MONTHLY DENGUE UPDATE

A publication of the National Dengue Control Unit

Ministry of Health, Sri Lanka

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Contents

National Mosquito Control Weeks and Special Mosquito Control Campaigns

Special mosquito control campaigns are organized by the National Dengue Control Unit to achieve two primary objectives.

The two objectives are;

I. To prevent or mitigate impending outbreak/s
II. To control ongoing outbreak/s

There are two types of special campaigns to achieve these objectives.

I. National Mosquito Control Weeks (NMCW)
II. Special Mosquito Control Campaigns (SMCC) – (two or three days) / Special Mosquito Control Weeks (SMCW)

National Mosquito Control Weeks

National Mosquito Control Weeks are organized and conducted before the onset of monsoonal rains (south-west and north-east) to prevent or mitigate dengue outbreaks.

The main task of the said special activity is to bring down or remove all the potential breeding places (can become positive with upcoming rains) or take remedial actions if such places cannot be removed, (e.g., applying chemical or biological larvicides to water collecting places, covering the water collecting containers to prevent mosquitoes from laying eggs) and removal/ altering of active breeding places.

Conducting such a campaign will be leading to eliminating/reducing the possible breeding places that can occur with rain, thereby reducing mosquito density and the spread of dengue.

Further, during this period community will be made aware on keeping the environment free of mosquito breeding and the importance of early health-seeking behaviour.

The National Mosquito Control Weeks are carried out covering all 26 health administrative areas in the country, and include the Colombo Municipal Council area and the National Institute of Health Sciences community area. All Medical Officer of Health (MOH) areas are categorised into three groups as priority high risk (PHR), high risk (HR) and low risk (LR), mainly based on the current and historical epidemiological data and entomological data. This classification is important to carry out prevention and control activities in a high-risk approach, prioritizing areas and efficiently using available resources.

During the NMCW, mosquito control activities will be carried out in the PHR and HR MOH areas. If required, the human resources in the LR MOH areas are mobilized to the PHR and HR MOH areas.

The NMCW will be carrying out for seven days in PHR MOH areas and five days in HR MOH areas. Two separate days dedicated to schools and construction sites respectively and one day (Sunday of the week) for 'shramadana' campaigns with active participation of the community (No teams will be deployed from the health sector).

The Public Health Inspector (PHI) ranges within the PHR and HR MOH areas are further stratified into PHR, HR and LR considering:

- historical dengue epidemiological data
- population density data
- the proportion of dengue patients reported aged <15 years during the last 3 months (this proportion is significant as it depicts the local transmission of dengue)
- premise index (PI) reported in vector surveys during the last 3 months within the PHI range
- additional potential breeding places (large construction sites, vacant/ bare lands, schools within the PHI area)
- socio-demographic characteristics of the area

The special activities in these PHR and HR PHII ranges may carry out within selected one or several Grama Niladhari (GN) divisions (one PHI range includes more than one GN division).

Special Mosquito Control Campaigns (two or three days) / Special Mosquito Control Weeks

These campaigns are organized during both monsoonal and inter-monsoonal periods when a rise in the reporting of dengue cases or high vector densities in high-risk localities are noted, to add a boost to the ongoing dengue control activities and whenever the MOOH need extra support to combat the outbreaks.

The prime objective of such a campaign is to:

- drastically bring down the active breeding places by either removing or altering them and reducing the potential breeding places.

Such reduction of mosquito breeding grounds prevents laying eggs, thereby declining the adult mosquito density which will minimize the spread of the dengue virus.

The frequency of special campaigns hangs on the severity of the outbreak situation. This is a reactive process based on the recent results of the epidemiology and entomology surveillance data.

Organizing and Coordinating NMCW & SMCC/ SMCW

National Dengue Control Unit organizes and coordinates the campaigns at the ministerial level with both health and non-health sector partners. The main two non-health sector partners are the Ministry of Defence (MoD) and the Sri Lanka Police. Apart from them, the Ministry of Provincial Council and Local Government and Community Based Organizations (CBO) such as Sri Lanka Sarvodaya Shramadana Sangamaya and the Sri LankaRed Cross Society work as partners.

Once the MOH areas are selected and dates for the campaigns are finalized by the NDCU the Director General of Health Services will request the Military Liaisons Officer of the Ministry of Defence (MoD) and the Inspector General of the Police (IGP) to provide clearance to obtain the services of personnel from Tri-Forces and Civil Security Division (CSD) and the Police Officers for field activities. The Office of the Chief of Defence Staff (OCDS) and Office of Director Environment Police (ODEP) coordinate the activities and liaise with the NDCU on behalf of the MoD and IGP respectively.

The Regional Epidemiologists (RE)/ Medical Officer Epidemiology (MOE) coordinate the campaign in relevant districts under the administrative support of the Provincial Director of the Health Services (PDHS) and Regional Director of the Health Services (RDHS) and the technical guidance of the district Consultant Community Physician (CCP). The Entomologist and SPHID need to assist the RE to coordinate the campaign.

The MOOH conduct the campaigns in identified high-risk localities based on the number of days planned.

In the planning process of the campaign, MOOH need to send their action plans through REE to the NDCU. This action plan includes the details of:

- Category of the MOH area
- Exact locations of the campaign taking place (PHI area and the GN division)
- Meeting points of the inspection teams
- Contact details of the MOH office, MOH, SPHI and other relevant PHII

The REE need to compile all action plans into a single district/RDHS plan and send it to the NDCU in a timely basis.

Once the plans are accepted by the NDCU, they will be shared with the OCDS and ODEP to allocate the required number of tri-forces/ CSD and police personnel for each MOOH area.

The team allocation (Army, Navy, Airforce or CSD) and list of district coordinators of tri-forces/ CSD and police will be shared with the MOOH through REE before the commencing of the campaigns. It is essential to build a good rapport with the tri-forces/ CSD and the police coordinators by REE and MOOH for an effective and successful campaign to achieve the stipulated targets of the process.

In each MOOH area, each field inspection team should include a minimum of three members from:

- Public health personnel (preferably Field Mosquito Control Assistant – if number is inadequate, PHI, PHFO or PHM)
- Tri-forces or CSD personnel
- Police personnel

Apart from the above-mentioned team members, any volunteers from the community/ CBOs or members representing local government and Divisional Secretariat can be included in the teams. It is mandatory to have at least one public health personnel in each team.

To conduct the campaign successfully, the NDCU will provide necessary financial assistance to all the MOOH areas. The funds are from the consolidated fund of the Government of Sri Lanka. In 2022, the World Health Organization (WHO) financially supported this activity considering the importance, the urgency and the economic situation of the country. When the campaign isplanning, budgetary approval will be obtained from the MoH for the following components:

- To provide refreshments to the field inspection teams. (funding is provided for morning tea and the lunch since the tri-forces, CSD and police personnel are joining the campaign from distant camps and stations)
- To hire vehicles to transport teams into the field and to cover other transport requirements of the special campaign
- To purchase stationery required for the campaign

Conducting the NMCW & SMCC/ SMCW

With the coordination of REE, the campaign will be implemented in the planned MOH areas. As the leader of the team, the respective MOH has to lead the campaign with his/her staff.

Once NMCW is declared, district and divisional intersectoral meetings (headed by the District Secretariat and RDHS at the district/ RDHS level and Divisional Secretariat and MOH at the divisional level) should be conducted to inform respective stakeholders and to get their maximum support for the activity.

Under the guidance of the MOH, the SPHI has to coordinate with the local government office and the divisional secretariat office to get their support for the planned campaign, (e.g., arranging tractors for the container collection, getting the support of Grama Niladhari and Development Officers in the locality) and to look after other relevant matters (e.g., contacting tri-forces/ CSD and police, hiring vehicles, arranging refreshments etc.).

The range PHII should prepare the route maps of the localities for each day, where the campaign will be taking place. Every day, field inspection team should receive a docket containing the route map, premise inspection formats, red and yellow notices and leaflets to educate the public about dengue.

Each morning of the campaign days, MOH/AMOH or SPHI should address the teams and brief them on the day's plan.

Again, at the end of the day the MOH/AMOH should conduct a de-briefing at the MOH office to evaluate the outcome and to identify shortcomings of the day and then to plan for the next day.

The teams when they are in the field, should inspect the premises for both potential and larvae-positive breeding places. The health personnel of the team needs to record the findings. Actions should be taken for potential or positive breeding places.

Actions taken for potential or positive breeding sites include – requesting the owners to take corrective measue immediately and ensuring it happens, issuing of red notice to owners to correct the situation and report to MoH office within three days and taking legal action (especially against premise owners having heavy mosquito breeding sites or repeated offenders).

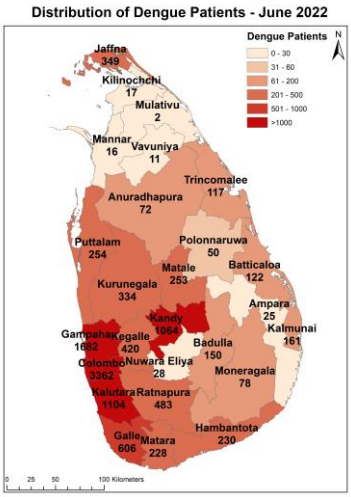
The MOH team can combine a container collection programme with this special campaign in collaboration of the local government authorities.

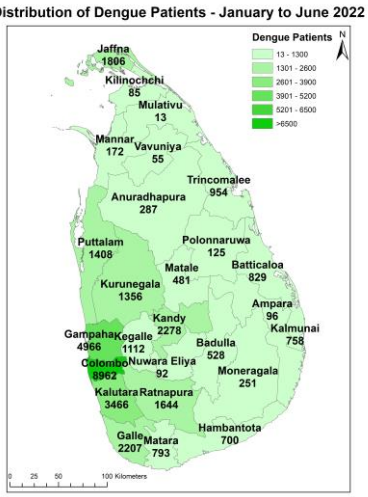
Each day the MOH should forward the summary of the campaign to the RE and on the same day, the final daily district summary should be forwarded to the NDCU by the RE. NDCU will prepare the final summary of the campaign and disseminate it to the DGHS, DDG (PHS) 1, other relevant stakeholders and the media.

Subsequently, on a separate day, the NDCU will be conducting a debriefing meeting with all the stakeholders who took part in the campaign to disseminate the results, discuss the outcome and to further strengthen the control activities.

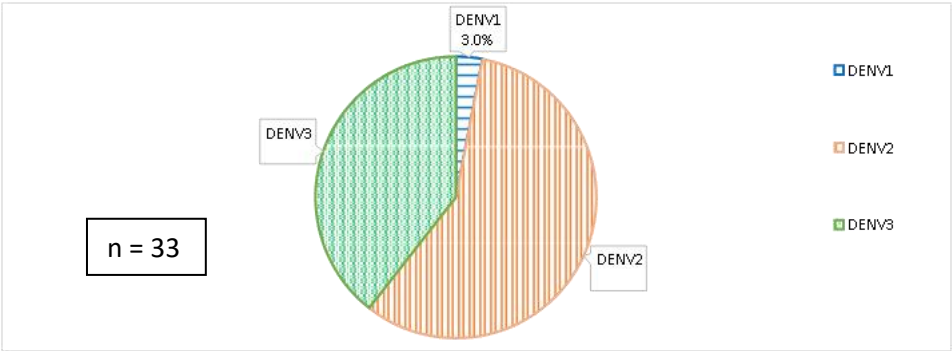
Author: Dr. Indika Weerasinghe, Medical Officer, National Dengue Control Unit

2. DISTRIBUTION OF DENGUE PATIENTS – June 2022





3. VIRUS SURVEILLANCE DATA – June 2022



Source: Department of Virology, MRI and Centre for Dengue Research, University of Sri Jayewardenepura

4. SUMMARY OF ENTOMOLOGICAL AND EPIDEMIOLOGICAL SURVEILLANCE DATA – June 2022

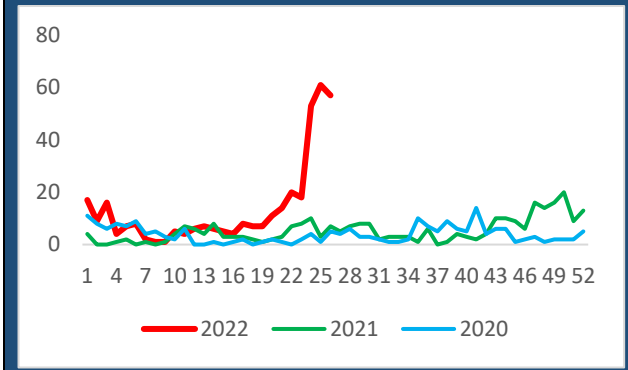
SUMMARY OF ADULT VECTOR SURVEYS				
District	**MOH**	**GN area**	**Findings**	
Matara	Matara Mc	Walgama South	Outdoor findings (7.40am -3.45pm)	*Aedes albopictus* Females 02 (Blood fed); Males 01
Kalmunai	Akkaraipattu	KT-1	Indoor findings (8.15 a.m-1 pm)	*Aedes aegypti* Females 02 (Blood fed 2); Males 01
Batticaloa	Eravur	Eravur 02	Indoor findings (8.00a.m-11.00 am)	*Aedes aegypti* Females 01 (Semi Gravid)
Kegalle	Mawanella	Kiringadeniya	Outdoor findings (7.40am -10.50m)	*Aedes albopictus* Males 03
Mullaitivu	Mullaitivu	Mulliyavalai	Outdoor findings (7.40am -4.30pm)	*Aedes albopictus* Females 15 (Unfed 05, Blood fed 06, Semi gravid 04); Males 01
Kalutara	Ingiriya	Poruwadanda West	Outdoor findings (8.40am -6.05 pm)	*Aedes albopictus* Females 04 (Blood fed 03, Semi gravid 01)
	Horana	605B, Oluboduwa North	Outdoor findings (8.50a.m -1.40 pm)	*Aedes albopictus* Females 02 (Blood fed 01, Semi gravid 01)

2. SUMMARY OF ENTOMOLOGICAL AND EPIDEMIOLOGICAL SURVEILLANCE DATA

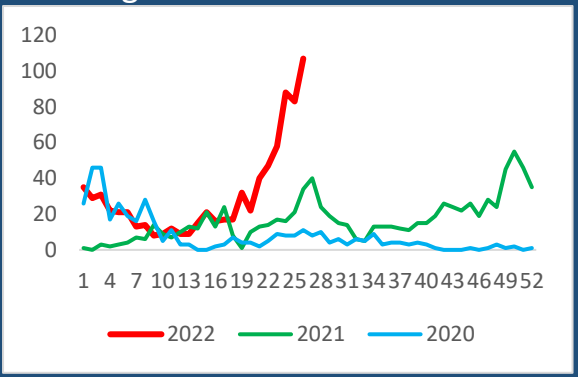
Province	District	Entomological surveillance data				Epidemiological surveillance data	
		(Source - returns of entomology surveys received by NDCU)				(Source-DenSys)	
		No. of Premises			Main type of containers positive for larvae and percentage positivity	Month	
		Inspected	Positive Found	Positive %		June	Cumulative
WP	Colombo	1900	258	13.6	Discarded items (26.8%), Temporary removed items (21.8%), Tyres (9.1%)	3362	8962
	Colombo MC	238	28	10.5	Concrete slabs (43.1%), Water storage cement tank (9.2%), Discarded items (7.6%)		
	Gampaha	1528	180	11.7	Temporary removed items (33.8%), Discarded items (15.8%), Ornamental items (7.6%)	1682	4966
	Kalutara	1315	157	12	Discarded items (35%), Temporary removed items (16.5%), Tyres (12.5%)	1104	3466
	NIHS	1000	180	18	Temporary removed items (32%), Discarded items (16.7%), Water storage barrel (7.9%)		
CP	Kandy	1258	91	7.2	Tyres (24.3%), Water storage barrel (16.2%), Discarded items (15.4%)	1064	2278
	Matale	800	54	6.8	Discarded items (42.4%), Water storage barrels (21.2%), Water storage other items (16.6%)	253	481
	Nuwara Eliya				Data not received by NDCU	28	92
SP	Galle	1500	284	18.9	Discarded items (21%), Ornamental items (13.1%), Water storage barrel (10%)	606	2207
	Hambantota	1746	207	11.9	Ornamental items (16.9%), Discarded items (16.1%), Water storage other items (15.3%)	230	700
	Matara	1600	154	9.6	Water storage other item (29.2%), Discarded items (23.1%), Ornamental items (11.2%)	228	793
NP	Jaffna	500	3	0.6	Water storage other item (66.7%), Water storage cement tanks (33.3%)	349	1806
	Kilinochchi	200	7	3.5	Discarded items (55.5%), Water storage other items (22.2%), Water storage other items (22.2%)	17	85
	Mannar	800	10	1.25	Water storage barrel (70%), Discarded items (15%), Pet feeding items (5%)	16	172
	Vavuniya	1257	19	1.5	Ornamental items (30.9 %), Water storage other items (23.1%), Discarded items (15.5%)	11	55
	Mullaitivu	221	14	6.3	Water storage barrels (25%), Water storage cement tank (25%), Ornamental items (10%)	2	13
EP	Ampara	141	8	5.7	Tyres (44.4%), Discarded items (44.4%), Covering items (11.15)	25	96
	Batticaloa	1834	88	4.8	Other items (23.3%), Pet feeding items (16.5%), Ornamental items (14.6%)	122	829
	Trincomalee	320	16	5	Water storage cement tank (25.3%), Water storage barrels (20.2%), Pet feeding items (15.2%)	117	954
	Kalmunai	1400	76	5.8	Other items (44.2%), Temporary removed items (16.3%), Discarded items (15.1%)	161	758
NWP	Kurunegala	1059	175	16.2	Discarded items (23%), Water storage other items 13.8%), Ornamental items (9.7%)	334	1356
	Puttalam	955	65	6.8	Discarded items (41.7%), Ornamental items 16.7%), Water Storage other items (16.7%)	254	1408
NCP	Anuradhapura				Data not Received by NDCU	72	287
	Polonnaruwa	266	12	4.5	Discarded items (34.3%), Water storage other items (20%), Ornamental items (14.3%)	50	125
UP	Badulla	400	65	16.3	Discarded items (33%), Water storage other items (15.4%), Natural items (15.4%)	150	528
	Monaragala	1527	131	8.6	Discarded items (49.1%), Water Storage barrels (17.3%), Tyres (11.1%)	78	251
SGP	Rathnapura	1301	185	14.2	Discarded items (37.6%), Water storage other items (13%), Ornamental items (9.7%),	483	1644
	Kegalle	2987	183	6.1	Discarded items (26.5%), Water storage barrel (19.3%), Ornamental items (11.2%),	420	1112
Sri Lanka		**26824**	**2630**	**9.8**	**Discarded items (25.6%), Temporary removed items (12.2%), Water storage other items (9.3%)**	**11218**	**35424**

Current High Risk MOH Areas - Epidemiological Trends (Source: DenSys)

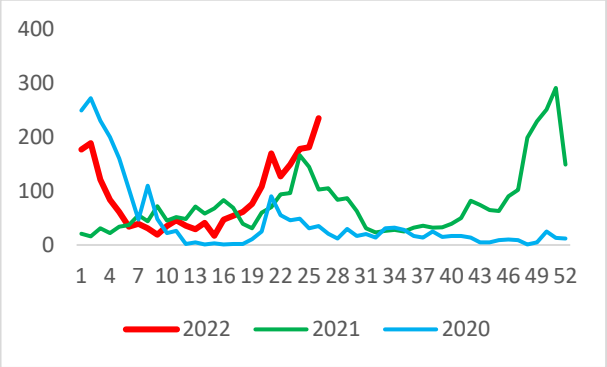
Pitakotte



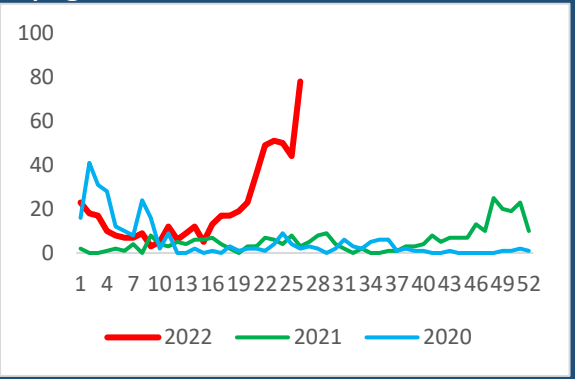
Maharagama



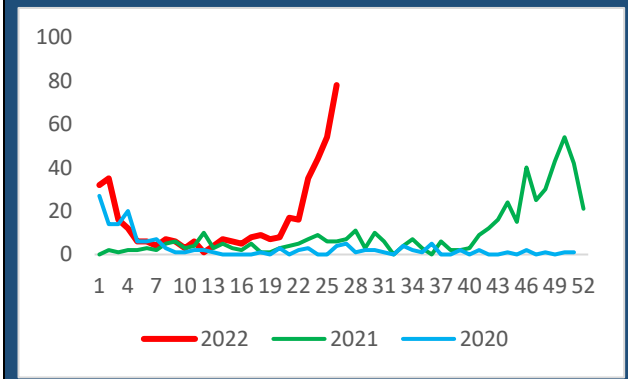
MC Colombo



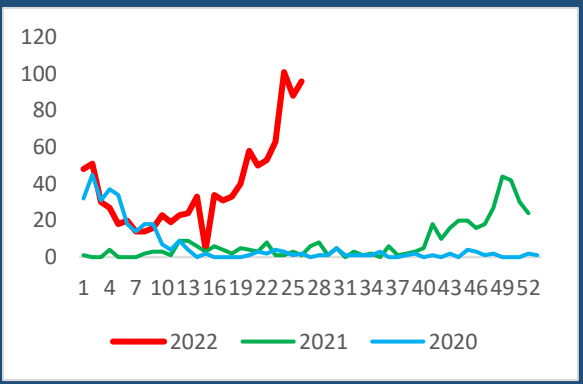
Biyagama



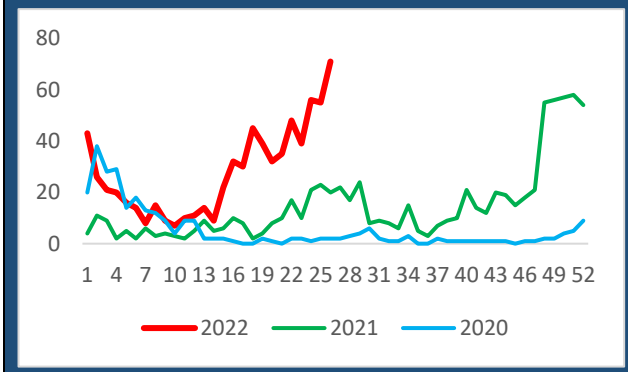
Ja-Ela



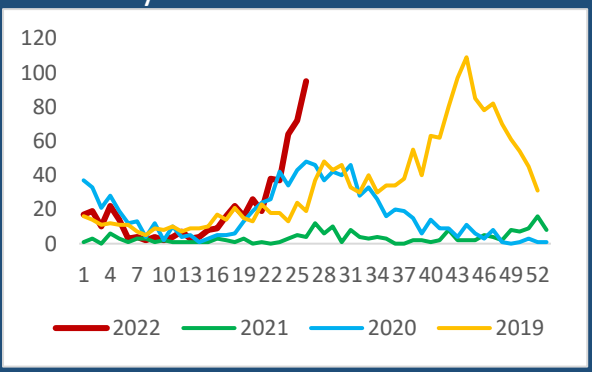
Beruwala



Panadura



MC Kandy



5. High-risk areas based on Entomological forecast

District	MOH Area	GN Division
Colombo	Gothatuwa	Halmulla
	Dehiwala	Nalandarama Place
	Boralesgamuwa	Boralesgamuwa A
	Moratuwa	Dahampura
Gampaha	Negambo	Thimbirigaskatuwa
	Biyagama	Udana Mawatha
	Minuwangoda	Galoluwa
	Ja ela	St. Sebastian Road
Kalutara	Beruwala	765A
	Beruwala	757
	Beruwala	751
	Beruwala	753
	Dodangoda	808-Thudugala West
	Kalutara	724
Puttalam	Puttalam	Thiladiya
	Wennapuwa	Waikkala South
Kurunegala	Kurunegala	Heraliyawala
Kandy	Gangawatakorale	Pallegama
	Akurana	Bulugohothenna
Mannar	Mannar Town	Pallimunai West
Rathnapura	Rathnapura PS	Dewalayagawa
	Rathnapura PS	Weralupa
Kegalle	Mawanella	Muruthuwala
Matara	Matara MC	Welegoda West
	Matara MC	Walgama South
	Weligama	Bandaramulla
Galle	Ambalangoda	Patabendimulla
	Ambalangoda	Karittakanda
Hambantota	Tangalle	Moraketiya
Batticaloa	Eravur	Eravur 2
	Arayampathy	Selvanagar East
	Kaluwanchikudy	Periyakallar West 2
	Kattankudy	167A
	Oddamavadi	208 B
Kalmunai	Sammanthurai	Vilinayadi - 1
	Kalmunai South	Kalmunai-12
	Akkaraipattu	TD-4
	Ninthavur	Ninthavur -4

Dengue vector surveys were conducted in 355 GN areas inspecting 26,824 premises in June. Here, the Entomological forecasting has been done by considering the districts currently recording a high number of Dengue cases that are also recorded high values for entomological indices against their conventional threshold values.

6. SPECIAL ACTIVITIES AND EVENTS CONDUCTED BY THE NATIONAL DENGUE CONTROL UNIT

Knowledge Sharing Sessions: 06.06.2022

Speakers:

Ms. Lakmini Edirisinghe,

Senior RECP Expert, National Cleaner Production Centre

Mr. Senerath Kiriwaththuduwage,

Director, Hayleys Agriculture Holdings

Training and Hands on Workshop on Clinical Management of Dengue jointly organized by the National Infectious Diseases from 20.06.2022 to 24.06.2022





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Any comments, suggestions, and contributions for the MDU Sri Lanka are welcome.

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