Lymphatic filariasis (LF) is one of the leading causes of permanent disability and a major impediment to socioeconomic development. The WHO South-East Asia Region accounts for the highest burden of LF, in nine of its 11 Member States. The eighth meeting of the Regional Programme Review Group (RPRG) for Elimination of Lymphatic Filariasis in the South-East Asia Region, held on 28-29 April 2011, in Colombo, Sri Lanka, reviewed the progress of LF elimination in the Region, identified key issues and made technical and operational recommendations to scale up mass drug administration (MDA) and disability management by the endemic Member States. It was recommended that the process of verification of elimination of LF in Sri Lanka and Maldives be initiated as per the revised (2011) WHO guidelines on transmission assessment.

This report presents the synopsis of the deliberations held at the meeting and its recommendations.
Elimination of Lymphatic Filariasis in the South-East Asia Region

Report of the Eighth Meeting of the Regional Programme Review Group (RPRG)
Colombo, Sri Lanka, 28–29 April 2011
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The Eighth Meeting of the Regional Programme Review Group (RPRG) for Elimination of Lymphatic Filariasis (ELF) in the WHO South-East Asia (SEA) Region was held in Colombo, Sri Lanka, on 28-29 April 2011. The agenda and the List of Participants are at Annexes 1 and 2 respectively.

The objectives of the meeting were:

(1) To review the reapplication for free supply of albendazole and the annual report submitted by endemic countries for lymphatic filariasis (LF) and recommend to the Regional Director, WHO-SEARO, on the quantity of free supply of this drug for Mass Drug Administration (MDA) and further request the donor for the supply of the required quantity;

(2) To review the progress of lymphatic filariasis (LF) elimination in the nine endemic countries of the Region with a view to identifying and recommending on operational and technical issues including research; and

(3) To review strategies and emerging technical issues with a view to providing technical advice to the Regional Director, WHO-SEARO.

1. Opening session

In his opening remarks, Dr A P Dash, Regional Adviser, Vector Borne and Neglected Tropical Diseases Control (VBN), WHO-SEARO, while welcoming the participants pointed out that the WHO South-East Asia (SEA) Region had a disproportionate share of the global burden of lymphatic filariasis. All three parasites causing human filariasis are prevalent in the Region. The disease was endemic in nine of the 11 Member States of the Region which was making significant progress towards achieving the goal of elimination. Mapping had been completed in all endemic countries by the end of 2009. The endemic Member States adopted the WHO-recommended two-drug strategy for MDA by 2006. Significant scaling up of MDA operations had occurred in the Region. Member States had demonstrated their commitment to the programme by mobilizing funds to cover operational costs. The generous support of GlaxoSmithKline (GSK)
that had ensured adequate supplies of albendazole for the Region was an important factor that contributed to the significant progress that had been made.

The Eighth Meeting of National Programme Managers for Elimination of Lymphatic Filariasis in the South-East Asia Region was held on 26-27 April 2011 i.e. prior to this meeting. Dr Dash said that the RPRG members would have had a good opportunity to discuss and identify issues with all programme managers.

Dr Ichimori while conveying the greetings of the Director, Department of Neglected Tropical Diseases (NTD), WHO-HQ, Geneva, said that the SEAR-RPRG meeting was an important one since the Region had the highest burden of LF in the world and that the success of the global LF elimination programme was dependent on the success in the SEA Region. It was important for all partners to work together to ensure that the elimination of filariasis in the Region was achieved by 2020.

Dr Nirmal K. Ganguly, the Chairman of the RPRG conducted the meeting.

2. Action taken on the recommendations of Seventh RPRG meeting (2010) held in Jakarta, Indonesia

Dr A.P. Dash, Regional Adviser (VBN), WHO-SEARO, presented a report on the action taken on the recommendations of the Seventh RPRG meeting. The RPRG noted that appropriate action had been taken on all the recommendations made by the Seventh RPRG meeting held in Jakarta in April 2010. The group recorded its deep appreciation of and conveyed its thanks to WHO-SEARO for the prompt action taken by it to improve the programme.

3. Updates from Glaxo Smith Kline

Mr Andy Wright, GlaxoSmithKline (GSK), provided an update on the GSK partnership with the Global Programme for the Elimination of LF (GPELF). Fifty-four countries commenced LF elimination programmes using mass drug administration with albendazole along with Diethyl Carbamazine
Citrate (DEC). As of March 2011, 2151 million tablets had been donated to these countries and 63% of these shipments were made to the endemic countries of the SEA Region. There has been a steady increase in donation to countries of the SEA Region, with India alone receiving 300 million tablets from the Nashik plant in 2010. A new GSK albendazole manufacturing production line in Nashik was opened by the CEO of GSK, Mr Andrew Witty in April 2010. Since December 2009, 445 million albendazole tablets have been supplied from Nashik for the India LF programme. In 2011, 25 million tablets are being shipped for the Indian programme every month from this plant.

Significant increases in drug donations have taken place. In October 2010 GSK announced the expansion of albendazole donation to treat school-age children in Africa for soil-transmitted helminthiasis (STH). Johnson and Johnson announced a donation of 200 million tablets of mebendazole per year from 2012 while Eisai announced a donation of DEC for LF from 2012. GlaxoSmithKline was expanding its commitment to the control of tropical diseases and had made a pricing promise of charging only 25% of the cost of drugs in least developed countries (LDC). By developing a knowledge pool, it sought to promote flexible patents for the developing world. A Research and Development (R&D) centre for neglected tropical diseases (NTDs) had been established at Tres Cantos in Spain and an open laboratory “Foundation” had been created by GSK by investing US$ 8 million. Several antimalarial compounds were being screened and the company was exploring various affordable pricing options for its malaria vaccine.

4. Progress made by the Member States

4.1 Bangladesh

The country has identified 34 of 64 districts as endemic for lymphatic filariasis with 75.96 million people living in the endemic districts (implementation units). The MDA activities were initiated in 2001. In 2010, MDA was conducted in 19 implementation units (IUs) covering a population of 36.25 million. Approximately 31.14 million people out of the eligible population of 33.57 million ingested the drugs (92.75% reported coverage). The assessed coverage, however, was only 72.63%.
The programme adopted a directly-observed treatment strategy while distributing the drugs. Household registration, door-to-door drug distribution and administration was done by public health and family planning field staff and private paid volunteers (drug distributors) in both rural and urban areas. Only persons present in the house were given the drugs and asked to swallow them in the presence of field staff. Drugs were not left with any member of the household. On the following day, there was a supervisory visit by supervisory staff to administer the drugs to those who had been missed. Drugs were also distributed and administered directly in schools, colleges, madrassas, mosques, cinema halls, market/shopping areas, slums and on roads, etc. Social mobilization was carried out using a documentary film show and distributing public education materials to the community. No severe adverse effects (SAE) to DEC and albendazole administrations were reported. The programme identified insufficient social mobilization, and delayed availability of funds, as barriers to implementation.

In the area of LF-related disability prevention and management, the programme had made significant progress. Disability management guidelines had been developed and health personnel were being trained in management of cases. Over 12 000 hydrocele surgeries had been performed.

In its reapplication the country stated that it planned to treat 36.25 million people in 2011 and requested 34.45 million tablets of albendazole and 4800 ICT cards for use in various activities.

**Recommendations**

The RPRG:

- Appreciated the efforts of the country in taking steps to improve the MDA coverage and its expansion of disability-alleviation activities.
- The request for 34.45 million tablets of albendazole and 4800 additional ICT cards was approved by the RPRG.
- The RPRG urged the programme to explore reasons for the low coverage in some IUs.
The Group recommended Transmission Assessment Surveys (TAS) as per the guidelines of WHO (2011) in five districts to determine stoppage of MDA.

The programme should examine the feasibility of conducting studies on transmission patterns and dynamics in areas where there is a persistence of microfilaraemia (mf) despite sustained MDA activities.

The RPRG requested the programme to explore increased community involvement in disability prevention activities.

4.2 India

The country had identified 250 endemic IUs and classified 169 districts as non-endemic. An estimated 600 million people were residing in endemic districts. Although MDA had been started as early as 1996, it was only after 2004 that the programme was expanded rapidly to cover 209 districts. The 2009 MDA round covered 193 IUs. The MDA activities could not be carried out in seven IUs in Assam and 50 IUs in Uttar Pradesh. The 2010 MDA was carried out in 165 IUs. A total of 293 million people were treated with MDA. Mass drug administration campaigns were carried out over 3-4 days. Although MDA campaigns were planned for November, they could not be completed that month due to a variety of reasons. The reported coverage was 40%-90% while the actual coverage among the eligible population was 45%-95%. In five IUs the coverage was <65%, in 14 IUs it was 65%-80%, and in 108 IUs it was >80%. The remaining IUs were not surveyed.

The programme conducted mf surveys both in 2009 and 2010. In 209 IUs mf rate was 0 to <1% while in another 41 IUs the mf rate was >1%. In 2009, mf surveys were not conducted in 57 IUs (mainly in Assam and Uttar Pradesh). The programme conducted ICT card tests in a few IUs in 2009 where the mf rate had dropped below 1%. However, none of the IUs qualified for stoppage of further rounds of MDA.

Countrywide morbidity management activities had been initiated in 2004. By 2009 all 250 IUs had morbidity management plans in place. The 2009 programme reported 762380 cases of lymphedema and 8834 hydrocelectomies. The report regarding the morbidity management activities carried out in 2010 was awaited.
The country proposed to conduct the 2011 MDA round in November 2011 to cover all the 250 IUs with approximately 600 million population. No new IUs are to be included. Some IUs would be excluded if the TAS could be conducted to decide stopping of MDAs. The 2010 round of MDA had been carried out by utilizing a generous supply of 300 million tablets of albendazole from GSK. In its reapplication the country requested 300 million tablets from GSK to be shipped in monthly installments of 25 million tablets.

The programme was planning to source the remaining 300 million tablets from the country government programme budget. The government had provided Rs 794.83 million for the 2010 round and the programme anticipated receiving approximately Rs 1215 million for the 2011 round.

Recommendations

The RPRG:

- Appreciated the efforts of the programme to expand the geographical coverage to all endemic districts and acknowledged the commitment of the government in providing sufficient funds for the programme.

- Approved 600 million tablets of albendazole for the 2011 round of MDA and recommended the supply of 300 million tablets of albendazole by GSK. The RPRG also requested GSK to explore additional supply of tablets of albendazole.

- The programme was requested to submit a revised estimate of albendazole after the completion of MDA round in the remaining districts.

- Urged the programme to explore funding for the purchase of 150 000 ICT cards that would be required to assess stopping of MDA in some IUs.

- Requested the programme to ensure that MDA is started in all states and to strengthen social mobilization and other activities to enhance coverage in areas where coverage was low.
➢ While appreciating the initiative of the programme to fund albendazole from other sources, the RPRG requested the programme to ensure the quality of the locally purchased albendazole.

➢ Recommended the programme to undertake TAS in 100 IUs where the levels of mf were lower than 1.

➢ Recommended a critical review of the programme to determine variations in mf prevalence and identify districts (IUs) where MDA could be stopped. Such a review would assist the programme in reducing requirement of albendazole and conservation of resources.

4.3 Indonesia

The mapping studies to date showed that out of a total of 495 districts in the country, 356 or 72% of IUs were endemic. The rest were non-endemic. No uncertain (grey) areas were reported. The MDA implementation unit is a district. The total endemic population in endemic IUs was estimated to be around 131 million. In 2010 MDA was carried out in 88 IUs (24.7%) out of the 356 endemic districts using single annual doses of DEC and albendazole.

The total and eligible population treated in the 88 IU was 37.2 million and 22.6 million respectively. The MDA 2010 round treated 18.5 million. The overall treatment coverage was 81.65%. The coverage data showed great variation from district to district ranging from a reported 1.28% to 92.90% of total population and from 9.40% to 95.39% for eligible population. The strategy used for drug delivery to people varied from a house-to-house strategy to setting up of distribution points within communities. In urban areas, special population groups in factories and offices were also targeted. All treated individuals ingested drugs under observation. No SAEs were reported during this round of MDA.

The MDA was discontinued or not provided in 19 IU during the year, 11 of which had received five MDAs previously. The main reason appeared to be lack of funds while some IUs were awaiting assessments of impact to be made following the completion of five rounds of MDA.
WHO funded the social mobilization efforts and advocacy meetings with stakeholders from district, sub-district to village levels were conducted and several information, education and communication (IEC) materials distributed throughout the district and among target populations. Socialization activities were also carried out through television and other electronic devices. However, only some districts were found to be able to afford this.

In 112 IUs, morbidity management activities were carried out using the National Prevention of Disability Guidelines. The programme identified 4773 lymphoedema patients in 99 endemic IUs. The programme conducted 112 courses on interruption of transmission and disability prevention at the district level covering 1120 staff.

The programme identified the following as major obstacles:

- low commitment from stakeholders to conduct MDA
- budgetary constraints
- low levels of socialization/advocacy.

The programme planned to overcome these hurdles by improving advocacy and sensitization activities, fund-raising through other resources besides the government, and decreasing delays in procurement of drugs and diagnostics.

In its reapplication, the country proposed to conduct its next round of MDA in September 2011. A total of 114 IUs are to be treated including 96 IUs, which will be retreated while 18 will be new IUs. The total population to be covered will be 57,703,339 including 5,150,905 people who will be treated for the first time. Seven IUs are to be excluded, removing 1,382,801 people from treatment since these districts have received 5 years of MDA. DEC will be supplied by MoH while district governments will provide for the operational costs.

Since the programme already has a stock of 39,233,327 tablets, the country requested 18,470,012 tablets of albendazole from GSK through the RPRG/WHO to treat 57,703,339 individuals. Albendazole tablets will be required by June 2011.
Recommendations

The RPRG:

- Acknowledged the progress made by the country in expanding MDA activities despite difficulties in mobilizing resources.
- Appealed to the country to ensure uniform high coverage in all IUs since the current coverage is highly variable.
- The programme should ensure an uninterrupted five-six rounds of MDA in all IUs by securing commitment of local administration.
- All steps should be taken to strengthen efforts to eliminate *B. timori* since this is a focalized infection.
- The proposed plan of expansion of the programme should consider scaling up in contiguous areas.
- Suggested mobilization of additional resources through increased advocacy and organization of stakeholders meetings.
- Recommended strengthening of communication networks between researchers and academic institutions to promote operational research relevant to the programme.
- Suggested that the National Task Force decide the usage of “expired” ICT cards after a critical examination of the issue.
- Recommended a visit by a team of experts to a national-level workshop to address the National LF Committee, programme managers and biostatisticians on monitoring and evaluation (M&E) strategies, TAS and sampling strategies.

4.4 Maldives

The last MDA round was finished in 2008 in the Fonadhoo Island which was mapped as endemic. Since then, post-MDA surveillance activities have been implemented.
Recommendation

The RPRG:

- Recommended the commencement of the process for the verification of elimination in the country as per the WHO guidelines.

4.5 Myanmar

Mapping activities were completed in the country in 2007 and 45 of 65 regions/provinces were declared endemic. An estimated 46,994,323 persons live in endemic areas. The MDA conducted in 2010 achieved a geographic overage of 26.7(%). All the 12 IUs reported a coverage of 84%-91% of total population and 90%-99% of eligible population. The surveyed coverage was 91%-97% of total population and 94%-99% of the eligible population.

A house-to-house drug distribution strategy was adopted and there was one drug distribution team for 50 households. It took approximately one week to administer the drugs. No SAEs were reported. Disability prevention activities were carried out in 42 IUs using 2002 guidelines. Training activities were conducted in all IUs and at the national level.

There were interruptions in the distribution of the drug leading to a change in the schedule of MDA. Also, activities planned in 2010 could not be completed due to non-availability of DEC from WHO. The programme also experienced shortage of funds in purchasing DEC and delays in shipments of albendazole. While the programme would make all efforts to obtain national funding for the programme, it requested extrabudgetary funding from WHO.

The programme received 50 million DEC tablets from WHO and requested WHO to provide US$ 39 500 to meet the operational cost to implement the 2010 round in June 2011. This is being submitted to Sabine Vaccine Institute/Global Network for Neglected Tropical Diseases Control (GNNTDC), Washington DC, USA.
The programme had developed an integrated plan of action for control of neglected tropical diseases that included a comprehensive approach for all activities of the LF elimination programme.

In its reapplication, the country stated that it would complete activities that had been left incomplete in 2010 in 2011. In addition it was planning to conduct another round of MDA that would be the 2011 round. Two IUs would be excluded in that round. Since the MDA activities were still ongoing the stock position was not clear and a final assessment of the drug requirement may have to be made after completion of those activities.

**Recommendations**

The RPRG:

- Appreciated the efforts of the programme in achieving high coverage and large scale implementation of disability-alleviation activities.
- Urged the programme to complete the 2010 round of MDA in June 2011 utilizing the available DEC and albendazole and submit a report on activities.
- Approved the request of the programme for 17.79 million tablets of albendazole.
- Requested the GNNTDC to explore funding channels for in-country activities to cover operational costs for distributing MDA drugs, IEC, training and monitoring exercises.
- Requested WHO to continue to provide technical assistance to scale up MDA.

### 4.6 Nepal

Nepal has identified 60 of the 75 districts as endemic for lymphatic filariasis. Out of these, 57 districts are rural and three are urban. The total endemic population has been estimated at 25 million. The elimination programme, which began in 2003 in one district (IU), was expanded to cover 30 districts (IU) by 2010. The initial population covered by the programme was 475 000 while it increased to 14.5 million by 2010. Sixteen districts had completed four rounds of MDA, four districts had
completed five rounds of MDA while one district had completed six rounds of MDA. In six districts the mf rate had dropped below 1%. The coverage was uniformly high, being generally above 80% in all districts.

The MDA round 2010 was held in March 2011. All 36 districts covering a population of 14.5 million completed MDA. Four districts reported severe adverse events (SAE). The programme expressed concern at the recurrent occurrence of SAEs and sought a review of the guidelines to assess and plan the management of SAEs.

MDA activities were stopped in five districts without conducting any surveys to determine if further MDAs should be carried out or not.

The programme had developed an integrated plan of action for control of neglected tropical diseases that included a comprehensive approach for all activities of the LF elimination programme. In its reapplication the country planned to treat people in a total of 51 districts, 41 of which would be districts where MDA had already been carried out while the remaining 10 districts would be new ones. The programme requested 24.41 million tablets of albendazole for the forthcoming 2011 round of MDA to be implemented in February 2012.

**Recommendations**

The RPRG:

- Appreciated the progress made by the programme and the development of an Integrated Plan of Action for the control of NTDs.
- Approved the request for 24.41 million tablets of albendazole made by the programme for the 2011 round.
- Suggested that the SAEs should be rapidly investigated and efforts should be taken to prepare for future MDA rounds.
- Urged the programme to develop and utilize national guidelines for the management of SAEs.
- In view of the recent SAE incidents, the country could consider holding the next round of MDA in February 2012.
4.7 Sri Lanka

The country had initiated MDA in eight districts in three provinces in 2001 and had successfully completed five/six rounds of treatment by 2007. Since then the programme was involved in post-MDA activities. The programme was carrying out four types of post-MDA surveillance: spot checks; community surveys; school-based surveys; and entomological surveys. All surveys indicated that the country was making good progress and needed to expand its post-MDA activities to include TAS, and take other steps towards certification of elimination. The programme was planning to conduct a community survey of children between two-four years of age and school entrants using LQAS. It was also calculating the requirements of ICT cards for the proposed surveys using the guidelines on transmission assessment surveys (WHO).

The programme has planned an external review of LF elimination as per the Seventh RPRG recommendation with the assistance of WHO in 2011.

Progress in the area of morbidity management was equally good with identification of 5,792 people with lymphedema participating in disability-alleviation programmes. Hydrocele surgical operations were carried out as a routine activity all over the country.

Recommendations

The RPRG:

- Appreciated the effort of the country in successfully completing five rounds of MDA with high coverage and initiating post-MDA activities.

- Recommended that the country should conduct TAS using the new guidelines.
The RPRG:

- Recommended the commencement of the process for the verification of elimination in the country as per the WHO guidelines with assistance of WHO.
- Recommended the feasibility of the use of the Brugia rapid test in the pockets of Brugian infections in the country.

4.8 Thailand

The elimination programme in Thailand was started in 2002 using single annual dose of DEC and albendazole covering 336 village-level IUs. The programme targeted both *W. bancrofti* and *B. malayi* transmitted by the *Aedes*, *Culex* and *Mansonia* group of vectors. The programme stopped MDA in 2007 in all endemic districts except the Narathiwat area, which continued to receive annual MDA. In the 11th MDA round conducted in 2010 in this region 87 villages (IUs) with a population of 80,930 were targeted. The coverage was reported to be 94.5%.

Although a population-based survey had not been carried out, ICT card tests in sentinel and spot check sites showed that results for all 838 children between two and four years were negative. The country was planning to initiate post-MDA surveillance activities based on the WHO guidelines. It was also exploring the use of newer Brugia detection kits in the surveillance programme.

In its reapplication the programme requested 97,000 tablets of albendazole to continue MDA in the Narathiwat province.

**Recommendations**

The RPRG:

- While appreciating the programme’s efforts to achieve the goal of elimination, urged the programme to continue its efforts to complete MDA in the Narathiwat province.
- Approved the supply of 97,116 tablets of albendazole requested by the programme.
- Suggested that efforts should be made to validate the existing and new diagnostic test for detection of Brugia infections.
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- Urged that the country should initiate TAS in areas where MDA has been stopped and initiate post-MDA surveillance.
- Recommended the commencement of the process for the verification of elimination in the country as per the guidelines of WHO.

4.9 Timor-Leste

No report of activities or reapplication was received from the country this year too. The country had initiated MDA in 2005 in four IUs covering 310 000 people. However, it was discontinued in 2006 due to a variety of reasons.

Based on the recommendations of the Seventh RPRG, WHO-SEARO (VBN) had organized a visit to the country to assess the situation. The team found that all NTD control activities except leprosy had ceased since 2008 due to low priority and commitment, lack of trained health workforce and non-availability of funds to meet operational costs. The MoH was willing to revitalize the LF MDA programme with external financial and technical support.

Recommendations

The RPRG:

- Urged the country to consider developing an integrated NTDs control approach for LF elimination and revive its elimination activities.
- Recommended that a special resource package be developed for the country that should include identification of a focal point in Indonesia responsible for capacity building in Timor-Leste.
- Recommended that funding opportunities available with USAID and AusAid should be explored.
- Strongly recommended SEARO (VBN) to form a team to assist the country in its elimination activities.
5. **Technical discussions and updates on programme implementation in relation to regional strategic plans**

5.1 **Filariasis test available for assisting with the LF elimination programme**

Dr Edwin Michael presented an overview of the status of diagnostic tests available for LF elimination and the importance of the use of appropriate statistical tools in monitoring the LF programme. Monitoring is closely related to intervention management and the current tools are capable of identifying the progress in the control of various stages of the parasite lifecycle. A large number of tests are already available or are in various stages of development. Antigen- as well as antibody-based tests of varying sensitivities and specificities were being used and also evaluated. Good indicators for parasite intervention monitoring should show quick response to change in infection/transmission states, demonstrate low natural variability and be reasonably priced. Transmission of LF had complex dynamics and the initial conditions had significant impact on endpoints. In addition, the choice of endpoint values depends on whether management is risk-averse or risk-tolerant. Mathematical modelling had allowed different endpoints such as infection breakpoints and transmission thresholds to be evaluated. Estimation of infection prevalence in human and vector hosts was critical for the estimation of sample sizes during monitoring. Utilizing the available monitoring tools and those being developed should provide information on when and where to start MDA, check progress and when to stop and also assist in surveillance. The indicators that are to be used should describe the status of different attributes of a system for meeting these objectives. Finally, the choice of indicators needs better appreciation of the impact of diagnostic accuracy, power and sample size calculations, field feasibility and costs.

5.2 **Ongoing operational research studies under the Gates grant**

Dr Kumaraswami in his presentation provided an overview of activities being undertaken under the Gates grant. The studies being carried out addressed the following three major issues: (i) when can MDA be stopped
and how can we be sure of its success; (ii) are there supplementary tools that can ensure success; and (iii) can we identify innovative financing strategies? Several diagnostic tools (including Pan ELF, BmR1, Bm 14 and Wb123) had been evaluated in field settings. Better sampling frames (using six-seven-year-olds) had been developed and a user-friendly Survey Sample Builder constructed to assist programmes. The TAS design had been finalized in consultation with experts in the field. Electronic data collection using Android-powered cell phones and EpiCollect 2 software had been successfully field-tested. The challenges posed by problems in urban coverage and deliveries of drugs in special situations were being addressed in multiple studies. At three sites the effect of MDA and LF treatment on subclinical pathology was being monitored in studies that used lymphoscintigraphy. The role of supplemental vector control using different strategies was being identified in studies and being carried out in India and Africa. Studies to use the existing drugs in different dosages and rhythms were making significant progress, and the results promised alternative tools that could strengthen the programme. Approximately 46 million DALYs were averted, nearly 9.9 million newborn babies were protected and over 2.2 million new clinical cases were averted since the programme began nine years ago. Significant increase in funding for the programme as a consequence of targeted advocacy was noted in three African countries.

Dr Peter Fischer presented the highlights of the studies being carried out under the Death to Onchocerciasis and Lymphatic Filariasis (DOLF) project. These studies encompassed: large-scale annual versus twice/year MDA with modelling and cost analysis; randomized clinical trials of new combinations and schedules; pre-clinical development of flubendazole as a macrofilaricide. The community-based chemotherapy trials were testing different MDA options to speed up LF elimination and find the most cost-efficient strategy for elimination in different epidemiological settings. They would also determine the impact of different MDA options on STH. Twice yearly, high-dose ivermectin and albendazole combinations were shown to be superior for clearing mf of *W. bancrofti* compared to standard dose annual ivermectin and albendazole combinations. Modelling data predicted that twice-annual MDA interventions would lead to a shorter duration of LF elimination programmes. Several collaborative research programmes were being conducted in Indonesia. The prevalence of *B. timori* microfilaraemia had been reduced to near zero after eight rounds of MDA in Alor district. In the same district, DOLF was carrying out a large population trial to assess the use of albendazole for STH. A FLOTAC test for the detection of STH
eggs had showed considerable promise. The programme was also field-testing the EPICOLLECT method of data collection and transmission in its project areas.

### 5.3 Resource mobilization

Dr Amanda Miller made a presentation on the activities of the Global Network for Neglected Tropical Diseases Control (GNNTDC), an advocacy and resource mobilization initiative working with international organizations, governments, technical agencies and donors to enhance collaboration and coordination in support of NTDs control and elimination goals. The global network served as a “global broker” and received support from the Bill and Melinda Gates Foundation to leverage new investment in NTD control. Its objectives were to support WHO, develop financing mechanisms for programmes in Africa and Asia, mobilize resources and promote effective advocacy. Country plans for integrated NTDs control were being developed for the South-East Asia and Western Pacific Regions of WHO. The Organization was promoting the concept of “regional financing” since it would aggregate demand and harmonize disparate control efforts by creating efficiencies, improving access to data, and create political will and demand at global, regional and national levels. Recognizing the incredible opportunity to control and eliminate NTDs in the Americas, the Global Network, IDB and PAHO have partnered to launch the first-ever regional financing mechanism to scale up NTDs control efforts. In the Asian region the following activities have been undertaken: development of a draft NTDs strategy for the Western Pacific and South-East Asia Regions, exploration of the landscape for regional financing mechanism and search for a major partner. Discussions are also on with the development banks and other partners to explore a possible regional resource mobilization platform. It was also supporting regional NTDs officers/focal points to monitor activities in both the Western Pacific and South-East Asia Regions. The Organization was investing heavily in the area of advocacy and education, and was using several innovative measures such as development of web sites, a global network blog site and encouraging writing of success stories.
5.4 Group discussions

During group discussions, the RPRG discussed some of the following issues:

Dr Rita Kusriastuti and Dr Peter Fischer discussed some methods of improving the MDA coverage. They highlighted community mobilization, IEC, directly-observed MDA and follow-up round of MDA that would improve the geographic and treatment coverage.

Dr K.N. Sein discussed the issues related to SAE. It was suggested that the programme should have SAE management guidelines, community orientation on SAE, pharmacovigilance system and a prompt reporting system, etc. to manage SAEs.

Dr Sunil Settinayake discussed the need to scale up disability-alleviation in LF-MDA programme by training health workers and involving NGOs and communities. He also suggested that LF-disability-alleviation activities should be integrated into leprosy disability-alleviation activities wherever applicable.

Dr Moazzem Hossain stated that in Bangladesh, NGOs were managing four hospitals especially for LF-related disability management including hydrocelectomy. The national programme should build strong partnership with NGOs to expand disability-alleviation activities.

Dr A.P. Dash discussed the importance of integrated vector control management (IVM) in augmenting the elimination efforts of LF. He also highlighted that the programme managers in Member States should initiate implementation of IVM guidelines. The Regional Office will facilitate capacity-building of Member States in IVM implementation.

Dr C.R. Revankar discussed the importance of integrating LF into other NTDs control activities to mobilize resources. He informed the RPRG that the Region was in the process of finalizing a regional strategic plan for integrated NTDs control as an advocacy tool for the Member States.

The RPRG also discussed the stopping of MDA and setting up of new surveillance mechanisms as per the guidelines of WHO. It was felt that there is a need to train country programme managers and build advocacy among countries to effectively adopt these new guidelines.
Finally, the RPRG discussed the scope for operational research to be carried out within programmes to improve their functioning.

The conclusions and recommendations arising out of these group discussions were incorporated into the recommendations of the meeting.

6. Conclusions and general recommendations

6.1 Conclusions

Significant progress has been made by Member States of the Region in rapid scaling up of programmes with the support of partners. Maldives, Sri Lanka and Thailand are ready to take the next steps after stopping of MDA. Some Member States are facing problems in expanding their activities due to lack of resources, particularly funds for operational costs. Indonesia, Myanmar and Nepal have drafted their plans to integrate LF into other NTDs to mobilize resources.

Although morbidity management activities have been initiated in many endemic countries they need to be rapidly scaled up using innovative and integrated approaches. The occurrence of SAEs in MDA programmes impact programme success and need to be managed rapidly and effectively. Newer tools for better diagnosis, monitoring and evaluation to enhance programme performance are being developed and evaluated, and hold considerable promise.

6.2 General recommendations

- Plans for expanding MDA activities by endemic countries may be based on realistic assessment of availability of adequate resources.

  Timor-Leste and Myanmar would need additional support in terms of funding and technical assistance.

- Countries are encouraged to develop a framework for management of SAE including a reliable referral system during MDA campaigns and strengthening of national pharmacovigilance networks to include reporting of safety of drugs used. Endemic countries are urged to ensure the quality of distributed drugs through quality control by utilizing the services of drug testing laboratories located in the Region.
WHO may encourage intercountry coordination on cross-border issues.

Countries are expected to initiate steps for stopping of MDA in IUs where a minimum of five-six effective rounds of MDA have been completed and mf rate has dropped below 1% using the guidelines of WHO 2011. Maldives and Sri Lanka will follow the guidelines of WHO 2011 for initiating the process of verification of elimination.

Countries are encouraged to include integrated vector management (IVM) strategies in their elimination programmes to sustain elimination efforts.

Elimination programmes should make best efforts to improve the quality and interpretation of data by improving the data management system through sound statistical principles.

Programme managers should be encouraged to identify key issues that impact the performance of the programme and undertake operational research in collaboration with research institutes and academia.

Countries are urged to analyse and publish the progress made by their programmes towards elimination of lymphatic filariasis that could serve as effective advocacy documents.

Disability alleviation programmes in endemic countries need to be expanded utilizing integrated approaches for the establishment of foot-care clinics in addition to home-based foot-care programmes that are already being implemented in many countries.

Resource mobilization efforts of endemic countries should be based on funding gap analysis, adoption of a transparent mechanism for tracking funds and development of plans that attract funding from in country sources. Integrating LF into other NTDs should be considered to mobilize resources.
**Summary of albendazole requirement of countries in the SEA Region approved by the Eighth RPRG meeting held at Colombo, Sri Lanka, 28-29 April 2011**

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of tablets approved (million)</th>
<th>No. of albendazole tablets to be shipped (million)</th>
<th>Expected arrival date of drugs in country</th>
<th>MDA scheduled for 2011</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>34.45 (19 IU)</td>
<td>34.45</td>
<td>October 2011</td>
<td>November 2011</td>
<td>ICT cards: 4800 more required; 8000 available</td>
</tr>
</tbody>
</table>
| India        | 600 (250 IU)                      | 300 (25 million per month) and 50 million in September and October 2011 | 25 million per month and 50 million in September and October 2011 | November 2011          | Additional quantity to be explored.*
|              |                                   |                                                    |                                          |                        | ICT supply to 100 IUs. Total ICT cards required: 150 000 |
| Indonesia    | 57.06 (114 IU)                    | 18.47                                              | July 2011                                | September 2011         | 2000 ICT cards available. 20 000 required |
| Maldives     | –                                 | –                                                  | –                                        | –                      | Verification of elimination in process |

* WHO will be supplying an additional 50 million to India
<table>
<thead>
<tr>
<th>Country</th>
<th>No. of tablets approved (million)</th>
<th>No. of albendazole tablets to be shipped (million)</th>
<th>Expected arrival date of drugs in country</th>
<th>MDA scheduled for 2011</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>43.79</td>
<td>17.79</td>
<td>May 2011</td>
<td>June 2011</td>
<td>WHO-HQ supplied 50 million DEC.</td>
</tr>
<tr>
<td>Nepal</td>
<td>24.41 (51 IU)</td>
<td>23.1</td>
<td>December 2011</td>
<td>February 2012</td>
<td>MDA stopped in 5 IUs. TAS to be planned. ICT cards 2000 cards available. 2000 more required. Disability survey with MDA to be carried out.</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>Verification of elimination is in process</td>
</tr>
<tr>
<td>Thailand</td>
<td>97116</td>
<td>97116</td>
<td>31 August 2011</td>
<td>April 2012</td>
<td>Requirement for 2012 is requested. DEC 300 mg. tablets purchased from the country.</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>No report</td>
<td></td>
<td></td>
<td></td>
<td>LF MDA programme is being revived</td>
</tr>
<tr>
<td>Total</td>
<td>759.81</td>
<td>393.91</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 1

Agenda

- Registration
- Opening session
- Presentation of action taken on the Recommendations of the Seventh RPRG meeting
- Updates from GSK
- Presentation on Summary of the Member Country-LF-Report 2010 and Review of Reaplication for Albendazole 2011
- Technical discussion and updates on programme implementation in relation to regional strategic plans
  - Filariasis tests
  - Ongoing operational research under Gates grant
  - Resource mobilization
  - Improving coverage
  - Severe adverse events of MDA drugs
  - Improving surveillance and evaluation
  - Verification of LF elimination and stopping of MDA
  - Disability alleviation
  - Integrated approach to NTDs control
  - Integrated vector management
  - Operational issues and research needs
- Conclusions and recommendations
- Closing
Annex 2

List of participants

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Lymphatic filariasis (LF) is one of the leading causes of permanent disability and a major impediment to socioeconomic development. The WHO South-East Asia Region accounts for the highest burden of LF, in nine of its 11 Member States. The eighth meeting of the Regional Programme Review Group (RPRG) for Elimination of Lymphatic Filariasis in the South-East Asia Region, held on 28-29 April 2011, in Colombo, Sri Lanka, reviewed the progress of LF elimination in the Region, identified key issues and made technical and operational recommendations to scale up mass drug administration (MDA) and disability management by the endemic Member States. It was recommended that the process of verification of elimination of LF in Sri Lanka and Maldives be initiated as per the revised (2011) WHO guidelines on transmission assessment.

This report presents the synopsis of the deliberations held at the meeting and its recommendations.