



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
Ministry of Health

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## Filariasis in Sri Lanka (Part II)

This is the second in the series of three articles on filariasis in Sri Lanka.

### Website of AFC

([WWW.filariasiscampaign.health.gov.lk](http://WWW.filariasiscampaign.health.gov.lk)) was launched on 02/07/2013

### Achievements

- One of the main strategies adopted for elimination was the interruption of transmission through MDA once yearly to the entire endemic population for at least five years. With the support of the international partners and the WHO, Sri Lanka successfully completed five rounds of MDA in 2006 which covered more than 80% of the population residing in endemic districts.
- Transmission Assessment Surveys (TAS) conducted among grade 1 and 2 school children in endemic districts in 2008 and 2011 with the financial and logistic support of WHO and international partners, further confirmed the elimination.
- In Sri Lanka, MF rate was below 1% over the past 15-20 years and current (2014) MF rate is 0.05%. This is very much below the WHO elimination target of < 1%.
- Sri Lanka is one of the first countries in South-East Asia Region suitable to work towards certification on elimination of filariasis. AFC has submitted a report (dossier) to WHO for the consideration of granting certification of elimination.
- Field staffs were instructed to collect 60 microliters of blood per person during the preparation of night blood films (NBFs) to enhance identification of cases with low mf densities.

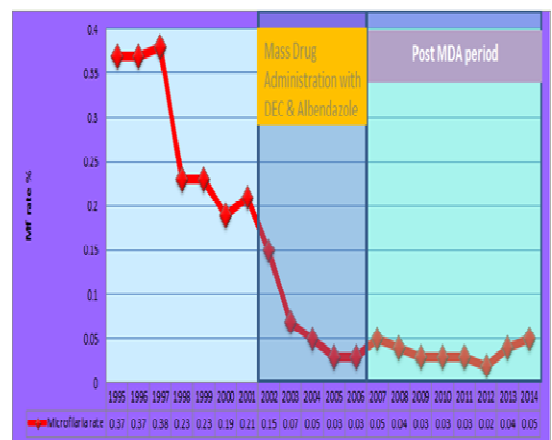
### Results of activities done in 2014 and 2015

#### A) Parasitological activities in endemic districts

In 2014, 344,861 night blood films were examined for microfilaria by the thick blood smear technique from endemic districts. Persons in endemic areas were screened at the night blood filming centers, through house to house visits and during special surveys. Microfilaria rate for 2014 was 0.05 %. (mf rate-number of microfilaria positive persons per 100 persons tested). The majority of positives were detected from Galle district.

Figure 1 shows the microfilaria rate in endemic districts. Microfilaria rate is far below 1% which is the filariasis elimination cut off.

**Figure 1 - The microfilaria rate in endemic districts**



### Contents

### Page

|   |   |
|---|---|
| 1. <i>Leading Article – Filariasis in Sri Lanka (part II)</i>   | 1 |
| 2. <i>Summary of selected notifiable diseases reported (16<sup>th</sup> – 22<sup>nd</sup> January 2016)</i>       | 3 |
| 3. <i>Surveillance of vaccine preventable diseases &amp; AFP (16<sup>th</sup> – 22<sup>nd</sup> January 2016)</i> | 4 |

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**B) Entomological activities in endemic districts**

**1. Infected and infective rates**

Infected rate [number of *Culex quinquefasciatus* mosquitoes with filarial parasite stages (mf, L1, L2 and L3) per 100 *Culex quinquefasciatus* mosquitoes] and infective rate [number of *Culex quinquefasciatus* mosquitoes with infective (L3) parasite stages per 100 *Culex quinquefasciatus* mosquitoes dissected] were 0.55% and 0.007% respectively for the year 2014.

**2. Molecular biological Assays**

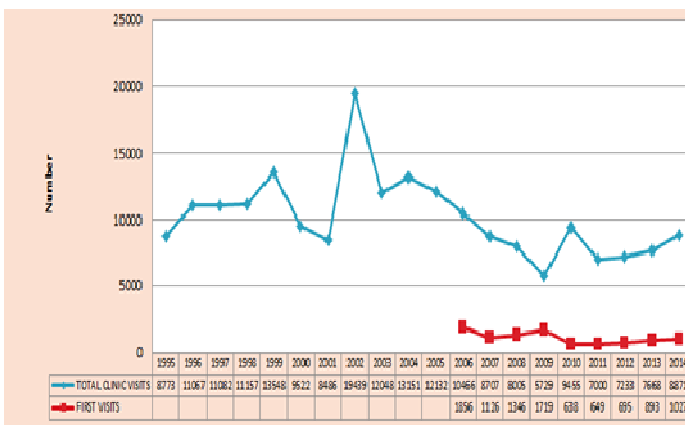
Female *Culex quinquefasciatus* and *Mansonia* species of mosquitoes collected from endemic districts were subjected to PCR testing at AFC to determine the *Wuchereria bancrofti* parasite DNA in *Culex quinquefasciatus* mosquitoes and *Brugia malayi* in *Mansonia* mosquitoes.

**C) Clinical activities in endemic districts**

**1. Clinic visits of lymphoedema patients**

In 2014, the numbers of first visit lymphoedema patients attending the clinics of AFC and RAFUs were 1027, and the numbers of clinic visits of past lymphoedema patients were 8871.

**Figure 2 - Lymphoedema cases (visits) managed at AFC and RAFUs(1995-2014)**



**D) Special Research activities**

**1. Molecular xenomonitoring survey in Galle district**

With the collaboration of foreign partners and RAFUs, AFC conducted “Molecular xenomonitoring Surveys for *Wuchereria bancrofti* DNA in mosquitoes in two evaluation units (Inland and Coastal) in Galle District in 2014.

Thirty PHM areas each were randomly selected from eleven (11) Coastal Medical Officer of Health (MOOH) areas and an-

other 30 PHM areas were randomly selected from nine (9) inland MOOH areas in Galle District. *Culex quinquefasciatus* mosquito pools were collected from these areas and subjected to PCR to determine *Wuchereria bancrofti* parasite DNA.

**2. Antigen and molecular xenomonitoring survey in 6 Public Health Inspector (PHI) areas in Galle, Matara, Kalutara and Gampaha districts in 2015**

Antigen testing using ICT test kits was done among community and school children (Grade 1 and 2) to identify *Wuchereria bancrofti*. Antigen rate is 3.05% (above the elimination cut off of 2%) in Balapitiya PHI area.

*Culex quinquefasciatus* female mosquito pools (20 mosquitoes in each pool) were collected using 50 trap sites in each PHI area and subjected to PCR testing to detect *Wuchereria bancrofti* DNA.

**3. Antigen survey in Galle district in 2015**

*Wuchereria bancrofti* antigen survey in the community was conducted in Galle district, using Field Test Strip (FTS). Galle MC and Balapitiya have shown high antigen rates above 2%.

**4. Special surveys in non-endemic districts**

Special entomological and *Wuchereria bancrofti* antigen surveys were conducted in Mannar district in 2014 and Kegalle district in 2015.

In Mannar district, *Wuchereria bancrofti* antigen surveys were done among 800 persons using ICT kits. Twenty two (22) *Culex quinquefasciatus* mosquito pools (20 mosquitoes per pool) were subjected to PCR and 23 mosquitoes were dissected.

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**Anti Filariasis Campaign**

**Ministry of Health**

**Sri Lanka**

**Table 1: Selected notifiable diseases reported by Medical Officers of Health 16<sup>th</sup> - 22<sup>nd</sup> Jan 2016 (04<sup>th</sup> Week)**

| RDHS Division   | Dengue Fever |             | Dysentery |            | Encephalitis |           | Enteric Fever |           | Food Poisoning |           | Leptospirosis |            | Typhus Fever |            | Viral Hepatitis |           | Human Rabies |          | Chickenpox |            | Meningitis |           | Leishmaniasis |            | WRCD      |           |     |
|-----------------|--------------|-------------|-----------|------------|--------------|-----------|---------------|-----------|----------------|-----------|---------------|------------|--------------|------------|-----------------|-----------|--------------|----------|------------|------------|------------|-----------|---------------|------------|-----------|-----------|-----|
|                 | A            | B           | A         | B          | A            | B         | A             | B         | A              | B         | A             | B          | A            | B          | A               | B         | A            | B        | A          | B          | A          | B         | A             | B          | T*        | C**       |     |
| Colombo         | 472          | 1533        | 3         | 16         | 0            | 0         | 0             | 0         | 0              | 0         | 1             | 7          | 1            | 1          | 0               | 1         | 0            | 0        | 0          | 8          | 28         | 2         | 3             | 0          | 0         | 81        | 94  |
| Gampaha         | 106          | 430         | 0         | 1          | 0            | 0         | 0             | 1         | 0              | 0         | 1             | 7          | 0            | 1          | 1               | 4         | 0            | 0        | 12         | 32         | 0          | 3         | 0             | 0          | 53        | 100       |     |
| Kalutara        | 59           | 207         | 2         | 9          | 0            | 0         | 0             | 1         | 0              | 0         | 3             | 34         | 0            | 3          | 2               | 2         | 0            | 0        | 4          | 14         | 4          | 6         | 0             | 0          | 71        | 100       |     |
| Kandy           | 64           | 244         | 1         | 10         | 0            | 4         | 1             | 4         | 1              | 5         | 4             | 32         | 3            | 9          | 1               | 9         | 0            | 0        | 4          | 10         | 0          | 3         | 0             | 2          | 87        | 100       |     |
| Matale          | 13           | 33          | 1         | 3          | 1            | 1         | 1             | 2         | 0              | 0         | 3             | 17         | 1            | 3          | 0               | 0         | 0            | 1        | 3          | 2          | 11         | 2         | 6             | 6          | 69        | 100       |     |
| NuwaraEliya     | 8            | 36          | 0         | 3          | 0            | 0         | 1             | 5         | 0              | 0         | 2             | 9          | 0            | 3          | 1               | 1         | 0            | 0        | 2          | 6          | 0          | 1         | 0             | 0          | 85        | 100       |     |
| Galle           | 43           | 197         | 0         | 6          | 0            | 1         | 1             | 1         | 0              | 2         | 2             | 38         | 2            | 15         | 1               | 3         | 0            | 0        | 3          | 19         | 2          | 13        | 0             | 0          | 75        | 100       |     |
| Hambantota      | 25           | 72          | 1         | 8          | 0            | 0         | 0             | 0         | 0              | 0         | 3             | 19         | 3            | 14         | 1               | 5         | 0            | 0        | 2          | 21         | 0          | 1         | 14            | 30         | 83        | 100       |     |
| OMatara         | 33           | 109         | 2         | 6          | 0            | 1         | 1             | 1         | 0              | 26        | 5             | 18         | 0            | 8          | 1               | 2         | 0            | 0        | 2          | 18         | 0          | 0         | 12            | 32         | 100       | 100       |     |
| Jaffna          | 137          | 585         | 8         | 34         | 0            | 1         | 5             | 11        | 1              | 6         | 3             | 6          | 73           | 254        | 0               | 0         | 0            | 0        | 6          | 12         | 1          | 3         | 0             | 0          | 100       | 100       |     |
| Kilinochchi     | 3            | 11          | 0         | 5          | 0            | 0         | 1             | 3         | 0              | 0         | 0             | 3          | 0            | 6          | 0               | 0         | 0            | 0        | 0          | 0          | 0          | 3         | 0             | 0          | 50        | 100       |     |
| Mannar          | 8            | 31          | 1         | 2          | 0            | 3         | 2             | 3         | 0              | 0         | 0             | 5          | 1            | 12         | 0               | 0         | 0            | 0        | 1          | 1          | 0          | 0         | 0             | 0          | 80        | 100       |     |
| Vavuniya        | 15           | 61          | 0         | 2          | 0            | 0         | 1             | 3         | 2              | 4         | 0             | 6          | 1            | 3          | 0               | 0         | 0            | 0        | 0          | 2          | 0          | 0         | 0             | 1          | 100       | 100       |     |
| Mullaitivu      | 12           | 24          | 0         | 2          | 0            | 0         | 0             | 1         | 0              | 0         | 3             | 5          | 0            | 1          | 0               | 0         | 0            | 0        | 0          | 0          | 0          | 0         | 0             | 0          | 1         | 60        | 100 |
| Batticaloa      | 32           | 109         | 7         | 32         | 0            | 0         | 0             | 2         | 1              | 1         | 0             | 4          | 0            | 0          | 0               | 1         | 0            | 0        | 1          | 4          | 0          | 1         | 0             | 0          | 86        | 100       |     |
| Ampara          | 0            | 17          | 0         | 1          | 0            | 0         | 0             | 0         | 0              | 0         | 0             | 3          | 0            | 0          | 1               | 2         | 0            | 0        | 0          | 2          | 0          | 0         | 0             | 0          | 14        | 86        |     |
| Trincomalee     | 20           | 76          | 1         | 7          | 0            | 0         | 0             | 1         | 0              | 0         | 1             | 1          | 1            | 2          | 6               | 16        | 0            | 0        | 4          | 14         | 0          | 1         | 0             | 0          | 83        | 92        |     |
| Kurunegala      | 60           | 175         | 5         | 19         | 0            | 2         | 0             | 0         | 0              | 5         | 4             | 21         | 0            | 3          | 0               | 1         | 0            | 0        | 5          | 22         | 0          | 4         | 0             | 8          | 67        | 100       |     |
| Puttalam        | 16           | 150         | 0         | 3          | 0            | 0         | 0             | 1         | 0              | 0         | 1             | 8          | 0            | 22         | 0               | 0         | 0            | 0        | 0          | 9          | 1          | 5         | 0             | 0          | 31        | 85        |     |
| Anuradhapura    | 21           | 76          | 0         | 10         | 0            | 1         | 0             | 0         | 0              | 2         | 5             | 70         | 0            | 3          | 0               | 1         | 0            | 0        | 2          | 9          | 2          | 3         | 2             | 15         | 58        | 100       |     |
| Polonnaruwa     | 4            | 37          | 0         | 6          | 0            | 0         | 3             | 5         | 0              | 0         | 6             | 33         | 0            | 0          | 0               | 0         | 0            | 0        | 0          | 9          | 1          | 1         | 3             | 19         | 57        | 100       |     |
| Badulla         | 14           | 73          | 2         | 10         | 0            | 0         | 0             | 1         | 0              | 0         | 3             | 15         | 0            | 10         | 2               | 6         | 0            | 0        | 1          | 10         | 3          | 17        | 0             | 0          | 71        | 94        |     |
| Monaragala      | 5            | 45          | 1         | 4          | 0            | 1         | 0             | 1         | 0              | 0         | 10            | 52         | 2            | 8          | 5               | 13        | 0            | 0        | 2          | 7          | 0          | 5         | 1             | 3          | 100       | 100       |     |
| Ratnapura       | 13           | 124         | 4         | 14         | 0            | 4         | 0             | 5         | 0              | 0         | 6             | 27         | 0            | 5          | 1               | 15        | 0            | 0        | 3          | 11         | 1          | 8         | 0             | 0          | 56        | 100       |     |
| Kegalle         | 33           | 153         | 0         | 2          | 0            | 3         | 0             | 10        | 0              | 3         | 9             | 39         | 1            | 3          | 3               | 4         | 0            | 0        | 5          | 33         | 1          | 2         | 0             | 0          | 82        | 100       |     |
| Kalmune         | 5            | 77          | 2         | 9          | 0            | 0         | 0             | 2         | 1              | 1         | 0             | 1          | 0            | 0          | 0               | 0         | 0            | 0        | 0          | 4          | 0          | 2         | 0             | 0          | 62        | 100       |     |
| <b>SRILANKA</b> | <b>1221</b>  | <b>4685</b> | <b>41</b> | <b>224</b> | <b>1</b>     | <b>25</b> | <b>17</b>     | <b>70</b> | <b>6</b>       | <b>55</b> | <b>75</b>     | <b>480</b> | <b>89</b>    | <b>389</b> | <b>26</b>       | <b>86</b> | <b>0</b>     | <b>0</b> | <b>68</b>  | <b>300</b> | <b>20</b>  | <b>96</b> | <b>34</b>     | <b>117</b> | <b>73</b> | <b>98</b> |     |

Source: Weekly Returns of Communicable Diseases (WRCD).  
 \*T=Timeliness refers to returns received on or before 22<sup>nd</sup> January, 2016 Total number of reporting units 337 Number of reporting units data provided for the current week: 336 C\*\*=Completeness  
 A = Cases reported during the current week. B = Cumulative cases for the year.

**Table 2: Vaccine-Preventable Diseases & AFP**

16<sup>th</sup> - 22<sup>nd</sup> Jan 2016 (04<sup>th</sup> Week)

| Disease               | No. of Cases by Province |    |    |    |    |    |    |    |     | Number of cases during current week in 2016 | Number of cases during same week in 2015 | Total number of cases to date in 2016 | Total number of cases to date in 2015 | Difference between the number of cases to date in 2016 & 2015 |
|-----------------------|--------------------------|----|----|----|----|----|----|----|-----|---|--|---------------------------------------|---------------------------------------|---|
|                       | W                        | C  | S  | N  | E  | NW | NC | U  | Sab |   |  |                                       |                                       |   |
| AFP*                  | 01                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 01  | 00                                       | 04                                    | 06                                    | -33.3%  |
| Diphtheria            | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 00                                       | 00                                    | 00                                    | 0%  |
| Mumps                 | 00                       | 00 | 03 | 01 | 01 | 02 | 00 | 00 | 02  | 09  | 11                                       | 28                                    | 27                                    | +4.1%   |
| Measles               | 01                       | 01 | 02 | 01 | 02 | 00 | 02 | 00 | 00  | 09  | 32                                       | 53                                    | 108                                   | -51.1%  |
| Rubella               | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 00                                       | 01                                    | 02                                    | -50%  |
| CRS**                 | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 00                                       | 00                                    | 00                                    | 0%  |
| Tetanus               | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 01                                       | 00                                    | 01                                    | -100%   |
| Neonatal Tetanus      | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 00                                       | 00                                    | 00                                    | 0%  |
| Japanese Encephalitis | 00                       | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00  | 00  | 00                                       | 00                                    | 02                                    | -100%   |
| Whooping Cough        | 00                       | 00 | 01 | 00 | 00 | 01 | 00 | 00 | 00  | 02  | 02                                       | 10                                    | 08                                    | +25%  |
| Tuberculosis          | 68                       | 16 | 20 | 02 | 37 | 05 | 15 | 11 | 32  | 429   | 206                                      | 795                                   | 710                                   | +12.1%  |

**Key to Table 1 & 2**

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.  
 RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

**Special Surveillance:** AFP\* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS\*\* =Congenital Rubella Syndrome

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them**

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to [chepid@slt.net.lk](mailto:chepid@slt.net.lk). **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

**ON STATE SERVICE**

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