



MONTHLY DENGUE UPDATE

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Ministry of Health, Sri Lanka



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Dengue amidst the pandemic 2022: A giant leap towards innovation in dengue research

Dengue fever, which is now hyperendemic to Sri Lanka, has been identified as a major public health issue. Number of dengue cases have increased in magnitude and frequency in recent times, necessitating robust preventative and control actions. However, with its close relationship with climatological factors such as monsoonal rains and low public compliance, prevention has been an uphill task.

With no effective vaccine or definitive treatment on the horizon, research, and development (R & D) seems to be the most viable solution for foreseeable future. Hence, National Dengue Control Unit (NDCU), has been actively pursuing different innovative research across the globe to control dengue menace.



To achieve this objective NDCU recently collaborated with Global Disaster Resilience Centre, University of Huddersfield, United Kingdom, a leader in disaster management and resilience education to organize a research conference. The aim of the conference was to build a platform for researchers, academia, practitioners, and professionals engaged in dengue and disaster related research to share their knowledge, expertise and share best practices.

With the current COVID-19 and it's influence to other hazards in the backdrop, the research symposium was aptly named as "Dengue amidst the pandemic:



Improving preparedness and response for multi-hazard scenarios - 2022, International Research and Innovations Symposium”.

UK Research and Innovation (UKRI), Anti-Malaria Campaign, Disaster Preparedness and Response Division, Ministry of Health, University of Colombo, University of Moratuwa, National Science Foundation and Disaster Management Center partnered with NDCU for the research symposium. Conference was held at Water's Edge, Battaramulla from 16th-17th March 2022.

Over 100 abstracts were presented during the two



days of proceedings under following symposium themes,

- Epidemiology and Surveillance of dengue and response mechanisms amidst the pandemic
- Control of dengue and prevention of re-introduction of malaria
- Clinical Management of dengue and covid-19 during the pandemic
- Complex and interconnected multi hazard risks: the nature of cascading impacts and relationships

- Integrated pandemic and multi-hazard preparedness planning strategies: national to community empowerment and social mobilization
- Early warning and risk communication strategies on multi-hazard scenarios for concurrent and cascading hazards
- Built environment resilience and innovation in addressing biological hazards and multi-hazard scenarios

Nine scientific sessions and six plenary sessions which addressed contemporary issues in relation to dengue and multi hazard scenarios were held with active participation of researchers physically and virtually over two days.



Three keynote speeches covering the areas of Health Emergency and Disaster Risk Management, Intersectionality of Disaster Risk, Epidemic and Pandemic Informed Decision Making and Challenges for dengue in the times of Covid-19 were delivered during the sessions. Industry partners, professional bodies, and research organizations across Sri Lanka and some abroad were well represented during the symposium.

In line with the main symposium four pre congress sessions for grassroot level public health workers, in four high risk provinces (Western, Sabaragamuwa,



Central and Southern) were conducted to share best practices in dengue prevention and to absorb local expertise and experiences for a comprehensive dengue prevention strategy. Following the main symposium, a community engagement workshop was successfully concluded in Northern province to incorporate citizen's perspective to multi hazard scenario mitigation and response.



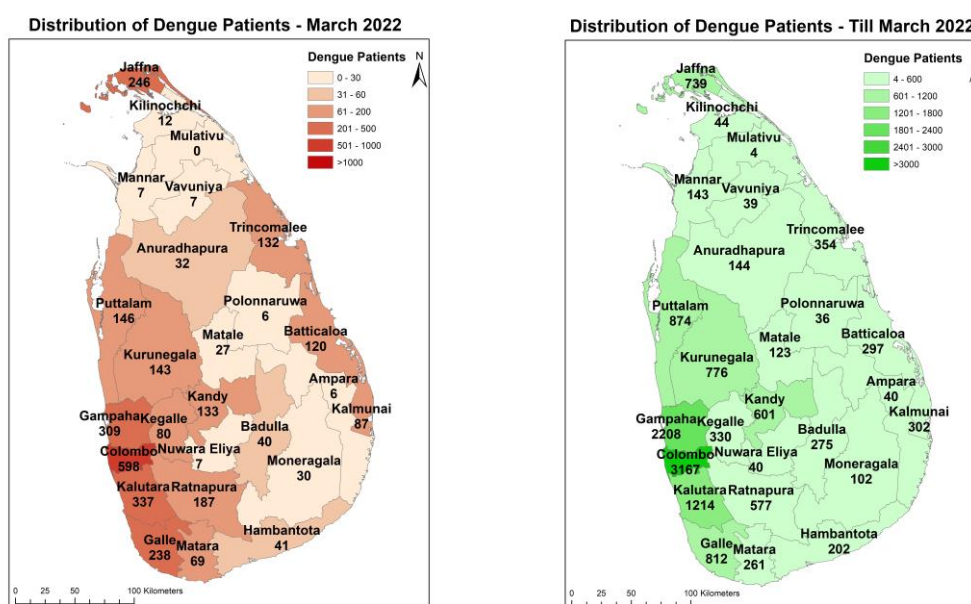
Additionally, two introductory workshops for regional public health professionals on D-MOSS, Dengue Satellite-based Forecasting Model System were held in collaboration with HR Wallingford and UK Space Agency.



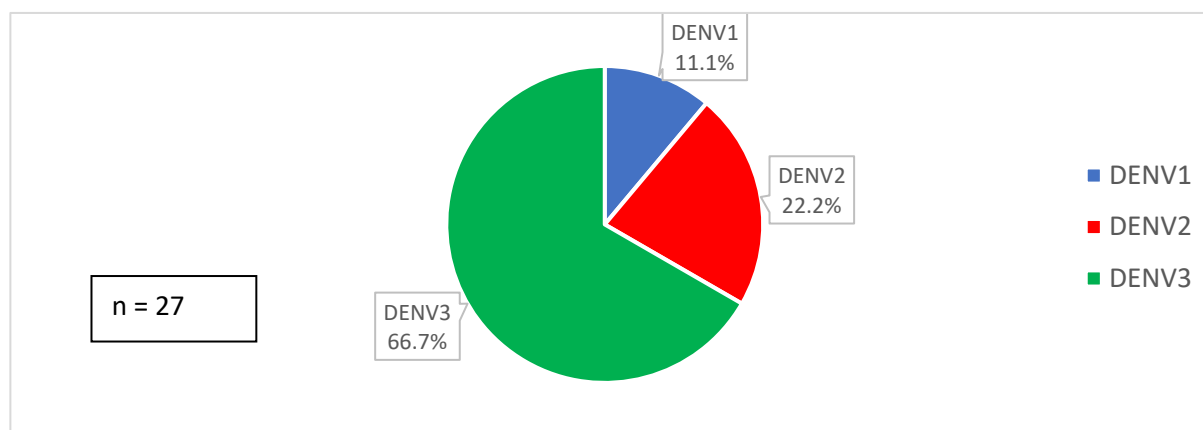
This research conference, no doubt will enter into the annals of dengue related research with its immense contribution to the scientific literature and innovative evidence-based practices. Further, results and evidence generated through the sessions will be discussed extensively in the next issue of Monthly Dengue Update.

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2. DISTRIBUTION OF DENGUE PATIENTS – March 2022



3. VIRUS SURVEILLANCE DATA – March 2022



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

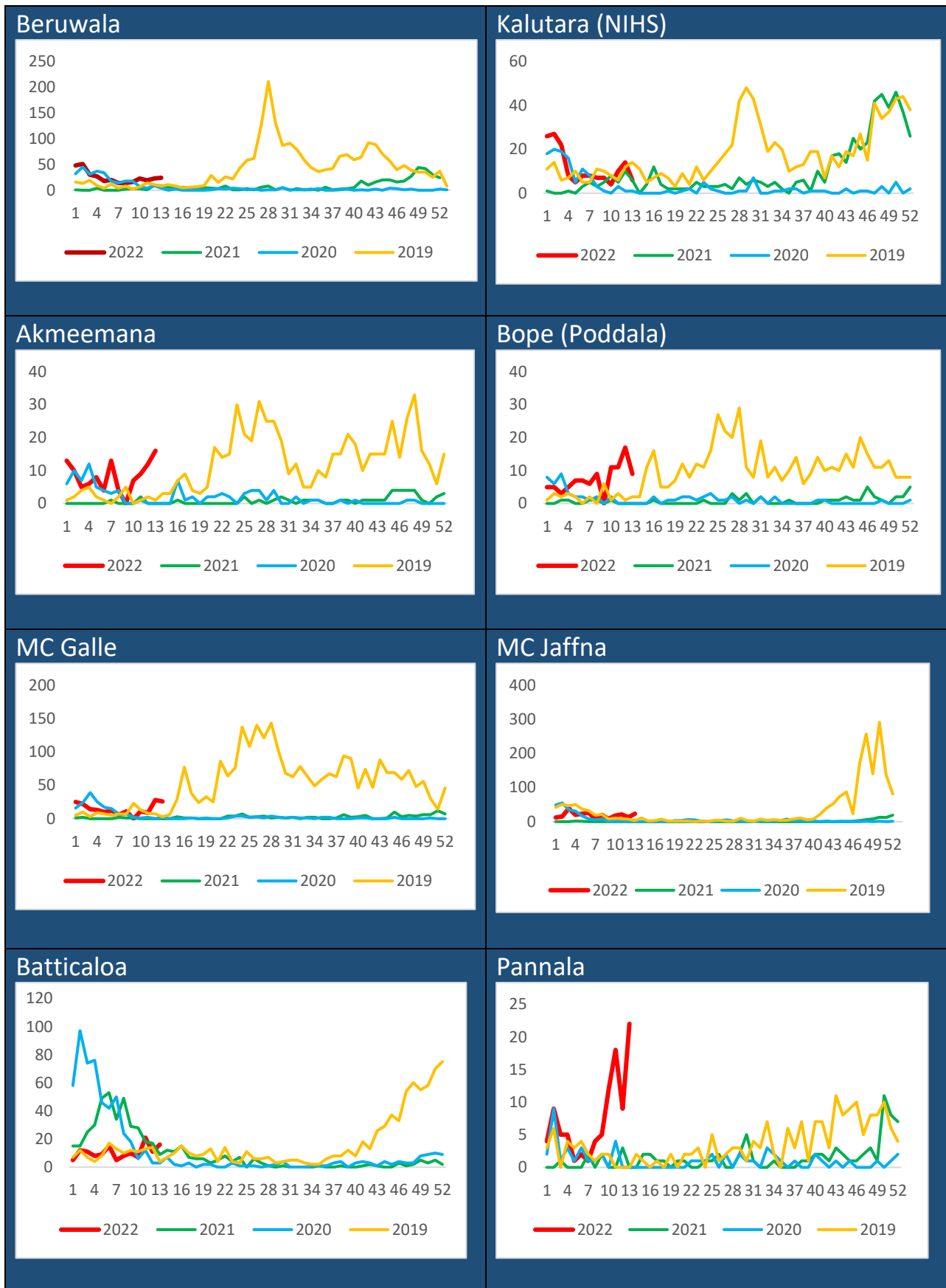
4. SUMMARY OF ENTOMOLOGICAL AND EPIDEMIOLOGICAL SURVEILLANCE DATA - February 2022

SUMMARY OF ADULT SURVEYS				
District	MOH	GN area	Findings	
Colombo	Kolonnawa	Kuruniyawatta	Outdoor findings (8.30 am-1.30pm)	<i>Aedes albopictus</i> 04 female (unfed)
Batticaloa	Eravur	GN 2	Indoor findings (8.30am -12.45 pm)	<i>Aedes aegypti</i> 01 Female (Gravid stage)
Kalmunai	Akkaraipattu	KT-01	Indoor findings (8.15 a.m-12.45 pm)	<i>Aedes aegypti</i> 24 Females (Unfed 11, Blood fed 04, semi gravid 04, Gravid 05)
Kalutara	Horana	Wlmilla	Outdoor findings (8.35am -2.00 pm)	<i>Aedes albopictus</i> 02 female (Blood fed 02)

2. SUMMARY OF ENTOMOLOGICAL AND EPIDEMIOLOGICAL SURVEILLANCE DATA

Province	District	Entomological surveillance data				Epidemiologic al 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 %		March	Cumulative
W P	Colombo	1144	95	5.9	Tyres (25.8%), Discarded items (22.5%), Temporary removed items (19.9%)	598	3167
	Colombo MC	180	7	3.9	Ponds (28.6%), Water storage other items (14.3%), Ornamental items (14.3%)		
	Gampaha	2014	162	8	Temporary removed items (23.4%), Discarded items (20.6%), Water Covering items (10%)	309	2208
	Kalutara	1508	41	9.4	Discarded items (26.7%), Tyres (15.6%), Temporary removed items (15%)	337	1214
	NIHS	800	98	12.4	Temporary removed items (36.6%), Discarded items (15.6%), Water storage barrel (9%)		
C P	Kandy	2399	169	7	Water storage barrel (17.5%), Discarded items (14.4%), Water storage other items (12.9%)	133	601
	Matale	900	42	4.7	Discarded items (49%), Water storage barrels (17.6%), Water storage cement tanks (11.8%)	27	123
	Nuwara Eliya	500	22	4.4	Discarded items (22.3%), Water storage barrel (18.2), Covering items (13.6%)	7	40
S P	Galle	2400	199	8.3	Discarded items (25.9%), Ornamental items (17.8%), Water storage barrel (14.4%)	238	812
	Hambantota	1048	74	7.1	Ornamental items (21.1%), Water storage barrel (15.4%), Discarded items (15.4%)	41	202
	Matara	1700	113	6.7	Ornamental items (23.7%), Water storage other item (19.6%), Discarded items (18.6%)	69	261
N P	Jaffna	799	19	2.4	Ornamental items (31.2%), Water storage barrel (18.8%), Pet feeding (12.5%)	246	739
	Kilinochchi				Data not Received by NDCU	12	44
	Mannar	1400	33	2.4	Water storage barrel (44.7%), Water storage cement tank(29.8%), Water storage other items(25.5%)	7	143
	Vavuniya	1297	42	3.3	Discarded items (36.4%), Water storage other items (20.5%), Ornamental items (20.5%)	7	39
	Mullativu				Data not Received by NDCU	0	4
E P	Ampara	254	25	9.8	Discarded items (32.3%), Water storage other items (26.5%), water storage barrel (11.7%)	6	40
	Batticaloa	1464	141	9.6	Discarded items (17.6%), Other items (14.3%), Temporary Removed items (13.7%),	120	297
	Trincomalee				Data not Received by NDCU	132	354
	Kalmunai	1760	180	10.2	Temporary removed items (23%), Other items (23%), Ornamental items (13%)	87	302
N W P	Kurunegala	2001	158	7.9	Discarded items (15.6%), Water storage other items (13.2%), AC and refrigerators (12%)	143	776
	Puttalam	1103	34	3.1	Discarded items (28.9%), Ornamental items (13.2%), Water Storage other (13.2%),	146	874
N C P	Anuradhapura				Data not Received by NDCU	32	144
	Polonnaruwa	706	53	7.5	Discarded items (46%), Temporary Removed items (22.2%), Water storage other items (7.9%)	6	36
U P	Badulla	90	16	17.8	Discarded items (47.3%), Water storage cement tank (15.8%), Water storage other items (15.8%)	40	275
	Monaragala	1602	159	9.9	Discarded items (38.2%), Water Storage barrels (16.3%), Tyres (13.3%)	30	102
S G P	Rathnapura	1401	171	12.2	Discarded items (29.1%), Tyres (10.9%), Natural items (10.1%)	187	577
	Kegalle	659	36	5.5	Water storage barrels (24.3%), Tyres (21.6%), Ornamental items (18.9%)	80	330
Sri Lanka		28840	2153	7.5	Discarded items (24.8%), Temporary Removed items (10.2%), Tyres (10.1%)	3040	13,704

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



5. High-risk areas based on Entomological forecast

District	MOH Area	GN Division
Colombo	Gothatuwa	Kittampahuwa
Gampaha	Negombo	Periyamulla
	Biyagama	Delgoda
Kalutara	Beruwela	763
	Kalutara	717D,717C
	Horana	610A-Aramanagolla
	Mathugama	795A-Badugama
Puttalam	UC Chilaw	Weralabada
	UC Chilaw	Weralabada South
Kurunegala	Pannala	Pannala town
	MC Kurunegala	Kurunegala South
Matale	MC Matale	Vihara Road
Kandy	Udawalpata	Ilangawatta
Badulla	MC Badulla	Badulupitiya
Mannar	Mannar town	Thoddaveli
	Mannar town	Chavakkadu
Rathnapura	PS Rathnapura	Gurube Weligama
Matara	MC Matara	Welegoda
	MC Matara	Walgama East
Galle	Galle	Madawalamulla
	MC Galle	Thalpitiya
Batticaloa	Eravur	Eravur 2
	Batticaloa	Thiraimadu
	Chenkalady	Eravur 4
	Kattankudy	162 B
	Kaluwanchikudy	Periyakallar
Kalmunai	Sainthamaruthu	Sainthamaruthu
	Sammanthurai	Karuwaddukkal Addalachchenai
	Nintavur	Nintavur-9
	Pottuvil	Pottuvil-4
	Karaitivu	Karaitivu 1

Dengue vector surveys were conducted in 347 GN areas inspecting 28840 premises in March.

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

Pre Congress Session 02 – 02.03.2022

Vector Bionomics and Integrated Vector Management in Malaria and Dengue



Pre Congress Session 03 – 08.03.2022

At RDHS Matara for PHII of Southern Province



Pre congress Sessions 04 – 10.03.2022

For PHII and PHMs in Rathnapura district



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

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