WEEKLY EPIDEMIOLOGICAL REPORT

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Strengthening Mosquito Management in Construction Industry to Prevent Dengue Part II

This is the second in a series of three articles on Strengthening Mosquito Management in Construction Industry to Prevent Dengue.

It has now become a major concern to establish and maintain a system to prevent Dengue transmission in and around construction sites. In this backdrop, the development of a standard protocol has been proposed by the National Dengue Control Unit (NDCU) of the Ministry of Health, which coordinates implementation of the **Mosquito Management Code of Practice for Construction Industry in Sri Lanka.**

The purpose of such a code of practice was to provide developers, architects, planners and engineers of the construction industry a platform where they can interact closely with the local government institutions, public health authorities (MOH staff) and commercial enterprises (Pest Management Agencies, PMP) to deal specifically to control Dengue which has become the most significant mosquito borne public health problem in Sri Lanka.

Minimizing the number of locally acquired cases of Dengue related to Construction Industry by strengthening and sustaining a risk based surveillance approach with practical guidelines on the suitable prevention and control measures was the expected outcome of this endeavour. Though this Code of Practice need not be mandatory, compliance from all relevant parties would provide a defense against litigations for allowing and harbouring the breeding and abundance of disease causing mosquitoes.

An essential component of such a Mosquito Management Programme (MMP) is the Integrated Mosquito Management (IMM) where the implementation of a number of mosquito control techniques using a_multi-pronged approach in order to collectively contribute to the management of mosquitoes in a practical way that it may reduce the reliance on chemicals, taking into account environmental impact, sustainability and cost effectiveness. It is believed that this Code of Practice can be applied both at the planning and operational levels in the execution of specific mosquito control tasks.

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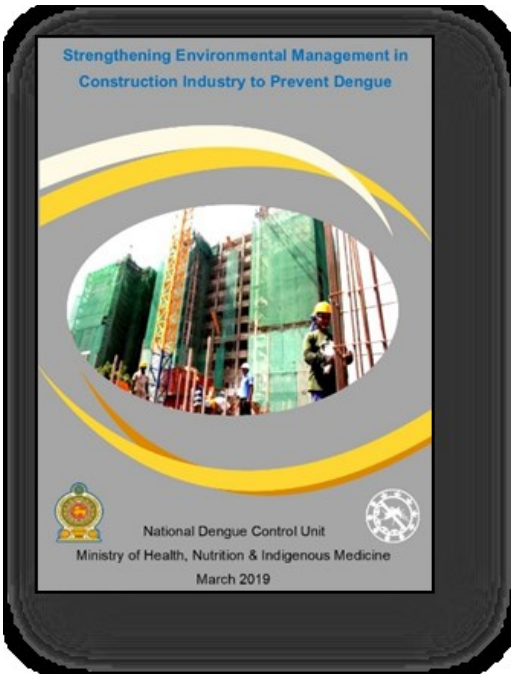
Integrated Mosquito Management could be described broadly in 2 aspects; the direct (reactive) approach and the indirect (proactive) approach. Direct approach includes methods related to chemical and biological control, habitat modification and source reduction while the indirect approach deals mainly with education and awareness building at different levels and development planning in the designing and planning of buildings. Use of environmental modification methods like removal of breeding habitats in roof gutters, screening of doors and windows to prevent mosquito movements and application of chemical and biological methods in non-removable stagnant water collections are few IMM application examples.

Relevant stakeholders related to the construction industry including several Ministries will provide the necessary support to ensure effective implementation of these practices. These include several ministries in the Presidential Task Force on Dengue Prevention (Ministry of Provincial Councils and Local Government and Ministry of Housing and Construction through CIDA or Construction Industry Development Authority) as well as the Ministry of Megapolis and Western Development together with Higher Education Institutes, Registrar of Pesticides (RoP) and several Pest Management Agencies. A booklet has been published and distributed by the NDCU to create awareness and empower these stakeholders on this important national endeavor.

Several steps have been recommended in the booklet published by NDCU to prevent mosquito breeding in these construction sites, and most important of it is to instill a dedicated and regular inspection programme for elimination of mosquito breeding places throughout the site during the entire construction period. All personnel at all levels should comply with such instructions in effectively preventing the breeding of mosquitoes. The authorities issuing the building approval should inform the respective Medical Officer of Health (MOH) of the area regarding proposed construction projects to ensure environmental safety requirements.



General instructions

Contractor is considered as the key person responsible for maintaining mosquito breeding free environment within the construction site. The Contractor should;

- Assign an officer and a subordinate team (site inspection team) responsible for keeping the site free of mosquito breeding.
- Train members of the site inspection team (on a regular basis) on control methods of mosquito breeding according to the guidelines prepared by NDCU.
- Ensure regular communications with regard to health concerns in the construction site with the PHI (and MOH) in the respective area.

Activities of the Site Inspection Team

- Site inspections should be carried out daily covering the entire construction area (e.g. storage yard, living quarters, cooking / washing are and toilets.
- All mosquito breeding places identified should be removed on a daily basis indicating positive and potential breeding places.
- A daily report (or a filled form) indicating the activities carried out should be kept filed in the site office for inspection by any authorized officer.
- A weekly report (or a filled form) indicating the activities carried out should be communicated to the contractor of the construction site.
- A consolidated monthly summary report (or a filled form) should be prepared based on the weekly findings.
- All construction sites must send this monthly summary report (or a filled form) to the respective local authority (Municipality/Urban Council), with a copy to the area MOH. Central level institutions like CIDA (Construction Industry Development Authority) and NDCU (National Dengue Control Unit) should also be informed on a regular basis.

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to be continued ...

Table 1: Selected notifiable diseases reported by Medical Officers of Health 29th – 05th July 2019 (27thWeek)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		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	303	5706	1	29	0	6	1	11	0	29	3	114	0	7	0	5	0	0	6	283	0	29	0	3	**49**	**100**
Gampaha	60	3489	0	20	0	4	0	3	0	18	0	57	0	3	0	4	0	1	2	234	0	12	0	83	**51**	**93**
Kalutara	26	1999	2	42	0	6	0	11	0	42	3	293	0	4	0	4	0	1	0	404	0	64	0	3	**63**	**94**
Kandy	83	1608	1	60	0	10	0	2	0	11	0	43	3	57	0	2	0	1	5	167	2	43	3	29	**64**	**99**
Matale	10	284	1	18	0	3	0	0	0	4	0	32	0	5	1	4	0	2	1	54	0	4	1	124	**57**	**97**
NuwaraEliya	6	109	3	75	0	1	0	6	0	2	0	33	3	48	1	6	0	0	7	71	1	26	0	0	**25**	**100**
Galle	187	2586	0	29	0	6	0	3	0	5	10	234	2	27	3	12	0	0	6	271	0	32	0	2	**61**	**98**
Hambantota	25	650	0	5	0	2	1	1	0	5	2	68	0	77	0	2	0	1	10	217	0	23	6	478	**74**	**99**
Matara	119	1099	1	11	0	4	0	2	0	9	10	212	0	21	0	16	0	0	3	181	0	9	6	306	**60**	**100**
Jaffna	18	1983	5	125	0	11	1	18	0	38	0	23	0	260	1	4	0	0	9	206	1	13	0	0	**25**	**93**
Kilinochchi	1	106	0	12	0	1	0	9	0	0	0	18	0	24	0	1	0	0	0	6	0	5	0	7	**48**	**98**
Mannar	0	75	0	2	0	1	1	8	0	1	0	1	0	8	0	0	0	0	0	0	0	1	0	1	**55**	**99**
Vavuniya	0	184	0	10	0	10	0	22	0	9	0	44	0	4	0	0	0	0	0	59	0	9	0	1	**55**	**95**
Mullaitivu	0	103	0	6	0	0	0	9	0	2	0	18	0	6	0	0	0	0	0	3	0	6	0	4	**32**	**91**
Batticaloa	9	910	2	60	0	2	0	11	0	4	0	35	0	1	0	0	0	1	3	173	0	18	0	0	**51**	**98**
Ampara	1	128	2	42	0	2	0	0	0	8	0	24	0	1	0	10	0	0	10	139	0	7	0	4	**56**	**99**
Trincomalee	8	769	0	10	0	0	0	0	0	16	0	8	0	16	0	3	0	0	7	160	0	5	0	1	**30**	**97**
Kurunegala	30	910	0	49	0	11	1	6	0	15	0	108	0	12	0	17	0	1	3	410	3	63	4	471	**60**	**98**
Puttalam	12	350	1	19	0	2	0	1	0	3	0	23	0	9	0	1	0	0	0	105	0	29	0	7	**60**	**98**
Anuradhapura	4	293	1	26	0	6	0	4	0	5	1	88	0	27	0	18	0	2	0	363	0	54	1	292	**41**	**93**
Polonnaruwa	10	170	0	15	0	2	0	1	0	1	0	49	0	4	0	15	0	1	0	217	0	13	4	149	**64**	**97**
Badulla	18	412	0	45	0	5	0	7	4	71	6	128	2	72	0	13	0	0	2	183	7	124	0	11	**65**	**98**
Monaragala	11	285	0	35	0	4	0	0	0	77	5	173	1	68	1	39	0	0	6	189	2	101	0	17	**59**	**100**
Ratnapura	37	1308	0	57	0	24	0	8	0	11	12	486	0	22	0	18	0	4	4	233	5	97	2	93	**44**	**97**
Kegalle	17	749	1	25	0	13	0	1	0	22	1	123	1	33	2	81	0	0	0	288	1	32	0	24	**65**	**97**
Kalmune	3	526	0	25	0	0	0	1	1	12	0	22	0	3	1	2	0	0	2	149	0	15	0	0	**64**	**99**
SRILANKA	**998**	**26791**	**21**	**852**	**0**	**136**	**5**	**145**	**5**	**420**	**53**	**2457**	**12**	**819**	**10**	**277**	**0**	**15**	**86**	**4765**	**22**	**834**	**27**	**2110**	**54**	**97**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 05th July , 2019 Total number of reporting units 353 Number of reporting units data provided for the current week: 219 **C****-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

29th – 05th July 2019 (27th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2019	Number of cases during same week in 2018	Total number of cases to date in 2019	Total number of cases to date in 2018	Difference between the number of cases to date in 2019 & 2018
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	01	00	00	000	00	00	00	00	01	02	44	32	37.5 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	01	00	00	02	00	00	00	00	03	04	190	192	-1.0 %
Measles	03	01	01	01	00	01	00	00	01	07	05	184	72	155.5 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	04	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	01	00	00	00	00	00	00	01	00	11	11	0 %
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	01	09	17	- 47 %
Whooping Cough	00	00	01	00	00	00	00	00	00	01	01	34	30	13.3 %
Tuberculosis	31	02	02	03	08	07	13	14	12	92	96	4406	3978	10.7 %

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

NA = Not Available

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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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@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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