimination programmes are in operation in all the nine endemic countries and national plans of action are being implemented in all the countries.

2. Factors favourable for elimination of LF

Humans are known to be the predominant reservoir host for bancroftian and brugian filariasis in the Region. Low-cost, safe and very effective drugs are available for prevention of LF infection through Mass Drug Administration (MDA) and treatment of morbid cases. Diagnostic kits and monitoring tools are also available and can be easily acquired by the endemic countries. The MDA strategy for elimination of LF as a public health problem is based on cost-effective technology that is operationally feasible to be employed in the endemic countries. MDA is considered to be one of the cheapest public health interventions available.

All endemic countries in the Region have the necessary infrastructure and experience for implementation of the programme. The commitment by the national governments has been and continues to be encouraging. Many partners including the Global Alliance for Elimination of LF and bilateral/multilateral agencies are actively supporting the programme. The LF support centres, WHO collaborating centres and research centres provide assistance to some of the endemic countries.

3. Formulation of regional strategic plan

An informal consultation on Lymphatic Filariasis in South-East Asia was held in Orissa, India on 23-25 February 2000. Based on the global target and strategies (WHO/FIL/99-198) and consensus obtained at the above-mentioned consultation, the Regional Strategic Plan for elimination of lymphatic filariasis was developed for the period 2000-2004. This plan was successfully implemented in the Region. Consequently, the plan was further reviewed and revised for the period 2004–2007 with the consensus reached at the Bi-Regional Programme Managers' Meeting held in Bali, Indonesia on 22-24 July 2002. In 2005, this plan was further reviewed, revised and extended from 2007–2010 at the Inter-country meeting of the Lymphatic Filariasis Programme Managers in South-East Asia Region held in New Delhi on 5-7 May 2005. Taking into consideration the subsequent progress of LF elimination in the endemic countries and the new knowledge and tools available, the Regional Strategic Plan is revised and updated for the period 2010-2015. This document presents the revised Regional Strategic Plan for the WHO South-East Asia Region for the period 2010-2015 on LF elimination in the endemic countries, as finalized at the Meeting of Experts held at SEARO, New Delhi, during 29-30 September 2009.

4. Regional progress in elimination of LF

In 2008, a total of 162 million people were administered MDA with the 2-drug regimen in the Region and another 264 million with DEC alone.

Three countries – Maldives, Sri Lanka and Thailand have completed more than five rounds of MDA to the entire eligible endemic population of approximately 10 million and reduced the Mf rate to <1%. They have stopped MDA and are in the process of post-MDA surveillance and 'verification' of LF elimination.

Bangladesh, Myanmar and Nepal are expected to scale up MDA using the two-drug regimen to cover the entire endemic population by 2010 and complete five or more rounds of MDA by 2015. However, Myanmar requires additional support for MDA scale-up to cover the entire endemic population.

India has already scaled up MDA to cover the entire endemic population, using the two-drug regimen in some areas and DEC alone in other areas. The country plans to cover the entire endemic population with the two-drug regimen by 2010 and would complete at least five rounds of MDA in all implementation units country-wide by 2015.

Two countries – Indonesia and Timor-Leste are scheduled to scale-up MDA to cover the entire endemic population by 2012-2013. These countries, along with Myanmar need additional support and resources to scale-up and sustain MDA to cover the entire endemic populations.

Some of the issues and challenges pertaining to the LF elimination programme in the Region are: Insufficient funds and human resources, high per capita costs for MDA implementation in some countries, delays in the availability of quality drugs, lack of baseline data prior to commencement of MDA in some countries or areas within some countries, lack of data from sentinel and spot-check sites, large differences in reported versus survey-assessed coverage, lack of resources for implementing Stop MDA and Post-MDA procedures and frequent changes in national LF programme managers that affects programme implementation.

5. Goal and objectives

5.1 Goal

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

This can be achieved by reducing the Microfilaraemia (Mf) rate to <1% in all endemic areas in the Region and subsequent verification for presence of circulating antigenemia in children born after initiation of MDA, to confirm that there are no new LF infections in the community.

General Objectives

To progressively reduce and ultimately interrupt the transmission of lymphatic filariasis with annual Mass Drug Administration as the core strategy.

To prevent and reduce disability in affected persons through community-based disability alleviation and management.

Specific Objectives (2010-2015)

- To complete the mapping of the distribution of LF in Indonesia by 2010 and undertake mapping in new areas if required;
- To further scale up and sustain mass drug administration (MDA) with DEC and albendazole, covering the entire country-wide population at risk in all implementation units in Bangladesh, India, Myanmar and Nepal by 2010 and in Indonesia and Timor-Leste by 2012;
- To ensure high treatment compliance exceeding 65% of the total and 80% of the eligible population;
- To ensure the implementation of necessary steps for stoppage of MDA in each of the implementation units which have completed a minimum of four or five effective rounds of MDA with the two-drug regimen;
- To initiate steps for stoppage of MDA in the implementation units in India, where single or two-drug regimens were used for more than 4-5 years and where Mf rate is less than 1%;
- To further scale up and implement activities for prevention and alleviation of disability in all endemic countries;
- To implement supplementary measures including Integrated Vector Management wherever necessary and feasible;
- To conduct operational research on important elements of LF epidemiology and elimination activities;
- To ensure an effective programme monitoring system to assess the progress of ELF activities and identify the gaps for corrective measures; and
- To initiate steps for verification of LF elimination in Maldives, Sri Lanka and Thailand.

6. Strategies

6.1 Specific strategies to reduce and ultimately interrupt LF transmission

Implementation of MDA and ensuring high treatment coverage and compliance.

MDA

Successful implementation of MDA depends on various preparatory activities such as;

- (a) review and selection of available health staff and volunteers
- (b) orientation and training of the selected staff/volunteers
- (c) timely projection and procurement of quality drugs
- (d) in-country drug supply and distribution plan and its implementation
- (e) political commitment
- (f) mobilization of resources
- (g) advocacy and social mobilization including wide publicity about the dates and advantages of MDA
- (h) arrangements for prompt reporting and management of Severe Adverse Episodes(SAE)

The national programme should give due attention to the planning, preparation and implementation of the pre-MDA activities.

Ensuring high coverage and compliance

The success of MDA largely depends on achieving high coverage and compliance in each of the implementation units(IUs) as defined by the country. The national authorities should aim at covering the entire eligible population and target a coverage exceeding 65% of the total population and 80% of the eligible population, with a minimal gap between the reported and actual coverage. This can be obtained through extensive information, education and communication (IEC) activities and advocacy at all levels using all available means of communication – TV, radio, village-

level-meetings and distribution of information leaflets. It is also important to inform the community that some people will develop mild reactions to the drugs and a few may develop severe adverse reactions. People should be advised that all severe reactions should be reported promptly to the nearest health facility and the training of medical officers should include management of SAE.

MDA should be preferably implemented country-wide on fixed days of a selected month and should be repeated each year in the same month. However, in large countries, it may be necessary to phase MDA in different IUs over a longer period but it should be ensured that subsequent MDAs follow a 12-month cycle in the respective IUs. While selecting the dates/months, primary consideration should be given to the convenience of the people.

6.2 Specific strategies to prevent and alleviate disability

- (a) Community home care measures for lymphedema
- (b) Management of acute episodes
- (c) Surgical facilities for hydrocelectomy
- (d) Patient and family education.

The progress and scale-up of activities related to disability prevention and alleviation has been generally limited in all countries. The above strategies need to be given due importance, necessary resources allocated and the activities scaled up in all the countries.

Prevention and management of lymphedema

The principles of lymphedema prevention and management include (a) daily washing and soaking of legs with soap and clean water; (b) daily exercises; (c) elevation of the feet at night; (d) prevention and treatment of secondary infection; and (e) wearing comfortable footwear. This should be included in the training of Medical Officers and staff involved in the LF programme. Adequate resources need to be allocated for home-based lymphedema prevention and management.

Management of acute episodes

LF infection initially leads to acute adeno-lymphangitis(ADL) characterized by swelling of inguinal and axillary lymph glands/nodes and symptoms like fever, bodyache and nausea. This can be managed through simple conservative treatment. Medical officers at the peripheral levels should be trained in the recognition and management of acute episodes.

Management of hydrocele

LF is the most common cause of hydrocele in males in LF-endemic countries. Hydrocele requires surgery. Therefore, the national programme should ensure adequate surgical facilities for hydrocelectomy, educate the patients about the need and benefits of surgery and provide a list of centres where surgery will be performed free of charge.

Patient and family education

The prevention and management of lymphedema is simple enough to be a set of home-based exercises. The patient and the family members have to be educated and trained in the simple procedures.

7. Support activities

7.1 Enhancing political commitment

The LF-endemic countries of the Region have generally shown strong political commitment to achieve the elimination goal. This commitment has to be sustained and enhanced until the elimination goal is attained through constant advocacy with political leaders and administrators at all levels and keeping them informed of the annual targets and achievements.

7.2 Resource mobilization

The achievement of the LF elimination goal through timely implementation of the needed activities is dependent on the mobilization and distribution of the essential resources – human, material and financial. This requires timely

allocation and release of government funds, mobilization and release of funds from partner agencies and inter-sectoral coordination. The national programme authorities should try to identify and involve new partners and the local communities. WHO and other partners are encouraging integration of LF elimination programmes with control of neglected tropical diseases (NTD), for which more resources are being internationally mobilized. National programmes should try to obtain resources from the NTD pool.

7.3 Establishing partnerships and involvement of partners

Partnership at global, regional, national and even at local level is the cornerstone for the achievement of the goal and objectives. With the participation and support of various partners, such as international agencies, experts, the private sector and civil society the challenges in the implementation of MDA and other activities can be overcome. Efforts will have to be made to forge partnerships with all stakeholders of neglected tropical diseases as a group.

7.4 Integrated vector management

Integrated vector management involves using more than one vector-control method and each method targets a specific type of mosquito breeding or resting habitat.

Though MDA alone has resulted in dramatic reductions in Mf rates in many countries of the Region, further reduction and the ultimate interruption of transmission may be facilitated by the inclusion of vector control as a supplementary activity.

Evidence from research has shown that when MDA is supplemented with vector control, it facilitates and hastens the interruption of transmission. In addition, most LF-endemic areas are co-endemic for other vector-borne diseases. Hence, integrated vector control activities will have an impact on all vector-borne diseases. Therefore, the countries may consider supplementing MDA with vector control measures by coordinating with the existing vector control programmes so as to accrue benefits to the LF elimination programme, according to need, feasibility and availability of resources.

The following vector control measures could be considered for implementation as supplementary measures for LF elimination - reducing human-vector contact by environmental management and promoting the use of long-lasting insecticide treated bednets; reducing vector population/density through chemical or biological methods; and reducing carrying capacity and breeding potential in an area through water management and environmental sanitation.

7.5 Selection of staff/volunteers and their training

MDA is a massive exercise that requires deployment of a large number of health staff and local volunteers. The list of staff/volunteers has to be drawn up and training provided to ensure that they implement MDA activities effectively. A training plan should be part of the preparatory activities.

7.6 Projection of drug requirement and drug procurement, supply/distribution and quality assurance

One of the major strengths of the LF elimination programme is the donation of albendazole by Glaxo Smith Kline (GSK) through WHO, to all the implementing countries. This ensures quality of albendazole and the timely supply/distribution of the drug, provided the countries send their application for albendazole in time each year for approval by the Regional Programme Review Group (RPRG). The timely projection, procurement and supply of albendazole and DEC constitute the essential components of the programme. Based on past experience, the drug requirement should be prepared sufficiently in advance to get necessary approval and the drug procured in time in order to implement MDA without delay.

The national programme authorities are responsible for the procurement and supply of DEC and are mandated to ensure the quality and timely supply of the drug. WHO and other partners may provide assistance to the countries in the procurement of DEC but it is important that the endemic countries provide adequate funds for DEC procurement or make efforts to find donors.

It is critical to develop a Drug Procurement and Supply Logistics Plan, including a detailed distribution mechanism from the national to the implementation unit level and to establish effective monitoring and reporting mechanisms.

7.7 Community awareness and education

The success of the LF elimination programme including MDA implementation, achievement of high coverage and disability prevention/alleviation will largely depend on community awareness, involvement and support. All available ways and means of information, education and communication (IEC) and all avenues of advocacy will need to be used to ensure the highest reach of the programme to the population.

7.8 Advocacy and social mobilization

In addition to creating awareness and IEC activities, it is important to undertake advocacy and social mobilization targeted at political, administrative and social levels. Advocacy should be targeted to the highest political level including the Heads of State and national/provincial/district level policy and decision makers.

7.9 Supervision, monitoring and evaluation

Proper supervision of each activity and close monitoring and evaluation should be built into all aspects, activities and all stages of the programme. This would include assessing results of mapping, Mf prevalence before and after MDA, reported and actual coverage, mid-term assessment/evaluation and impact assessment, including impact of social mobilization, disability alleviation and other activities.

It would be useful if the programme is periodically evaluated by independent experts. WHO recommends independent evaluation every two or three years.

7.10 Operational research

The scale-up and implementation of MDA, disability prevention and other activities should be subjected to operational research in order to optimize and improve the programme planning, management, monitoring/evaluation, identification of technical and operational problems and appropriate solutions and assessment of impact. The main focus will be on assessing the impact, improvement of the intervention and maintenance of elimination status. The countries may identify key operational constraints and undertake necessary operational research in collaboration with respective research institutes to resolve them.

7.11 Surveillance

Many countries or many areas within countries will have to begin surveillance in the near future. Therefore, efforts should be made to strengthen the necessary infrastructure, ensure capacity building and mobilize resources. Surveillance after stoppage of MDA and monitoring of the elimination status will need to be a critical component. Sentinel and spot-check sites will help to ascertain the baseline parasitological and clinical indicators and also help monitor the trend and impact of MDA rounds on the indicators.

Sentinel and spot-check sites will also serve to cross-check the reported coverage of MDA by being the sites of “observed” coverage. Each implementation unit should ensure regular surveillance as per WHO guidelines through the sentinel and spot-check sites.

8. Monitoring and evaluation (Stoppage of MDA , post-MDA surveillance and certification)

It is expected that the elimination level will be achieved in each IU after 5-6 rounds of MDA, provided the annual coverage has been >65% of the total population and >80% of the eligible population. Additional rounds may be required if the coverage figures are low. All IUs will need to undergo stop-MDA procedures and post-MDA surveillance as per WHO guidelines.

National LF programme managers should refer to WHO Guidelines for Monitoring and Epidemiological Assessment of the Programmes to Eliminate Lymphatic filariasis (2005)* for the steps and procedures to be taken for 'Stopping of MDA' and verification of LF elimination.

Certification of the absence of transmission in a country is judged on the basis of an assessment of (a) reliability and adequacy of the original survey determining endemicity of LF in each IU; (b) reliability and accuracy of post-MDA surveys.

The national authorities should have the reports of all the required surveys for submission to WHO.

** Currently under revision*

9. Role of partners

9.1 National health authorities

In eight of the nine LF-endemic countries of the SEA Region, national task forces (NTF) for elimination of LF have been established. However, the role played by NTF varies – while in some countries it plays an important role in formulating policies and monitoring the programme, in others it plays a very limited role. The terms of reference of NTF include formulation of policies and strategies to be employed in consultation with WHO and other partners. The national health authorities are primarily responsible for planning, implementation, monitoring and evaluation of the programme. The national programme manager will be the focal point in determining and prioritizing the activities, identifying the role of supporting partners, strengthen surveillance capabilities and improve the drug distribution system.

9.2 WHO

WHO continues to provide technical support to all endemic countries on all aspects of the LF elimination programme. This includes development and distribution of guidelines, policy documents and advocacy materials, support in training, and dissemination of information. It organizes regular meetings of

national programme managers, Regional Programme Review Group (RPRG), partners and other relevant bodies to facilitate elimination activities.

The presence of adequate professional staff at the WHO regional offices and country offices will be critical for the effective coordination of the programme.

WHO has already distributed necessary guidelines to the programme managers. These include comprehensive guides for preparing and implementing a national plan to eliminate LF, community home-based prevention of disability due to LF and training modules for drug distributors and monitoring and epidemiological assessment. 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.

The WHO RPRG for South-East Asia meets regularly to review the progress of LF elimination regionally and nationally and considers the requirements of albendazole for the current and subsequent years.

9.3 Global Programme for Elimination of LF

GPELF was established in 2000 under the leadership of WHO as an alliance of partners, with the aim of assisting LF-endemic countries in mobilizing resources, increasing the political commitment and if needed, provide technical assistance. GPELF is a partnership of many bilateral and multilateral agencies, foundations, international NGOs and the ministries of health of endemic countries committed to the elimination of LF. GPELF meets once in two years in different endemic countries to review progress of LF elimination globally and regionally.

9.4 LF support centres

Four WHO Collaborating Centres have been designated as LF Support Centres. They are (1) the Task Force for Child Survival, Atlanta, USA; (2) Liverpool School of Tropical Medicine, UK; (3) James Cook University, Australia and (4) Noguchi Research Centre, Accra, Ghana.

These centres are available to provide technical assistance to countries particularly in research and give limited financial support for specific activities.

9.5 Glaxo-Smith-Kline and other partners from the private sector

One of the major strengths of the LF elimination programme is drug security through the availability of albendazole free of charge. Glaxo-Smith-Kline (GSK) and WHO have a collaborating agreement by which GSK, as part of "Corporate Social Responsibility" pledged to supply the entire requirement of albendazole, free of charge for countries implementing the two-drug regimen of MDA until 2020. The total quantity of the donated supply for the 20-year period is projected to be about 5 billion tablets. GSK also provides grants to WHO and other partners to support activities such as training, communication and coalition-building. The meetings of the regional programme review groups are supported by GSK through WHO.

In countries in Africa using Ivermectin, Merck has donated the drug free of charge. John and Johnson has donated mebendazole for deworming in some countries. The national authorities may explore the possibility of DEC donation from pharma companies manufacturing DEC in their countries.

9.6 Other UN agencies

Agencies like the World Bank, UNICEF and UNDP are providing direct or indirect support for control of neglected tropical diseases and LF elimination programmes in some countries. The national authorities are encouraged to co-opt them as partners and seek their assistance as required.

9.7 International development agencies and NGOs

Many international development agencies and international NGOs are involved at the national level in providing critical additional support for control of NTDs including LF elimination. The national governments should identify and involve such agencies and INGOs in the LF programme. Some of the agencies/INGOs supporting the LF elimination programme in the

Region are – JICA of Japan, the Nippon and Sasakawa Foundations of Japan, AUS-AID, Damien Foundation-Belgium, Bill & Melinda Gates Foundation and Carter Center-USA.

9.8 National/local NGOs

National research and academic institutions in endemic countries should be involved in LF-related activities. They can be useful in identifying areas or topics of operational and applied research, capacity building and monitoring and evaluation.

There are also a number of local NGOs functioning in all the endemic countries of the Region, who can be involved in LF elimination activities.

9.9 Inter-sectoral coordination

The involvement of multiple partners and various ministries in endemic countries requires inter-sectoral coordination, with the leadership of the ministry of health and the national LF programme authorities and facilitation by WHO. There is also a need and scope for integration of LF elimination activities with the group of neglected tropical diseases and programmes such as malaria, soil transmitted helminthiasis (STH), immunization etc through a multi-intervention package. The national programmes should aim at integrating LF elimination activities with the general health system and NTDs and develop multi-disease and multi-intervention packages.

10. Integration of LF elimination with other disease control programmes

(a) STH

MDA is the main strategy for elimination of LF and control of STH, the only difference being that MDA is required once a year for LF and twice a year for STH. It would therefore be cost-effective to integrate the two programmes.

- (b) Malaria and other vector-borne diseases
Malaria control activities have common features with LF activities and can provide synergistic benefits. Activities like promotion of insecticide-treated bednets and vector control measures for malaria and other vector-borne diseases would have an impact on LF elimination.
- (c) Integrated disability prevention and care programmes — eg. leprosy
The success of the leprosy elimination programme in most countries of the Region gives an opportunity for the LF elimination programme to motivate and involve the health staff, volunteers and NGOs involved in leprosy work for LF activities. This is particularly true for disability prevention and care since it forms an important component of leprosy work. Some of the leprosy clinics and hospitals can be utilized for disability alleviation and care of those with filarial disabilities.

11. Regional targets

11.1 By the end of 2010

- The process of verification of LF elimination and certification will be initiated by Maldives, Sri Lanka and Thailand where MDA has been stopped after completion of five or more effective rounds;
- Mapping will be completed, the implementation unit determined and MDA scale-up plan finalized in Indonesia;
- Bangladesh, Myanmar, and Nepal will scale-up MDA to cover the entire endemic population country-wide;
- India will implement MDA with DEC + Albendazole in all IUs and initiate stop-MDA procedure in some selected IUs;
- All countries will scale up disability prevention and alleviation activities; and
- All countries will scale-up disability prevention and alleviation activities to cover all patients needing the services.

11.2 By the end of 2013

- Indonesia and Timor-Leste will scale-up MDA to cover the entire endemic population country-wide;
- Maldives and Sri Lanka will be “Certified” as countries which have achieved LF elimination;
- At least half of the implementation units in Bangladesh, India, Myanmar and Nepal will be completing five or more rounds of MDA and will initiate measures to “Stop” MDA in these IUs; and
- All countries will further scale-up disability prevention and alleviation activities.

11.3 By the end of 2015

- Thailand will be “Certified” as the third country which has achieved LF elimination;
- All Implementation units in Bangladesh, India, Myanmar and Nepal will complete five or more rounds of MDA and the countries will initiate action to “Stop” MDA;
- Indonesia will initiate measures to “Stop” MDA in IUs which have completed five or more rounds of MDA;
- All countries will continue disability prevention and alleviation activities; and
- Post-MDA surveillance will be established in all countries.
- From 2015 – 2020:
- Post-MDA surveillance will be functioning well in all countries
- Steps and Procedures for Verification of LF elimination initiated in Bangladesh, India, Indonesia, Myanmar, Nepal and Timor-Leste
- LF elimination achieved in South-East Asia Region.

12. Summary of country-wise progress in South-East Asia Region: 2005-2010

(All figures rounded to '000,000')

Country	Total Population	Population at risk	MDA coverage 2007*	MDA coverage 2010* (Expected)	Expected MDA Status 2015
Bangladesh	147 000 000	74 000 000	30 000 000	74 000 000	All IUs complete five rounds
India	1 200 000 000	596 000 000	62 000 000	596 000 000	All IUs complete five rounds
Indonesia	220 000 000	180 000 000	11 000 000	30 000 000	All IUs covered by 2013
Maldives	300 000	15 000	15 000	MDA Completed	LF elimination confirmed
Myanmar	57 000 000	48 000 000	20 000 000	48 000 000	All IUs complete five rounds
Nepal	25 000 000	23 000 000	10 000 000	23 000 000	All IUs complete five rounds
Sri Lanka	20 000 000	10 180 000	10 180 000	MDA completed	LF elimination confirmed
Thailand	62 000 000	120 000	100 000	MDA completed	LF elimination verified
Timor-Leste	1 000 000	1 000 000	MDA**	600 000	All IUs covered by 2013
TOTAL	1 732 300 000	932 315 000	132 295 000	781 295 000	

* Refers to MDA coverage with the two-drug regimen

** In Timor-Leste, MDA was undertaken in six of the 13 IUs in 2005 & 2006 but no MDA undertaken since 2007; the country expects to re-start MDA in phases in 2010 and cover all IUs by 2013.

13. WHO Publications

WHO SEARO

- Regional Strategic Plan for Elimination of LF 2007-2010
- Regional Strategic Plan for Elimination of LF 2004-2007
- Regional Strategic Plan for Elimination of LF 2000-2004
- Report of Inter-country meeting of National LF Programme Managers in SEAR, New Delhi, May 2005

WHO HQ

- Global Strategic Plan for Elimination of Lymphatic Filariasis
- Training Module for Drug Distributors in MDA for LF
- Training Module on Community Home-based prevention of disability due to LF – Learner’s Guide
- Training Module on Community Home-based prevention of disability due to LF – Tutor’s Guide
- Guidelines for Monitoring and Epidemiological Assessment of the Programmes to Eliminate Lymphatic Filariasis at the Implementation Level (2005)

13.1 LF related Websites

- WHO – www.who.int/topics/filariasis/en
– www.searo.who.int/en/section10
– www.pacelf.org
– www.who.int/tdroid/diseases/lymphfil/diseaseinfo

Global Alliance to Eliminate LF – www.filariasis.org

GlaxoSmithKline – www.gsk.com/community/filariasis

13.2 Important national publications on LF elimination

India – Government of India – Operational Guidelines on Elimination of Lymphatic filariasis (2005) – Directorate NVBDCP.

Lymphatic filariasis (LF) is the second leading cause of disability worldwide. The WHO South-East Asia Region accounts for about 65% of the global population at risk. Strategic plans for 2007—2010 for LF elimination have been developed in the line of global targets and strategies that were successfully implemented in the Region. Taking into consideration further progress and the new knowledge and tools available, this strategic plan has been revised and updated with the goal to eliminate LF from the Region by 2020. The strategies include, Mass Drug Administration (MDA) with diethylcarbamazepine citrate (DEC) and albendazole, prevention and alleviation of disability, community awareness and mobilization, etc. Yearwise targets have been fixed to achieve the overall elimination target.



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