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Dengue DREF Final Report

Sri Lanka: Dengue

 International Federation
of Red Cross and Red Crescent Societies

DREF operation	Operation n° MDRLK007
Date of Issue: 31 May 2018	Glide number: EP-2017-000086-LKA
Date of disaster: 10 July 2017	
Operation start date: 10 July 2017	Operation end date: 28 February 2018
Host National Society: Sri Lanka Red Cross Society	Operation budget: CHF 475,924
Number of people affected: 103,114¹	Number of people assisted: 584,270 direct and 14 million indirect
Red Cross Red Crescent Movement partners currently actively involved in the operation: The International Federation of Red Cross and Red Crescent Societies (IFRC) supported the Sri Lanka Red Cross Society (SLRCS) in developing the Emergency Plan of Action for the DREF request and coordinated with SLRCS for information sharing with the Movement and external partners.	
Other partner organizations actively involved in the operation: Ministry of Health, National Dengue Control Unit, local authorities, municipal council, Grama Niladari (GN) – smallest government administration unit, World Health Organization (WHO), Dialog Axiata mobile network, television networks; Hiru Tv, Tv Derana, Vasantham Tv and ITN, SLBC radio network, and community-based organizations.	

A. Situation analysis

Description of the disaster

Sri Lanka faced an unpredicted outbreak of dengue fever. It is a tropical country with two monsoon seasons. With each monsoon brings in two peaks of dengue fever making it an endemic disease in Sri Lanka. However, 2017 started with an exceptionally high number of dengue cases which shot up to an outbreak in May-June 2017, creating the largest dengue outbreak experienced by the country for last three decades.

During the year 2017 a total of 186,101 suspected dengue cases were reported and as of 24 May 2018 a total of 19,459 suspected dengue cases were reported to the Epidemiology Unit of the Ministry of Health (MoH) of Sri Lanka with over 320 deaths in 2017 and 20² deaths in 2018. Over 40 per cent of dengue cases were reported from the Western province.

The highest numbers of dengue cases were reported during the 29th week of 2017. All four virus types of dengue have been seen in Sri Lanka. The outbreak was predominantly due to Dengue Fever Virus Type 2 (DEN-2), which was not the usual type circulating in Sri Lanka. According to the WHO, this is a 4.3-fold higher than the average number of cases for the same period between 2010 and 2016.

Monthly reported dengue cases are varied depending on the rains received. In July 2017 the highest number of dengue cases were reported where 22 per cent of the total dengue cases reported.



Figure 1: Students involved in the school clean-up campaign (Photo: SLRCS Colombo Branch)

¹ Epidemiological Unit, Ministry of Health 23 July 2017: [link](#)

² <http://www.dailynews.lk/2018/05/22/local/151620/southern-province-hit-double-blow>

Historical data shows that there were always two peaks of dengue incidence in Sri Lanka. One during Southwest monsoons and another during Northeast monsoons. Analysis of the data on the present outbreak showed the incidence of dengue were high in eastern province and districts adjoining to western province. Especially with the commencement of the North-Eastern monsoons, there was a risk of Dengue outbreaks in more districts. The MoH requested from SLRCS with a second letter dated 11 September 2017 to scale up the activities at community level.

Since the schools have been considered as a hot spot for dengue in Sri Lanka and were closed in the month of December. Considering there was trend of outbreak in January and February, SLRCS requested for two-month extension till 28 February 2018, to allow sufficient time to complete the school awareness activities and to conduct public awareness public education (PAPE) on Dengue prevention via mainstream media.

Furthermore, for the sustainability of the program, dengue activities were incorporated to ongoing flood operations and operation plan activities.

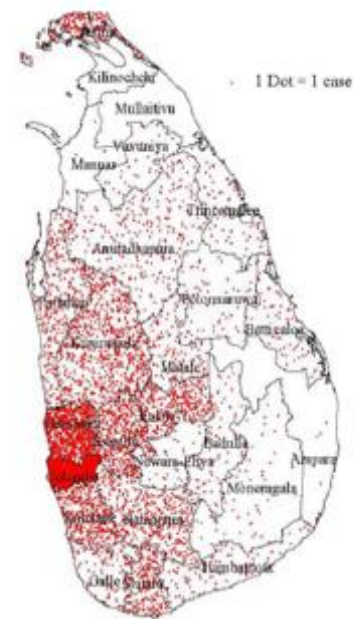
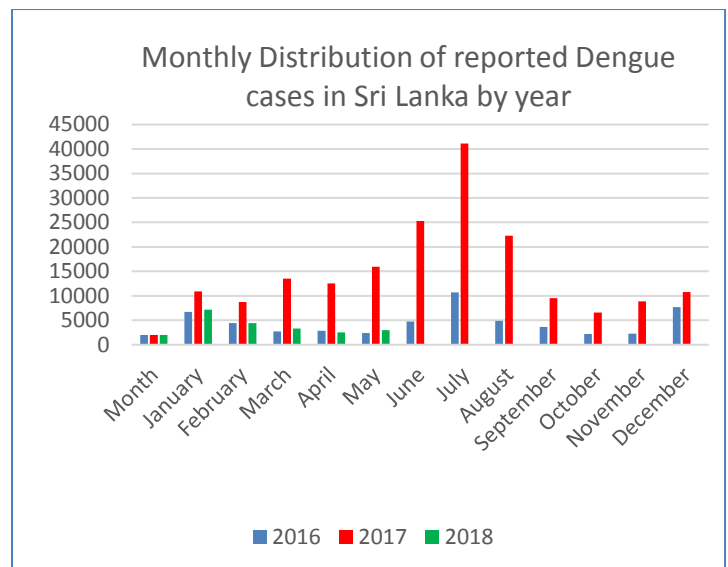


Figure 2: Distribution of Dengue cases by districts in Sri Lanka, 2010 – 2017. (Source – Epidemiology Unit – Sri Lanka)

Very High Risk	High Risk	Moderate Risk
12 districts	8 districts	6 districts
Colombo Gampaha Kalutara Ratnapura Kurunegala Kandy Kegalle Trincomalee Batticaloa Matara Galle Jaffna	Hambantota Puttalam Badulla Apura Kalmunai Matale Moneragala Polonnaruwa	N Eliya Ampara Vavuniya Mannar Kilinochchi Mulativu

Figure 3: Based on the number of dengue cases reported in 2018, 2017 and 2016, a risk categorization on districts was done as above. (Source – Epidemiology Unit – Sri Lanka)



Summary of response

10 July 2017	SLRCS initiated its assistance by deploying volunteers to assist dengue case management in Negombo hospital at Gampaha district.
18 July 2017	MoH of Sri Lanka requested assistance from SLRCS.
23 July 2017	IFRC granted DREF allocation of CHF 295,352 to support 309,000 people over 6 months' period.
18 August 2017	Deployed a health surge support from Geneva to assist DREF operations for one month's period.
9 October 2017	IFRC granted second DREF allocation totalling to CHF 475,924 to assist 651,000 direct and 14 million indirect beneficiaries.
29 November 2017	Health Regional Disaster Response Team (RDRT) member was deployed for a month, with special focus on developing a long-term plan on dengue.

Table 1: Summary of the people reached

Outcome	Timeframe	No of districts program implemented	Target # of people	People reached
Mosquito density in the targeted communities are reduced due sustained Community based vector control measures and good solid waste management practices	7 months	10 districts	216 communities 270,000 people	216 communities 239,032 people
Children act as agents of change at all levels school, home and neighbourhood	7 months	10 districts	288 schools 288,000 students	378 ³ schools 343,888 students
Volunteers support for Dengue case management, IEC material distribution and awareness raising at hospitals	1 month	1 district	1 hospital 3,000 patients	1 hospital ⁴ 1,260 patients
Emergency sanitation and water supply facilities at hospitals.	7 months	2 districts	WASH facilities in 3 hospitals	WASH facilities in 5 hospitals
The risk of dengue transmission of the target community is reduced by raising awareness through health risk communication campaign.	3 months	9 districts	Person 14,268,004	Person 14,000,000 ⁵
Early detection and early action due to community based surveillance has contributed to prevention of dengue occurrence goes into outbreak proportions – Pilot project in 3 districts	7 months	2 districts	3 districts people 90,000	Trained 90 persons ⁶

Overview of Host National Society

Dengue control has been moved up in the priority list of SLRCS agenda, at national level, SLRCS represented in high level meetings organized by the MoH to plan, review and coordinate dengue control activities. At branch level, the respective SLRCS branch staff frequently coordinated with the Regional Directors of Health services and district level health counterparts of the government. At community level, SLRCS volunteers worked hand in hand with the Medical Officer of Health teams mobilized for dengue control activities. There was close coordination with the Public Health Inspectors (PHI), field environmental health and disease surveillance officers in the SLRCS dengue control activities.

Overview of Red Cross Red Crescent Movement in country

The IFRC continue assistance to SLRCS. The country office in Sri Lanka together with the IFRC Country Cluster Support Team (CCST) based in New Delhi and Asia Pacific Regional Office (APRO) in Kuala Lumpur closely monitored the situation, exchanged technical support to the SLRCS for the preparation of a DREF and other supports to reach out to the affected people. A [DMIS](#) entry was posted by IFRC on 18 July to give an update on the evolving situation. IFRC incorporated dengue to ongoing flood appeals and operation plan activities to ensure sustainability of the program.

Overview of non-RCRC actors in country

Government of Sri Lanka (GoSL):

- The Government of Sri Lanka initiated several programmes such as clean-up campaigns and awareness raising through media promotions, to prevent the escalation of the outbreak and to provide medical services to the affected communities.
- The MoH reviewed its National Dengue prevention and control National Strategic framework (2016 - 2020) to align their action with the WHO Global strategy for dengue prevention and control (2012 – 2020). The proposed SLRCS action was aligned with the MoH's strategies.

³ Additional 90 school clean up campaigns were conducted in February 2018

⁴ Provided assistance in Negombo hospital

⁵ Video and radio clips were broadcasted on TV and radio channels in Sinhala, English and Tamil medium from December 2017 to February 2018.

⁶ Volunteers trained in 2 districts

- The Presidential Task Force on Dengue (PTF) and National Dengue Control Unit of the Ministry of Health, Nutrition and Indigenous Medicine launched a Rapid Intersectoral Program for prevention and control of Dengue as a national level initiative which enlists a range of activities including community-driven mosquito breeding site removal, enhanced surveillance and legal action.
- An Emergency Operation Centre was established at the National Dengue Control Unit (MoH) which managed preventive health activities, a separate Emergency Operations Centre established at the Disaster Preparedness and Response Division to cater to the needs of hospitals.
- Dengue breeding site clean-up programs were conducted with the participation of field health staff, other government field staff, Tri Forces, Civil Defence and Police. Active contribution of the private sector and non-government sector were sought by the government.
- Emergency measures were taken to enhance the treatment capacity through establishment of temporary wards at existing hospitals and upgrading of divisional hospitals with high dependency units. Essential medical supplies and critical equipment were supplied to the hospitals.
- Selected patients were monitored on out-patient basis to minimize hospital over-crowding.

Response by other stakeholders

An expert team from the WHO submitted a report to MoH on sustainable solutions to dengue outbreak. It consists of a strategy to reduce the dengue mosquito density and the number of dengue patients in the country by 50 per cent within a period of four weeks. According to the WHO strategies, the prevention and control of dengue outbreak depend on reducing the breeding of mosquitoes through source reduction (removal and modification of breeding sites) and reducing human–vector contact through adult vector control measures. Both control measures need to be implemented simultaneously for effective control. Based on expert teams' recommendations, the triage protocol was to assist with better management of the patients in the health facilities.

The corporate sector was also involved in dengue control activities with the widespread distribution of key messages on dengue prevention and control via print and social media.

Needs analysis and scenario planning

In July 2017 number of dengue cases reported surpassed previous years cases reported. Furthermore, it was expected that the number would continue to rise and possibly spread with the ongoing monsoon rains.

There was a need for environmental management for clean-up of dengue vector breeding sites as the main stay to manage the outbreak. It was unlikely that a quick fix solution such as a biological agent or vaccination would be useful, at least to the scale of a public health intervention in the recent times to come, and also due to the type of dengue being reported.

The government-lead clean-up campaigns were conducted. However, the resource exhaustion, both from human resources as well as physical resources were noted. Corporate sector showed satisfactory interest, but it was a challenge to sustain the interest.

Hospital capacity were extremely challenged with large number of dengue cases reported. This was a positive feature since it reflected good health sought by patients. However, quality of care provided were a challenge in this scenario. Health staff were overburdened with exceptionally high patient load.

Western province; Colombo, Gampaha and Kalutara was the worst affected. Batticaloa, Jaffna, Kandy, Kegalle, Kurunegala, Matara and Trincomalee were among the other highly affected districts.

SLRCS targeted interventions to high risk GN recommended by the epidemiologists from the Ministry of Health. Hence, beneficiaries of any interventions were selected on the risk backed by epidemiological evidence and gaps in services and activities.

Risk Analysis

The operation faced some risk factors when volunteers were deployed to the hotspots areas which posed a risk of contracting the dengue virus during exposure. This risk was mitigated through providing self-care packs, which consist of mosquito repellents, gloves and hand sanitizers, to all volunteers worked in the field.

B. Operational strategy and plan

Overall Objective

The objective was to reduce the morbidity and mortality of the targeted population due to dengue during the project period. The project target was 584,270 direct beneficiaries and 14 million indirect beneficiaries, whom were living in a high-risk district for dengue outbreak in Sri Lanka. The operation implemented over a seven-month period.

Proposed strategy

Operation was implemented from 10 July 2017 to 28 February 2018 in three phases

Phase one: implemented from 10 July 2017 to 28 February in Western province; Colombo, Gampaha and Kalutara districts.

Phase two: implemented from 9 October 2017 to 28 February in 7 districts; Batticaloa, Jaffna, Kandy, Kegalle, Kurunegala, and Trincomalee.

Phase three: based on a special request from the MoH, a special dengue clean-up program was implemented in Matara district from January to February 2018.

Following are the main interventions implemented:

1. SLRCS volunteers mobilized for dengue vector breeding site clean-up.
2. Good solid waste management practices promoted.
3. Hospitals supported through SLRCS volunteers.
4. Emergency water and sanitation facilities strengthened in hospitals
5. Risk communication to the general public and advocacy.
6. Community-based surveillance.

1. Dengue vector breeding site clean-up campaigns

Cleaning campaigns were organized for inspection and clean-up of dengue breeding sites. These campaigns were at schools, households and communities.

In each community, a half-day training was conducted to train 25 volunteers on how to detect and eliminate dengue vector breeding sites, share operational details and reporting systems. The training was conducted with the guidance of the health authorities. During the community and school outreach programmes, teams were advised that the patients who has febrile illness having not yet gone through medical assessment to seek medical advice urgently.

During the door-to-door cleaning campaigns, volunteers together with community members provided briefing to the households on dengue eradication, elimination and actions to be taken if dengue was diagnosed. During school cleaning campaigns, students were briefed during morning assembly on dengue. Information, education and communication (IEC) materials containing details on dengue were printed and distributed among households and schools during these cleaning campaigns.

Self-care packs were provided to each volunteer mobilized for the programme, which contains mosquito repellents, gloves and hand sanitizers. In addition, each branch organised Dengue Vector Elimination Campaigns in all the 9 districts, reaching 378 schools in total.

2. Support proper solid waste disposal in schools

288 schools were provided with compost bins and sets of colour coded bins (phase one schools provided with three compost bins and 1 set of colour coded bins, phase two schools were provided with two compost bins and two sets of colour coded bins) with training. Junior First Aider clubs were trained to promote the use of the bins and income generated through selling of garbage to be utilized for school environment improvement activities. Students were briefed during school morning assembly on waste disposal and usage of bins.

3. Volunteers support for Dengue case management at a high priority hospital in Gampaha district

In July 2017, 2017 health staff in Negombo hospital reported to be stressed with overburdened with work load in hospitals. There was an urgent need to augment their capacity with volunteers to assist patients affected by dengue. Accordingly, Gampaha branch deployed its volunteers for a months' time to assist the hospital. Volunteers were able to assist 1,260 patients during the period.

4. Top-up of emergency sanitation and water supply facilities at five high priority hospitals in Colombo and Gampaha districts

Most hospitals catering the needs of Dengue patients had exhausted their capacity to provide water and sanitation services due to heavy patient loads. With the coordination of Ministry of Health (MoH), five hospitals were identified to top-up its WASH facilities. The hospitals were; Awissawella hospital, Nawagamuwa hospital, Malwathuhipitiya hospital, Wathupitiwala hospital and Radhawana hospital.

5. Risk communication to the general public and advocacy

IFRC and SLRCS developed key messages in coordination with MoH, WHO and other partners and disseminated them on TV channels (Derana, ITN, Vasantham TV) radio channels (SLBC in Sinhala, English and Tamil medium) starting from December 2017.

Each very high-risk district branch established community action team with a pool 30 community volunteers representing the high-risk community, and undertaking a quick training program using the IFRC Zika Dengue Chikungunya Toolkit which includes education for communities on how to identify and monitor their risks. These trained volunteers were engaged in dissemination of risk messages to the community.

The SLRCS Communication Department conducted the overall risk communication campaign for the Dengue response and prevention programme with the support from the branches the society intends to assist. The risk communication was aimed in 3 levels; The grass-root level, the regional level and national level.

At grass root level, volunteers were expected to provide door-to-door services and work with people to change practices towards keeping their environment clean and continue to do so. Another focus was to educate people on how to identify dengue symptoms and to take precautionary measures from the onset. Village level meetings in high-risk communities were held to ensure that communities come together to face this crisis.

At regional level, the focus was mainly on educating school children in the districts. Dengue handbooks in partnership with the MoH, that includes educative information along with specific tasks were being provided to the students for them to ensure their surroundings within the school were kept clean and free from mosquitoes. Teachers were tasked with monitoring the students who are doing good jobs and to reward them accordingly.

At national level, where the message of safeguarding from dengue to the bigger audience which cannot be catered through from the previous two levels. Through advertising of dengue related messages utilizing electronic media, it was intended to ensure that various groups receive the message of being safeguarded from Dengue.

6. Community-based surveillance

Community based surveillance system was implemented in two district branches. A team of 90 community volunteers were trained on establishing Community-Based Surveillance (CBS) System.

Operational support services

Human resources (HR)

Volunteers were mobilized including FA trained volunteers, and members of the BDRT and NDRT. A full time SLRCS dengue response coordinator was recruited from August 2017 at National level. One programme support officer was also recruited to assist the dengue coordinator. Nine branch emergency dengue response coordinators were recruited for district level activities.

An information management system was established to gather, consolidate and disseminate information about SLRCS emergency dengue control activities. Health RDRT deployed for a month, with special focus on developing a long-term plan on dengue.

Logistics and supply chain

Logistics support for this operation was provided jointly by the SLRCS logistics department and IFRC Country Office logistics team. All procurement under the operation plan was conducted following IFRC standard procurement procedures to ensure the efficient and timely delivery of the items for the success of the operation. HQ level local procurement was led by the IFRC CO whereas at branch level SLRCS took the lead on local procurement. SLRCS and IFRC kept throughout the operation close communication on the procurement process to ensure transparency and accountability of activities. All planned logistics and supply chain activities were conducted and reported within the operation timeframe.

Communications

SLRCS communications staff worked in close coordination with the IFRC regional communications team to ensure that the evolving humanitarian needs and SLRCS response were well profiled across social media platforms and in the national and international media. A proactive approach was taken to maintain media outreach and to produce communications materials including press releases, news stories, photos/videos, key messages and infographics for external promotion by Partner National Societies in their networks.

Security

There were no specific security threats reported in the areas of intervention. SLRCS and IFRC continued to monitor the situation. Any security concerns will be handled with local authorities as per the existing security framework.

Planning, monitoring, evaluation, & reporting (PMER)

SLRCS was overseeing all operational, implementation, monitoring and evaluation, and reporting aspects of the present operation in the affected area through its country-wide network of branches and volunteers. IFRC, through APRO and CCST New Delhi was providing technical support in operation management to ensure the operation objectives were met.

Additionally, IFRC provided technical support to the SLRCS for the preparation of DREF request and updates. Operation updates were done providing necessary information in relation to the progress of the operation, any changes in the situation during the reporting period, and any problems, constraints or unmet needs.

C. Detailed Operational Plan

Health and Care

Needs analysis:

Sector	Need analysis	Assistance planned and population to be assisted
Health	<ul style="list-style-type: none"> Heavy monsoon rains, public failure to clear rain-soaked garbage, standing water pools and other potential breeding grounds for mosquito larvae attribute to the higher number of cases reported in urban and suburban areas High risk of Dengue, breeding grounds created within area has the potential to increase the risks needs continuous action to eliminate vector breeding sites For early detection and action there is gap in community based information gathering system related to Dengue 	<ul style="list-style-type: none"> Fourteen million very high-risk population from 9 districts will be targeted over a period of 6 months through risk communication campaign. This include, TV, radio spots, posters, short educational videos for sharing on social media, brochures, billboards and direct messages carried by volunteers Selfcare packs procured 400,000 IEC materials, 50,000 posters and 75,000 check lists printing Self-care packs procured Community cleaning materials procured Half a day training for volunteers on detecting and eliminating Dengue vector breeding sites, operational details and reporting systems Conduct dengue vector breeding site cleanup, IEC material distribution and awareness raising campaigns at communities (targeted 270,000 people) Conduct dengue vector breeding site cleanup, IEC material distribution and awareness raising campaigns in schools 288 schools targeted (288,000 students) Volunteers support for dengue case management at hospitals 1 hospital targeted (3,000 patients) Setting up community based surveillance system in 3 PHI areas (Targeted 90,000 people)

Outcome 1: The risk of Dengue transmission of the target community was reduced by raising awareness through health risk communication campaign. (target population 14,268,004)	Outputs		% of achievement
	Output 1.1 Targeted communities were provided with information on dengue transmission and prevention		100%
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Production of IEC material (leaflets, posters, videos etc.)	X		

Develop strategy CEA, plan and tools for the health risk communication campaign	X		100%
Production of visibility material	X		
Television campaign for 3 months in 2 selected National Stations (Sinhala & Tamil)	X		
Radio campaign for 6 months in selected 2 stations	X		
Collated website for Dengue to share information (server space & design and maintenance)	X		
Social media campaign on both Facebook & Twitter	X		
Media visits to promote branches	X		
Media Conference	X		
Videography (3 times a month)	X		
Production of video clips (Shooting, editing), info graphics, cartoons which are to be distributed among the branches for their activities	X		
Engage with communities through an intense public information campaign	X		
Setting up hot lines to collect public complains and feedback		X	
Setting up a mechanism to address public complains on Dengue control with authorities		X	

Achievements

SLRCS printed and distributed IEC materials to raise awareness among communities and school children. These materials contained details on how to identify and clean dengue breeding sites, and how to take care of dengue patients. These materials were printed in all three local languages; sinhala, tamil and english. These IEC materials include; 195,000 leaflets, 80,000 posters, 25,000 postcards, 4,000 workbooks and bookmark, 50,000 cards.



Figure 4: Distribution of IEC materials to school children



Figure 5: Dengue Postcard



Figure 6: Dengue poster for schools



Figure 7: Dengue Workbook



Figure 8: Dengue Leaflet



Figure 9: Dengue Bookmark



Figure 10: Dengue card for community

SLRCS held a press conference in February 2018 to create awareness on dengue through printing media, radio and TV channels. Furthermore, to advocate a wider group of people through TV and radio, a promotional video, voice clips and a cartoon were produced. Video and radio clips were broadcasted on TV channels (TV Derana, ITN, Vasantham TV) and radio channels (SLBC in Sinhala, Tamil and English mediums) from December 2017 till end of February 2018. SLRCS did not set-up a hotline to collect public complains and feedback, since the government established a hotline for the same purpose. Hence, SLRCS advocated people to use the government hotline.



Figure 11: Press conference



Figure 12: Dengue Cartoon



Figure 13: Promotional video



Figure 14: Advertisement broadcasted on TV channels



Figure 15: Promotion through SLRCS website

Challenges

Broadcasting advertisements on TV and radio during peak hours were a challenge due to difficulty in finding slots so, several discussions were conducted with the TV and radio channel to highlight the importance of reaching higher number of people.

Lessons learned

Education for the community through the media is a process that has to be in long run even the case rate decreases to a certain extend.
 Educating the school students using the workbook and Dengue cartoon were effective than delivering lectures about the topic (Practical sessions were more effective than ordinary lectures)

Outcome 2: Mosquito density in the targeted communities are reduced due sustained Community based vector control measures and good solid waste management practices (270,000 people targeted)	Outputs	% of achievement
	Output 2.1 Dengue breeding site clean-up campaigns conducted	100 %

Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Print health education materials	X		100%
Procure self-care packs	X		
Procure community cleaning materials	X		
Train volunteers on Dengue breeding site clean-up	X		
Organize community clean-up days, IEC material distribution and awareness raising	X		
Organize school clean-up days, IEC material distribution and awareness raising	X		
Development of material on good solid waste management practices	X		
Develop community plans on community-based vector control and waste management	X		
Support the selected communities' implementation of the community plans	X		

Achievements

IFRC conducted the procurement process according to the IFRC procurement guidelines. The self-care pack and the community leaning materials were procured, delivered to respective communities and schools, and distributed. Self-care pack consists of mosquito repellents, gloves and hand sanitizers. Community cleaning materials include ladders for gutter inspection, mamoties, rakes, wheel barrows and knives.

Table 2: Summary of the items procured

Item	Unit/set
Mosquito repellents	14,400
Gloves	14,400
Hand sanitizers	14,400
Gum boots	180
Compost bin	720
Colour coded bins to collect polythene/plastic, glass and metal (4 bins per set)	288
Ladders	18
Mamotys	90
Rakes	90
Wheel barrows	18
Knives	90
Gum boots	180
RC Jackets	450



Figure 16: BDET Team



Figure 17: Drone camera

Gampaha Branch has established a Branch Dengue Eradication Team (BDET) with a pool of 15 volunteers. Team is specially trained and equipped to identify and destroy dengue breeding sites.

Furthermore, dengue eradication special kits were procured by Colombo, Kalutara and Gampaha branches in order to improve branch capacity in dengue eradication. Following items were included in the kits based on each branch plan; drone cameras, safety boots, water pumps, high-pressure washers, potable hoisters, spray tanks, steal buckets, wheel barrows, axes, wire brushes, shovels, cleaning brushes-long, cleaning brushes-short, garden scissors, mamoties, ladders, screwdrivers (tool box), safety harness, gum boots, goggles, overall uniforms, rubber gloves and safety head gears.

SLRCS joined hands with Kegalle Regional Director of Health Services (RDHS) office to create a "Dengue Free Kegalle" under dengue prevention programme. Following a rapid needs assessment conducted in February 2018, essential items requested by the RDHS Kegalle worth of Sri Lankan rupees 2.5 million (CHF 15,000) were supplied.

Items handed over were, fogging machines, spray tanks, mega phones, fogging kits, volunteer kits, stationary for documentation, pipettes and larvae collection bottles for entomological analysis, wheel

At the initial stage of the project, branches trained Red Cross and village volunteers regarding dengue infection, breeding sites identification and removal and self-care in the field. Branch dengue coordinators, PHI, MoH conducted these training programmes.

Table 3: Volunteers trained according to district

District	No of volunteer training	No of volunteers trained
Colombo	24	600
Kalutara	16	380
Gampaha	24	600
Jaffna	24	600
Trincomalee	24	600
Batticaloa	24	600
Kandy	24	600
Kegalle	24	600
Kurunegala	24	600
Total	208	5180



Figure 18: Volunteer training - Colombo



Figure 19: Volunteer training - Gampaha

Households, public places and office premises have to be free of dengue breeding sites. SLRCS volunteers visited house to house in order to educate on dengue, help to identify potential breeding sites and their removal. Each household were given a dengue card, which could be used to mark the cleaning activities conducted.

Table 4: Summary community clean up campaigns

District	No of community clean up campaigns	No of beneficiaries
Colombo	24	52,000
Kalurata	24	14,596
Gampaha	24	27,977
Kandy	24	16,593
Kegalle	24	28,000
Kurunegala	24	12,746,
Jaffna	24	28,970
Trincomalee	24	38,400
Batticaloa	24	19,750
Total	216	239,032



Figure 20: Community Clean-up Campaign - Kalutara

The dengue prevention programme was conducted in Galgamuwa, Mawatagama and Rideegama areas. Community Awareness Programmes and Community Clean up Programees were conducted. Galgamuwa MOH requested assistance to distribute nets to cover rainwater harvesting tanks in the community, since those tanks were potential mosquito breeding sites.

Due to the high number of cases reported, special Dengue Prevention Programme was conducted in Weligama area (Matara District) - Palana North and Palana South. Community Awareness Programmes and Community Clean up Campaigns were conducted. Seven sign boards were placed on eye catching areas to create awareness about Dengue.

Two cannals in Weligama area were cleaned with the participation of community members. Those were blocked due to accumulation of waste materials and were potential Dengue breeding sites.

SLRCS volunteers were trained to make useful items using waste materials during volunteer training programmes, in order to teach them for school children during School Clean up Campaigns. Improper discard of plastic bottles and polythene can contribute to breeding of Dengue mosquitos



Figure 21: Sign Board – SLRCS Matara Branch



Figure 22: Community Awareness Campaign - Matara

To strengthen the coordination between Public Health Inspectors and the community, SLRCS conducted PHI Workshops regarding Dengue Prevention in Kegalle for Kegalle, Kurunegala, Kandy and in Trincomalee for Jaffna, Trincomalee, Batticaloa districts. Around 10 Public Health Inspectors from each district participated in these events. Ideas and inputs for the SLRCS Dengue Prevention Programme were discussed during these workshops.



Figure 23: Group discussions and presentations – SLRCS Kegalle Branch

Challenges

During Community clean up campaigns, door to door visits were conducted and some households were reluctant to allow our volunteers to visit and help households to identify the breeding sites. To overcome it, the breadwinner of the communities were addressed by the GN to convince the programme..

Organizing PHI workshops were a challenge because it was challenging to obtain permission from local authorities. To overcome lot of discussions were organized with National Dengue Control unit, which delayed the whole process.

Lessons learned

Convince the communities through GN will be more effective before starting the campaigns.

Outcome 3 : Early detection and early action due to community based surveillance has contributed to prevention of Dengue occurrence goes into outbreak proportions –Pilot project in 3 districts(Target 90,000 people)	Outputs		% of achievement
	Output 3.1 Community based surveillance implemented		30 %
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
CBS units are established in in 3 branches as pilot projects		X	30%
Mobile application developed and tested	X		
Coordination and reporting mechanism with MoH agreed upon		X	
Volunteers and staff has been trained	X		
Weekly community surveillance visits and reporting		X	
Monthly coordination meetings with the CBS team and the MoH local staff		X	

Achievements

Sri Lanka has a well-established health institution based disease surveillance system. The Community-based surveillance system (CBS) was planned to complement the existing health institution based disease surveillance system through improving the early detection and early response to outbreaks at the community level.



Figure 24: Veta app



Figure 25: Volunteer training

The dengue outbreak clearly demonstrated the need for a well-functioning CBS. The present surveillance system is a health institutional based disease surveillance system. The link between the health institution and community is missing to identify early and react early before blowing in the epidemic proportions. A Such CBS system could be useful not only during current Dengue outbreak, but also during future Dengue and other disease outbreaks as well. Sri Lanka Red Cross Society through its well-established volunteer network has the necessary capacity to establish and maintain a CBS system. With large number of Dengue patients and high level of in-country movement of people, imported cases of Dengue could give rise to Dengue outbreaks in areas where the disease outbreak is not operating at present. Hence it is vital to pick up such cases at very early stages to curtail the expansion into a widespread outbreak.

SLRCS conducted several meetings with Dengue Control Unit, Dialog; mobile service provider and branches on the surveillance system. SLRCS together with the Dialog conducted trainings to volunteers in Kalutara and Colombo on how to use the mobile application

SLRCS conducted several meetings with dengue control unit, Dialog and branches on the surveillance system. Furthermore, SLRCS together with the Dialog conducted trainings to volunteers on how to use the mobile application. Total of 90 volunteers were trained in 2 districts; Colombo and Kalurata.

This was an innovative program, SLRCS planned to support the prevailing government surveillance system via using a mobile application. SLRCS faced lot of challenging in rolling out the program, which hinder the achievements.

Trained SLRCS volunteers will be utilized to map and report above within their respective communities with the use of suitable mobile application. This reporting in this outbreak should be daily and using the mobile based system. Such information gathered will be reported to the SLRCS Branch as well as to the Medical Officer of Health of the area for necessary action.

Challenges

Implementation of the CBS in Gampaha branch was challenging because the volunteers engaged in the dengue programme did not have smart phones to install the Dengue Veta App. SLRCS had several discussions with Dialog to obtain few mobile phones which were not successful as well.

To get approval from National Dengue Control Unit for Veta app was a challenge. Had to conduct several discussions to obtain the approval which delayed the implementation.

Lessons learned

Clear understanding of the resources and capacities at community level is vital for successful program, specially an innovative program.

Organise regular follow up sessions with the CBS trained volunteers in order to get inputs and clarify doubts.

Outcome 4: Children act as agents of change at all levels school, home and neighborhood (288 schools targeted 288,000 students)	Outputs		% of achievement
	Output 4.1 Dengue circles have been established and the schools, and neighborhood is Dengue free		100 %
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Educational sessions in schools	X		100%
Setting up school Dengue circles	X		
Cleaning up campaigns in schools	X		

Procurement and of waste management equipment's to schools	X		
Promotion of waste segregation and management	X		
Design and production of students' activity books with info on Dengue for 288 schools in 9 districts	X		
Setting up the appreciation mechanism for the children actively involved in Dengue prevention activities	X		
Promote sustainable Dengue free school concept and set up an appreciation mechanism	X		

Achievements

School clean-up campaigns were organized in 378 schools. (Follow up visits to 15 schools from each district where Dengue was highly prevalent were conducted during the month of February 2018).

Table 5: Summary of school clean up campaigns

District	No of School Clean up Campaigns	No of students
Colombo	48	71,521
Kalutara	48	65,241
Gampaha	48	51,710
Kandy	39	22,730
Kegalle	39	15,589
Kurunegala	39	51,950
Jaffna	39	11,805
Trincomalee	39	22,256
Batticaloa	39	31,086
Total	378	343,888



Figure 26: School clean-up campaign - Kalurata



Figure 27: School clean-up campaign - Gampaha

Compost bins and color-coded bins were distributed to schools in order to recycle the wastage in order to renew the knowledge and to encourage the school children to create a Dengue free environment, SLRCS conducted a Dengue Free School Competition

during the months of January and February 2018. Events conducted at branch level were follow up visits to schools where campaigns were conducted to assess for Dengue breeding sites, up cycling exhibitions, selection of best Dengue workbook, inter district Dengue drama competitions, inter district Dengue quiz competitions, selection of best Dengue Circle activity book.



Figure 28: Distribution of compost bins



Figure 29: Distribution of colour coded bins

Semifinals of the quiz competition and drama competition were conduct by SLRCS national headquarters.

Inter School Dengue Quiz Competition (semifinals) was held during the month of January 2018 at Dambulla. Inter School Dengue Drama Competition (Semifinals) were conducted by staging 9 dramas and 3 were selected for the final round.

Inter School Dengue Competition Grand Finale was held on 18th February 2018. Final quiz competition and final drama competition were conducted during this occasion.



Figure 30: Inter school drama competition

Challenges

Time frame which was given to conduct the Dengue Free School Competition was a challenge due to the school holidays and term tests .To overcome this, branch coordinators informed the schools regarding the competitions before the holidays so the children were prepared to face the competition when the schools reopened.

Lessons learned

Follow up visits to the schools where campaigns were conducted atleast once in three months will endure sustainability of the program.Stage dramas, which enable to give a broader message to any age group, could be used as a tool to create public awareness.

Outcome 5: Dengue case management strengthened	Outputs		% of achievement
	Output 5.1 Hospitals supported through volunteers		100 %
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Selected volunteers for support in hospitals	X		100%
Train selected volunteers – please advise on the training conducted (duration, number of volunteers trained)	X		
Deploy volunteers in the selected hospitals	X		
Distribute IEC materials- please include in the below narrative results from this	X		

Achievements

Negombo Hospital has provided the highest level of care in the country or Dengue and known for positive outcome of patients managed by its trained and experienced staff where the hospital attracts a large number of dengue patients from many parts of the country. Therefore, the capacity of the hospital has exceeded with the increasing number of Dengue patients. SLRCS volunteers supported the Negombo Hospital with non-clinical services to scale up its support services in the stressed human resource situation. Gampaha branch deployed volunteers to assist the hospital between 3 July and 11 August 2017. An average of seven volunteers were deployed daily to support the hospital.



Figure 31: Volunteer monitoring a Dengue patient

Challenges

Finding volunteers on a regular basis were challenging, where SLRCS appointed leader and a roster was created.

Lessons learned

Volunteer allocation has to be done on roster basis

Water, Sanitation and Hygiene Promotion

Sector	Need analysis	Assistance planned and population to be assisted
WASH	<ul style="list-style-type: none"> Most hospitals catering to the needs of Dengue patients have exhausted their capacity to provide water and sanitation services due to heavy patient loads Indiscriminate solid waste disposal with potential Dengue breeding containers needs to be stopped in an urgent basis 	<ul style="list-style-type: none"> Construction of toilets and water points (Deprioritized) Procurement and putting up of water tanks (Deprioritized) WASH activities in hospitals in 3 districts (could be toilets, water tanks, which based on needs) Procurement and distribution of garbage sorting bins Briefing on waste disposal and usage of bins 288 schools

Outcome 6: Dengue-related water, sanitation and hygiene improved	Outputs		% of achievement
	Output 6.1 Emergency water and sanitation facilities constructed in hospitals		100 %
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	

WASH activities in hospitals	X		100%
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Outcome 6: Dengue-related water, sanitation and hygiene improved	Outputs		% of achievement
	Output 6.2 Solid waste disposal to prevent vector breeding promoted		100 %

Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Procure garbage bins	X		100%
Distribute garbage bins (3 bins per school)	X		
Briefing on waste disposal and usage of bins	X		

Achievements

Most hospitals catering to the needs of dengue patients were exhausted their capacity to provide water and sanitation services due to heavy patient loads. In addition, critical case management needed close monitoring of urine output of affected patients worsened the situation. There was an urgent need to top-up emergency sanitation and water supply facilities at hospitals managing dengue patients.

During the Dengue outbreak, toilet facilities were not adequate in most of the hospitals for the patients to monitor input and output during the disease period. SLRCS with the guidance of the Ministry of Health, renovated the toilets in some hospitals where they were upgraded as DENGUE HIGH DEPENDENCY HOSPITALS during the outbreak.

Find below hospitals assisted;

Table 6: Hospitals assisted

District	Dengue High Dependency Hospital
Colombo	Awissawella Hospital
	Nawagamuwa Hospital
Gampaha	Radawana Hospital
	Malwathuhiripitiya Hospital
	Wathupitiwala Hospital

Furthermore, it was noted proper waste management enable to reduce dengue breeding sites. Schools were provided with compost bins and color-coded bins, and trained students to segregate waste. 144 schools in the Colombo, Gampaha and Kalutara were provided with three compost bins each and one set of color coded bins. 144 schools in Batticaloa, Jaffna, Kandy, Kegalle, Kurunegala, and Trincomalee were provided with two compost bins and two sets of color coded bins. Total of 720 compost bins and 432 sets of color coded bins were provided to schools.

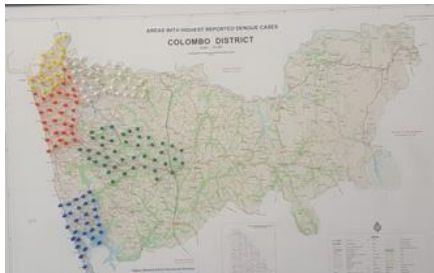
Challenges

It took long time to obtain the final list of hospitals from the government where the WASH facilities were required. SLRCS had to conduct several discussions with MOH, which delayed the implementation.

Lessons learned

Consider time taken for government approval process.

Programming / Areas common to all sectors

Outcome 7: SLRCS Dengue response strengthened	Outputs		% of achievement
	Output 7.1 SLRCS Dengue response coordination strengthened		100 %
Activities	Is implementation on time?		% progress (estimate)
	Yes (x)	No (x)	
Establish NHQ Emergency Dengue Control Coordination Centre	X		100%
Recruit of staff for the centre	X		
Establish three branch Emergency Dengue Control Coordination Cells.	X		
Achievements			
<p>SLRCS recruited a Dengue Coordinator and Program Support Officer at NHQ level. At branch level, nine Dengue Coordinators were recruited to strengthen the Dengue response coordination.. An EMERGENCY DENGUE CONTROL COORDINATION CENTER was established in SLRCS National Headquarters as the main control unit of the project. The directions to the 10 branches were given from this centre to conduct the programmes.</p> <p>Monthly progress review meetings were conducted with participation of all the Field Coordinators, to discuss the progress, achievements, challenges and suggestions.</p> <p>Lesson Learned Workshop was held during latter part of February 2018 in order to share the experience, to discuss pros and cons about the Dengue/DREF project. Representatives from SLRCS national headquarters, IFRC, Branch executive officers and Dengue Coordinators from all 10 districts participated for this two-day workshop. <i>During the lessons learned workshop, it was highlighted that people need a behavioral change; to regularly clean their environments and do proper waste management. Where regular reminders on dengue is vital.</i></p>			
 <p>Figure 32: Mapping Dengue prevalent district secretariat areas – SLRCS Colombo Branch</p>			
Challenges			
Recruiting field coordinators with appropriate skill and knowledge were challenging.			
Lessons learned			
When conducting a large scale project in short time period, lot of human resources are needed. Therefore its good to appoint volunteers for each program.			

D. Budget

CHF 475,924 was allocated to respond to dengue in Sri Lanka. In all, the operation utilized CHF 460,969 (97 per cent of the allocation). The balance of CHF 14,955 will be returned to the DREF pool.

- [DREF Operation](#)
- [Previous Appeals and Updates](#)

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How we work

All IFRC assistance seeks to adhere to the **Code of Conduct** for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere)** in delivering assistance to the most vulnerable. The IFRC's vision is to inspire, **encourage, facilitate and promote at all times all forms of humanitarian activities** by National Societies, with a view to **preventing and alleviating human suffering**, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:



Save lives.
protect livelihoods,
and strengthen recovery
from disaster and crises.



Enable **healthy**
and **safe** living.



Promote social inclusion
and a culture of
non-violence and **peace**.

Disaster Response Financial Report

MDRLK007 - Sri Lanka - Dengue

Timeframe: 24 Jul 17 to 28 Feb 18

Appeal Launch Date: 24 Jul 17

Final Report

Selected Parameters

Reporting Timeframe	2017/7-2018/4	Programme	MDRLK007
Budget Timeframe	2017/7-2018/2	Budget	APPROVED
Split by funding source	Y	Project	*
Subsector:	*		

All figures are in Swiss Francs (CHF)

I. Funding

	Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/RC contribution to development	Heighten influence and support for RC/RC work	Joint working and accountability	TOTAL	Deferred Income
A. Budget			475,924			475,924	
B. Opening Balance							
Income							
<u>Other Income</u>							
<i>DREF Allocations</i>			475,924			475,924	
C4. Other Income			475,924			475,924	
C. Total Income = SUM(C1..C4)			475,924			475,924	
D. Total Funding = B + C			475,924			475,924	

* Funding source data based on information provided by the donor

II. Movement of Funds

	Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/RC contribution to development	Heighten influence and support for RC/RC work	Joint working and accountability	TOTAL	Deferred Income
B. Opening Balance							
C. Income			475,924			475,924	
E. Expenditure			-460,969			-460,969	
F. Closing Balance = (B + C + E)			14,955			14,955	

Disaster Response Financial Report

MDRLK007 - Sri Lanka - Dengue

Timeframe: 24 Jul 17 to 28 Feb 18

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Final Report

Selected Parameters

Reporting Timeframe	2017/7-2018/4	Programme	MDRLK007
Budget Timeframe	2017/7-2018/2	Budget	APPROVED
Split by funding source	Y	Project	*
Subsector:	*		

All figures are in Swiss Francs (CHF)

III. Expenditure

Account Groups	Budget	Expenditure					TOTAL	Variance
		Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/RC contribution to development	Heighten influence and support for RC/RC work	Joint working and accountability		
	A					B	A - B	
BUDGET (C)				475,924			475,924	
Relief items, Construction, Supplies								
Clothing & Textiles	0			13,500		13,500	-13,500	
Water, Sanitation & Hygiene	27,000			30,236		30,236	-3,236	
Other Supplies & Services	195,456			194,500		194,500	956	
Total Relief items, Construction, Sup	222,456			238,236		238,236	-15,780	
Logistics, Transport & Storage								
Distribution & Monitoring	15,600			3,863		3,863	11,737	
Transport & Vehicles Costs	7,907			7,128		7,128	779	
Total Logistics, Transport & Storage	23,507			10,990		10,990	12,516	
Personnel								
National Staff				10		10	-10	
National Society Staff	27,070			21,425		21,425	5,645	
Volunteers	11,200			3,588		3,588	7,612	
Total Personnel	38,270			25,023		25,023	13,247	
Consultants & Professional Fees								
Consultants	7,000						7,000	
Professional Fees				6,401		6,401	-6,401	
Total Consultants & Professional Fees	7,000			6,401		6,401	599	
Workshops & Training								
Workshops & Training	40,168			35,566		35,566	4,602	
Total Workshops & Training	40,168			35,566		35,566	4,602	
General Expenditure								
Travel	14,690			11,526		11,526	3,164	
Information & Public Relations	89,533			77,243		77,243	12,290	
Office Costs	6,400			21,390		21,390	-14,990	
Communications	4,062			581		581	3,482	
Financial Charges	791			5,384		5,384	-4,594	
Other General Expenses				494		494	-494	
Total General Expenditure	115,476			116,618		116,618	-1,142	
Indirect Costs								
Programme & Services Support Recover	29,047			28,134		28,134	913	
Total Indirect Costs	29,047			28,134		28,134	913	
TOTAL EXPENDITURE (D)	475,924			460,969		460,969	14,956	
VARIANCE (C - D)				14,956		14,956		

Disaster Response Financial Report**MDRLK007 - Sri Lanka - Dengue**

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Appeal Launch Date: 24 Jul 17

Final Report

Selected Parameters

Reporting Timeframe	2017/7-2018/4	Programme	MDRLK007
Budget Timeframe	2017/7-2018/2	Budget	APPROVED
Split by funding source	Y	Project	*
Subsector:	*		

All figures are in Swiss Francs (CHF)

IV. Breakdown by subsector

Business Line / Sub-sector	Budget	Opening Balance	Income	Funding	Expenditure	Closing Balance	Deferred Income
BL3 - Strengthen RC/RC contribution to development							
Community-based health and first aid	475,924		475,924	475,924	460,969	14,955	
Subtotal BL3	475,924		475,924	475,924	460,969	14,955	
GRAND TOTAL	475,924		475,924	475,924	460,969	14,955	