Weekly Report on

JU-DNCC Mosquitoes Surveillance Program

Week 123 (October 9-13, 2026)

Submitted To

Chief Health officer
Dhaka North City Corporation
Dhaka, Bangladesh

Submitted By

IRES
Department of Zoology
Jahangirnagar University

IRES

JU-DNCC Collaboration Center

Department of Zoology
Jahangirnagar University
Email: ires@juniv.edu
Phone: +8801903307125

Weekly Report on Mosquitoes Surveillance Program at DNCC

Methods:

In the DNCC (Dhaka North City Corporation) area, mosquito surveillance is conducted across 5 zones. Adult mosquito surveillance involves setting up three types of traps in each zone to capture adult mosquitoes. Simultaneously, larval surveillance entails surveying an area within a 0.5-kilometer radius around traps location to inspect and collect mosquitoes' larvae from potential breeding sites.

Zone	Traps Location	GPS Location
01	Uttara-4 No sector park	23.8613672,90.4035528
02	Mirpur-2, Vander office, DNCC	23.8036248,90.3601995
03	Gulsan 1, Purantan Vander office	23.7860557,90.4164024
04	10 No ward community center, Mirpur-1	23.7922967,90.3467992
05	Mohammadpur regional office of DNCC	23.7618721,90.3590884

For the Adult mosquito collection

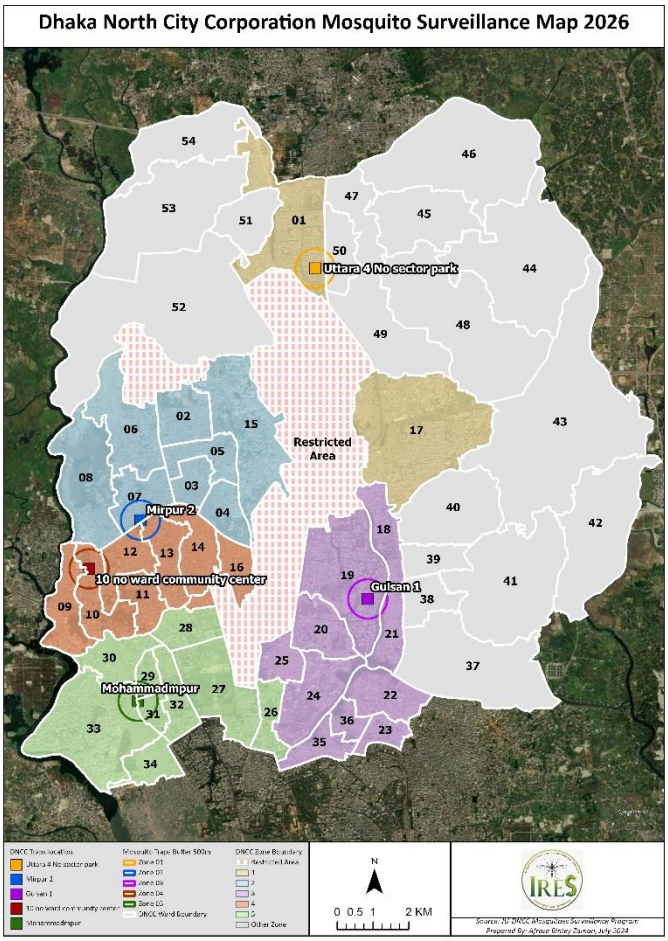
1. Light trap

For the mosquito larvae collection

1. Aedes X smart trap
2. Directly collection larvae from field.

For the *Aedes* mosquito larvae and egg collection

1. Den-X-Trap
   i. Only water (control)
   ii. Lure
   iii. Lure2Kill



Results:

Table 1. Collected Adult Mosquitoes from Moshar Machine (CO_2) traps in Week 123 (Oct 9-13, 2026)

Zone	*Ae. aegypti*	*Ae. albopictus*	*Cx. quinquefasciatus*	*Cx. tritaeniorhynchus*	*Cx. gelidus*	*Ar. subalbatus*	*Mn. annulifera*	*Mn. uniformis*	*An. vagus*	*An. subpictus*	*Total*	%
1	6	1	409	367	1	36	1	1	2	1	825	6.14
2	8	3	188	34	0	3	0	0	0	0	236	1.76
3	8	12	2566	1598	0	15	0	5	0	1	4205	31.29
4	5	4	1177	784	0	34	0	0	9	0	2013	14.98
5	32	8	4467	1626	0	26	0	0	0	0	6159	45.83
Total	59	28	8807	4409	1	114	1	6	11	2	13438	100.00
%	0.44	0.21	65.54	32.81	0.01	0.85	0.01	0.04	0.08	0.01	100.00	

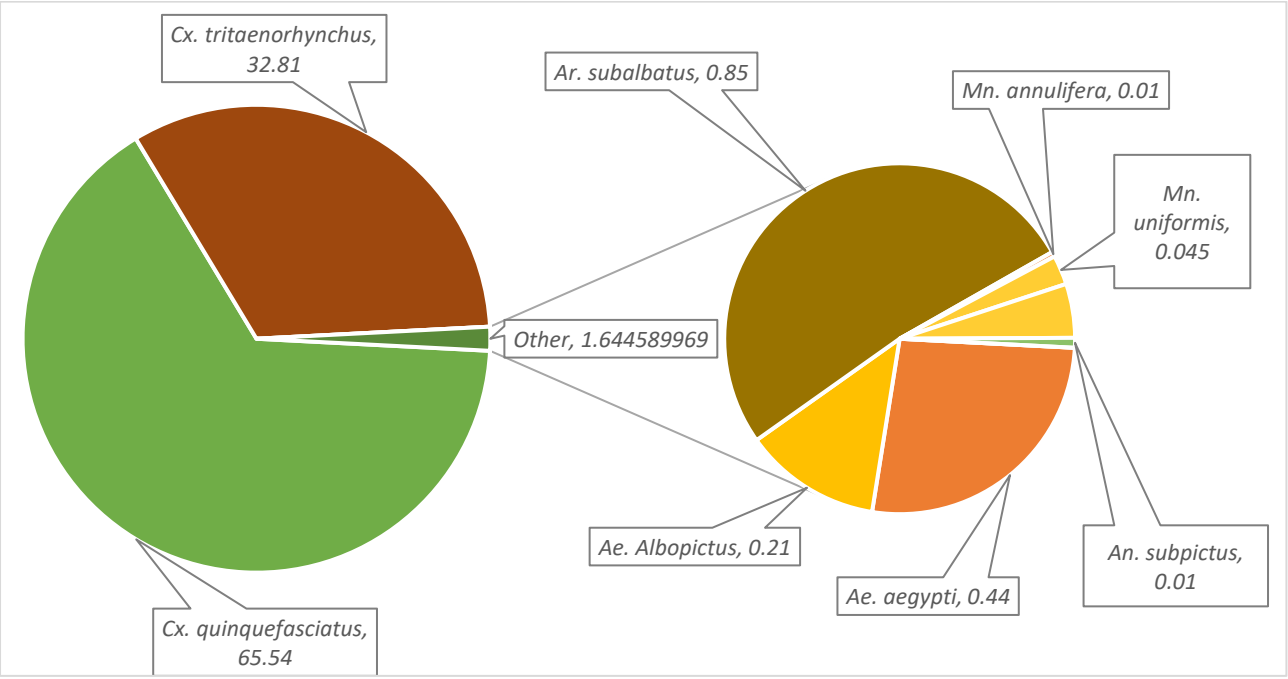


Fig. 1: Percentage of Adult Mosquitoes Collected by Moshar Machine (CO_2) traps in Week 123 (Oct 9-13, 2026)

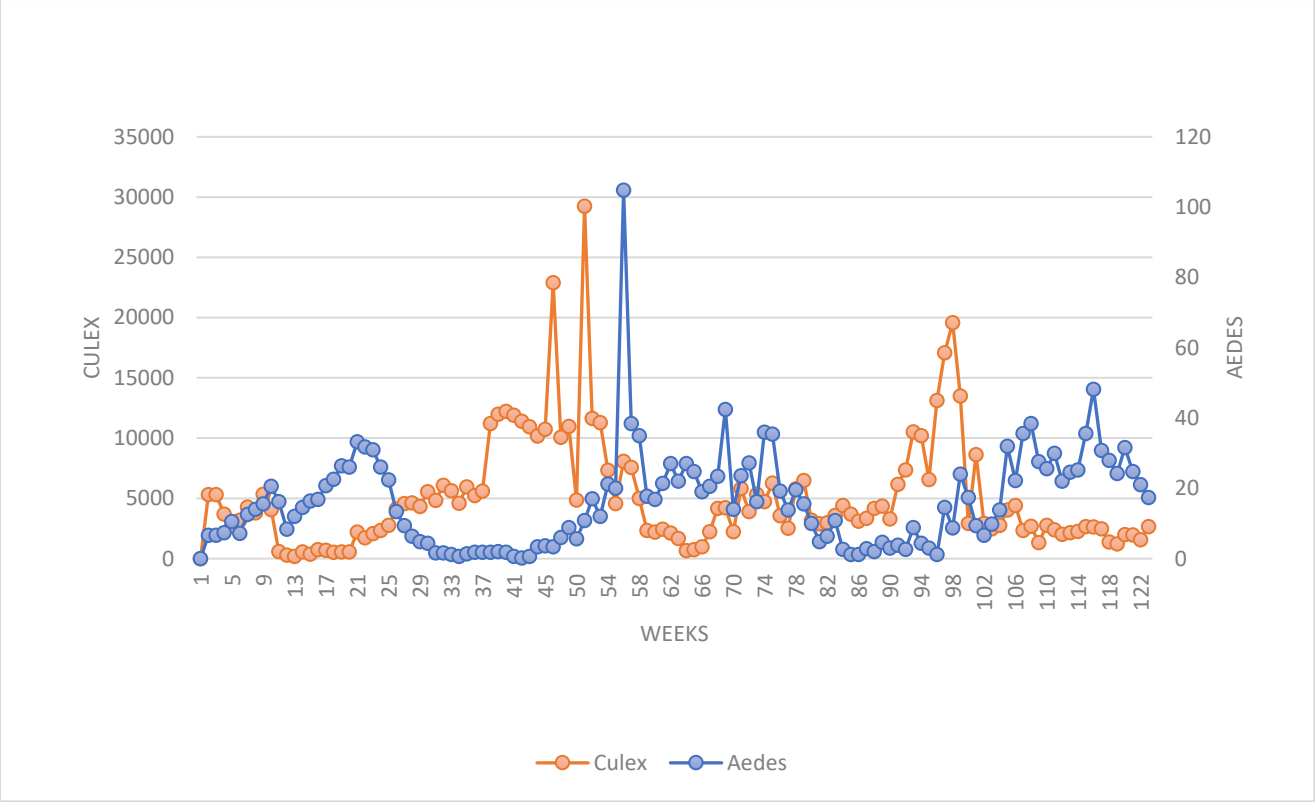


Fig 2: Average number of mosquitoes per Moshar Machine (CO_2) traps from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

Table 2. Collected Mosquito Larvae from *Aedes* X smart Traps in Week 123 (Oct 9-13, 2026)

Zone	N	*Ae. aegypti*	*Ae. albopictus*
1	5	0	5
2	8	8	0
3	12	0	12
4	0	0	0
5	0	0	0
Total	25	8	17
(%)	100	32	68





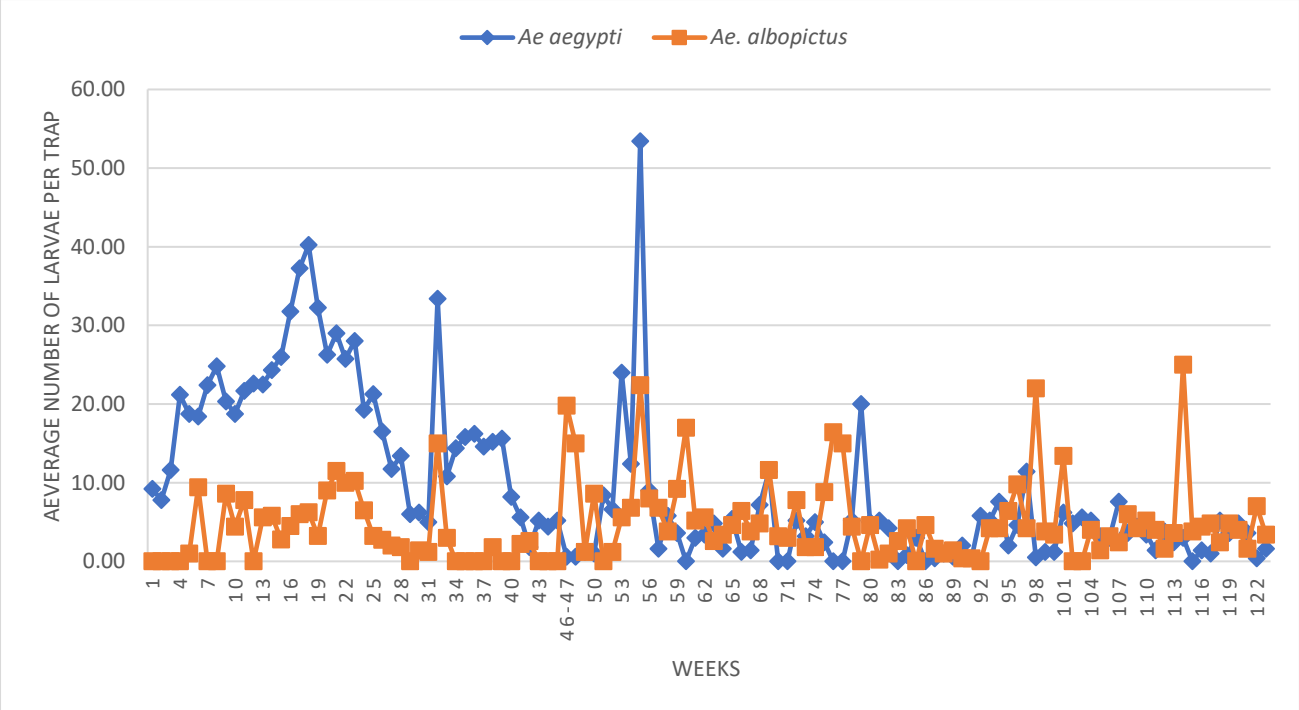


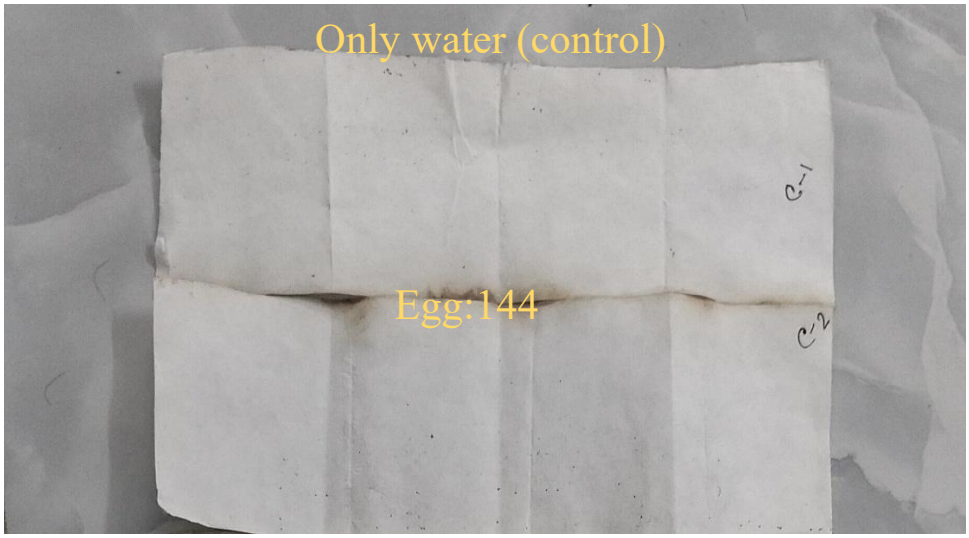
Fig 3: Average Number of *Aedes* Larvae per *Aedes* X Smart Trap in Zones 1-5 from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

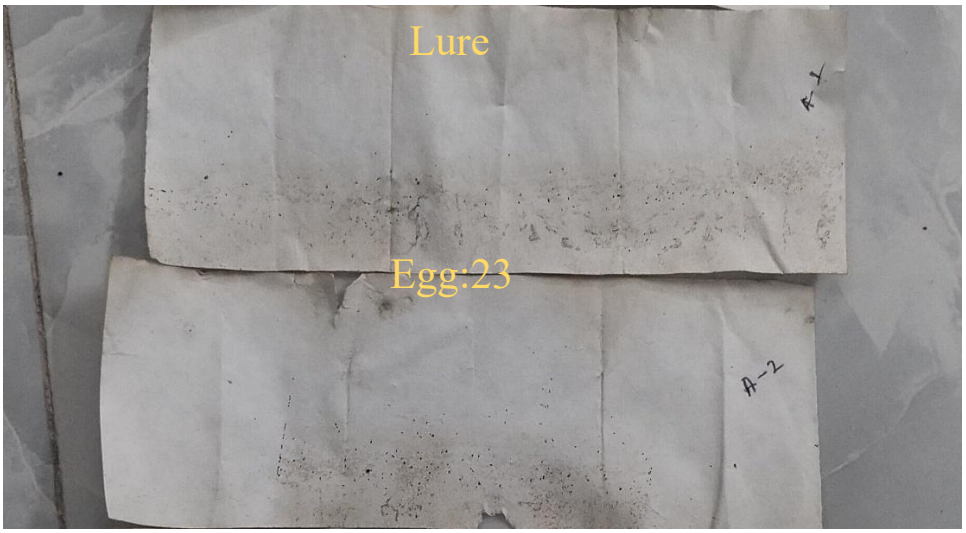
Table 3. Collected *Aedes* Mosquitoes Eggs and Larvae from Den-X-Trap in Week 123 (Oct 9-13, 2026)

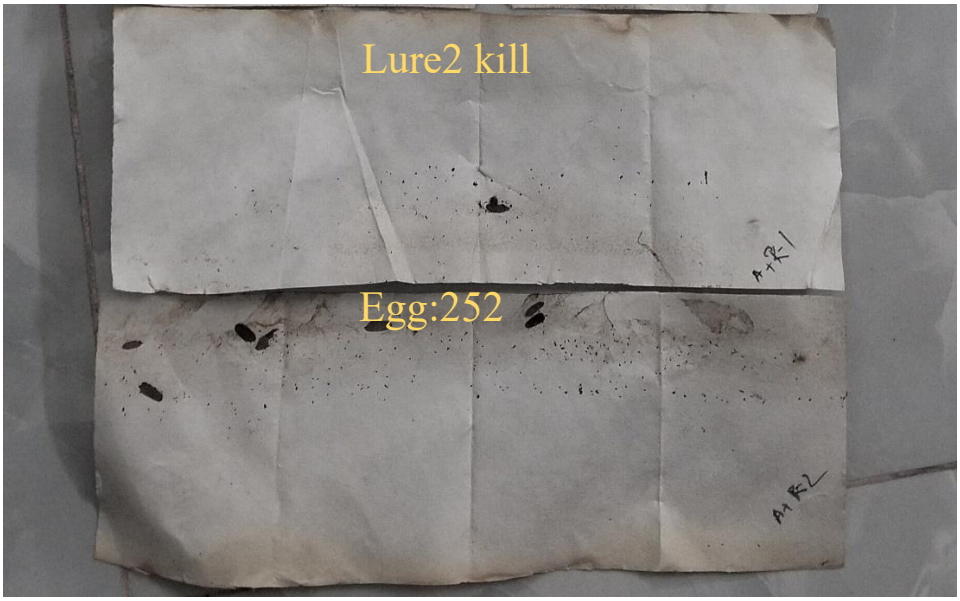
Zone	Only water (Control)		Lure		Lure2Kill	
	Eggs	*Aedes* Larvae	Eggs	*Aedes* Larvae	Eggs	*Aedes* Larvae
1	-	-	-	-	-	-
2	0	0	123	0	92	0
3	11	0	0	8	5	0
4	62	5	200	4	212	0
5	144	0	23	0	252	0
Sub-total	**217**	**5**	**346**	**12**	**561**	**0**
Average	**54**	**1**	**87**	**3**	**140**	**0**



Aedes Mosquitoes Eggs from Den-X-Trap







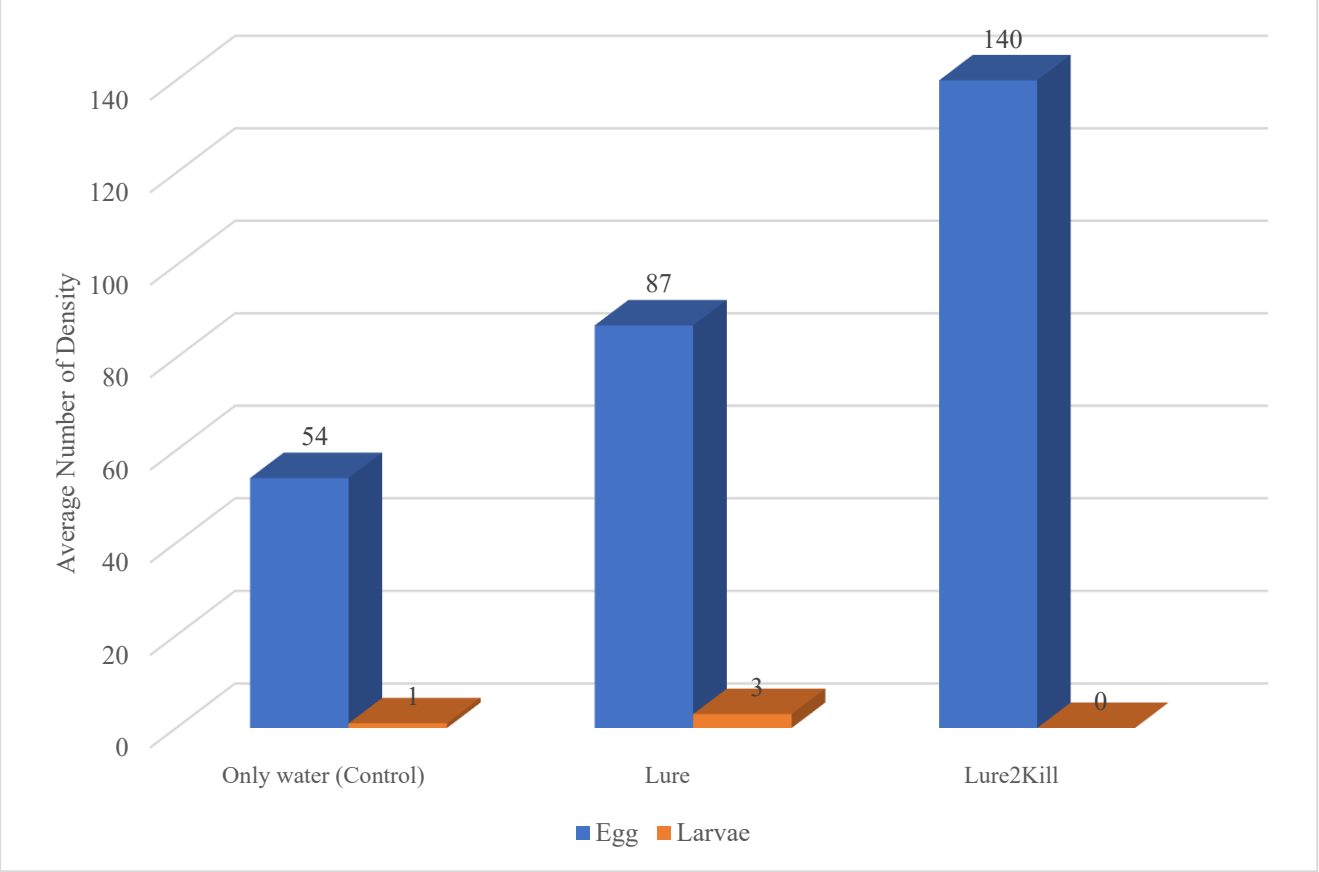


Fig 4: Average number of eggs and larvae of *Aedes* mosquitoes per Den-X-Trap in zones 1-5 in Week 123 (Oct 9-13, 2026)

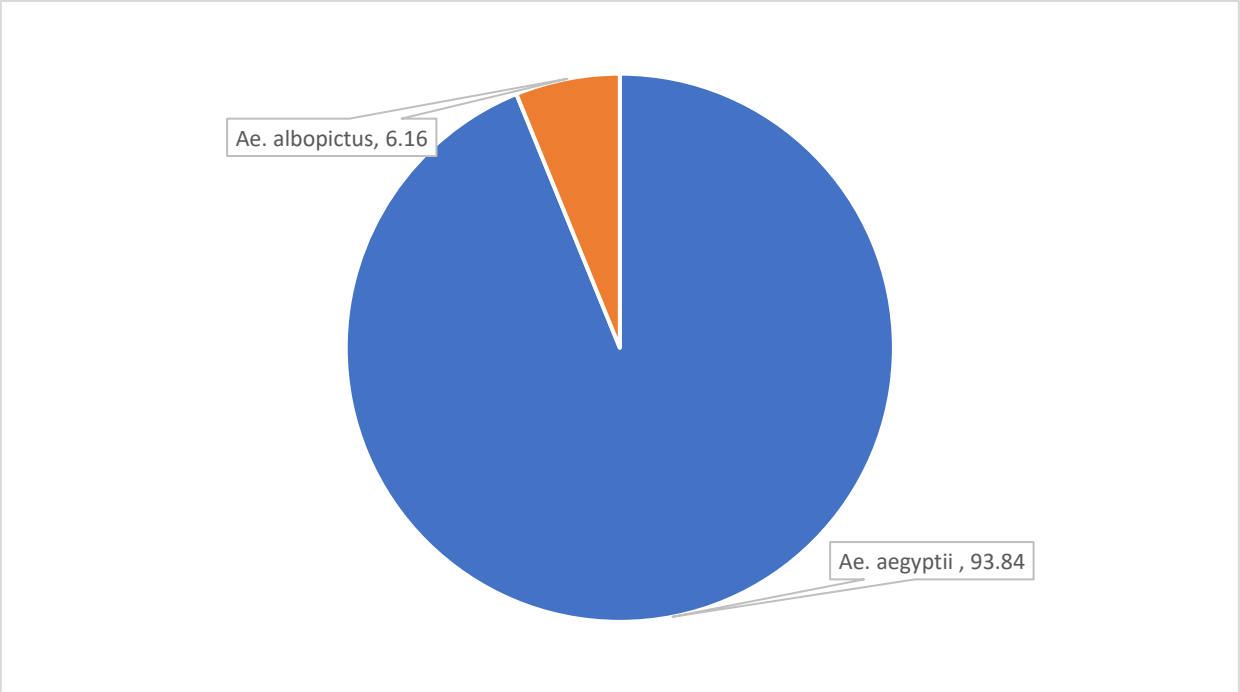


Fig. 5: Percentage of Mosquito Larvae from Zones (1-5) in Week 123 (Oct 9-13, 2026)

Table 4. Positive Larval Spots in Different Zones (1-5) with Estimated Number of Larvae in Week 123 (Oct 9-13, 2026)

Zone	GPS Location	*Ae. aegypti*	*Ae. albopictus*	*Source*
1	23.8598902 90.4052009	5	0	Manhole
	23.8597962 90.4053109	9	0	Plastic bucket
	total	14	0	
2	23.8057868 90.3570244	12	0	Plastic bucket
	23.8057646 90.3565932	457	0	Basement/Parking
	total	469	0	
3	23.7890782 90.4170435	25	0	Plastic bottle
	23.790168 90.4171158	53	0	Plastic Mug/pot/Bodna
	23.7898026 90.4179555	0	12	Clay pot
	23.7896769 90.4180433	0	14	Plastic Mug/pot/Bodna
	total	78	26	
4	23.7868823 90.3459553	23	0	Plastic bucket
	23.786639 90.3463913	11	0	Polyethylene sheet
	23.7867377 90.3467973	247	0	Water tank (Cement)
	total	281	0	
5	23.7638784 90.3598886	58	0	Hole of water meter
	23.7642117 90.3598892	54	0	Hole of water meter
	23.7647183 90.3605655	247	0	Plastic bucket
	23.7646072 90.35996	12	0	Flooded floor (basement or otherwise)
	23.764556 90.3598269	0	56	Coconut shell (dry or green)

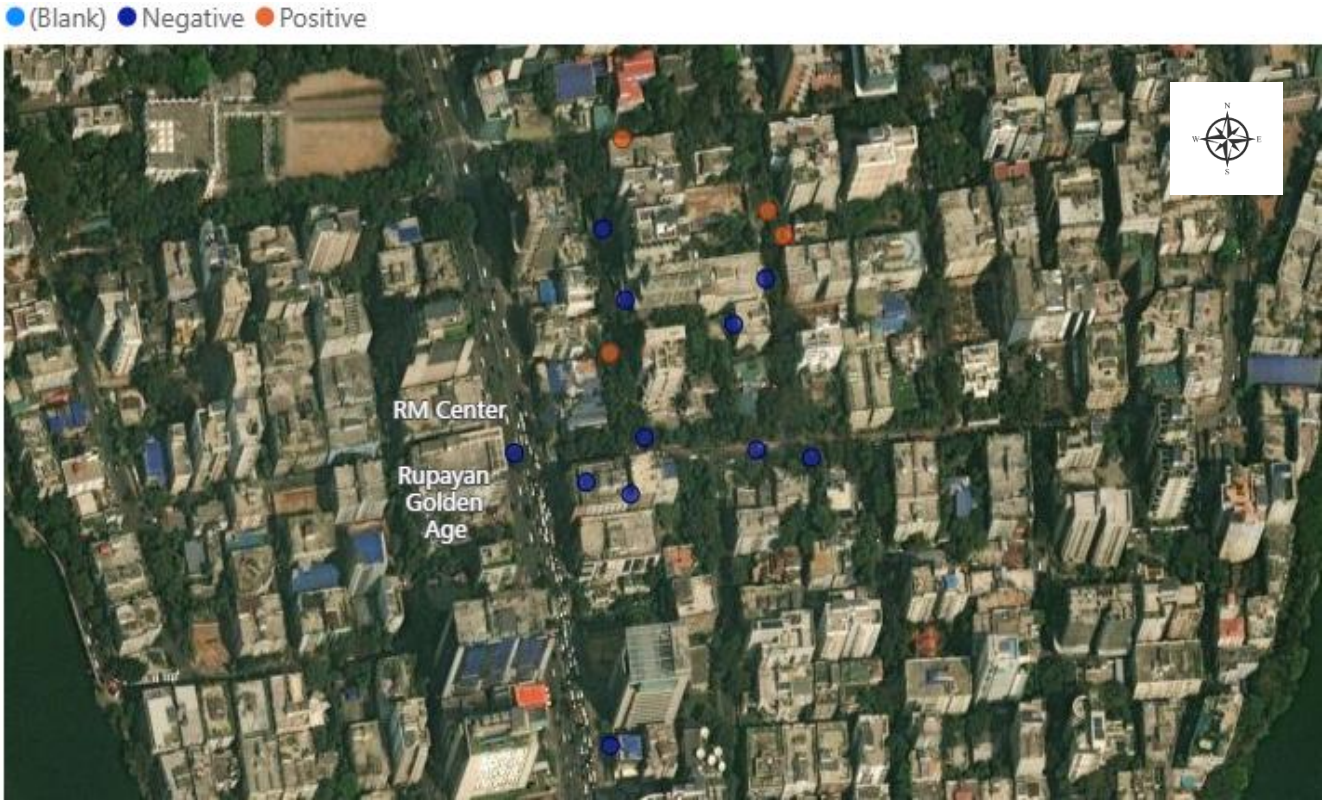
	23.7645405 90.3594991	37	0	Hole of water meter
	total	408	56	
Grand Total		1250	82	



Map 1: Positive and Negative House of Uttara 4 No. Sector at Weeks 123



Map 2: Positive and Negative House of Mirpur 2 at Weeks 123



Map 3: Positive and Negative House of Gulshan 1 at Weeks 123



Map 4: Positive and Negative House of Mirpur 1 at Weeks 123



Map 5: Positive and Negative House of Mohammadpur at Weeks 123

Table 5: Positive House, Wet Container, BI, CI and HI in Zones (1-5) in Week 123 (Oct 9-13, 2026)

Zone	Total House	Positive House	Total Wet container	Positive Wet Container	BI	CI	HI
1	15	2	34	3	20.00	8.82	13.33
2	15	2	27	2	13.33	7.41	13.33
3	15	4	43	18	120.00	41.86	26.67
4	15	3	31	3	20.00	9.68	20.00
5	15	6	38	6	40.00	15.79	40.00

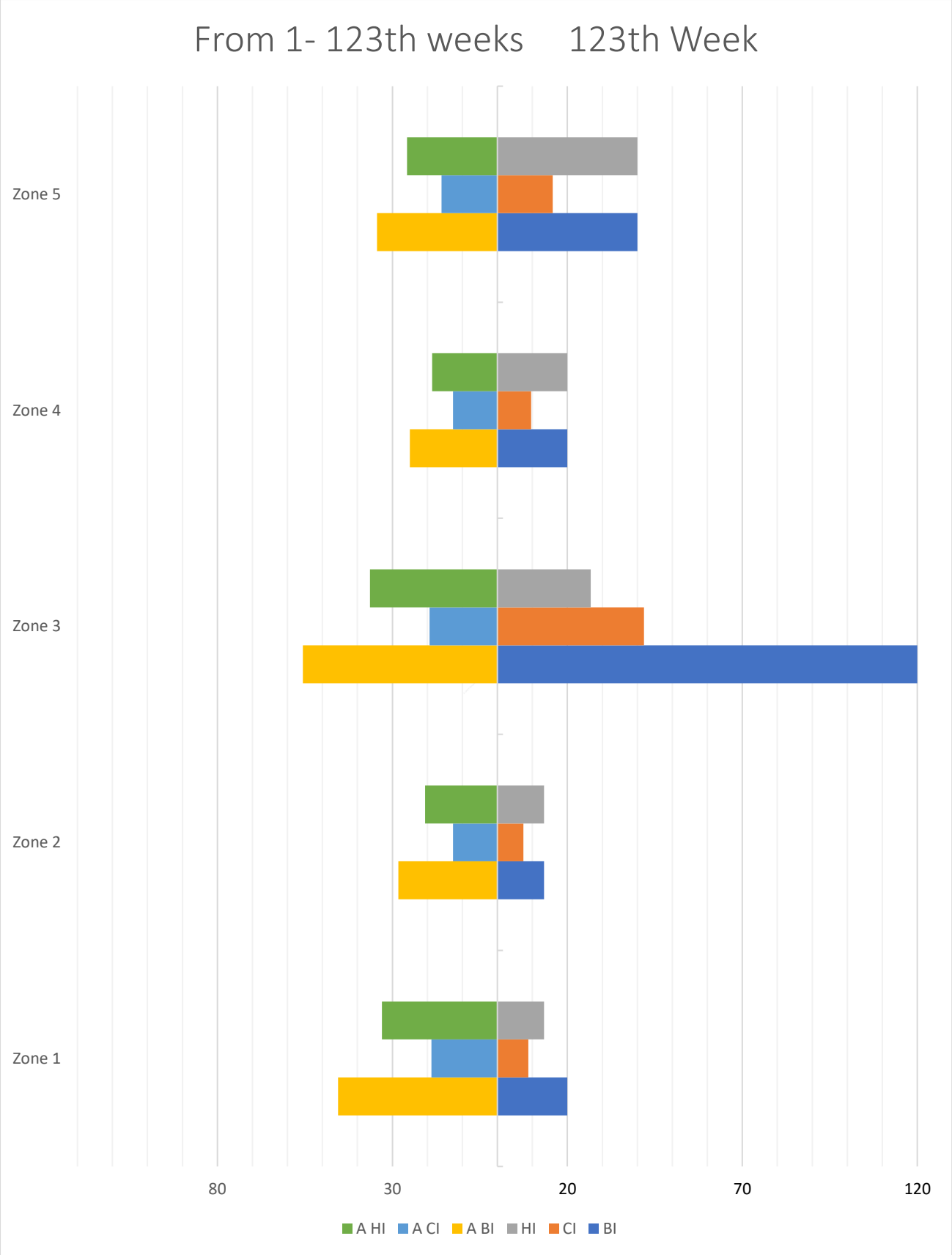


Fig. 6: BI, CI and HI in Different Zones (1-5) of Dhaka north City Corporation

***NB: "A" stands for Average from 1st week.**

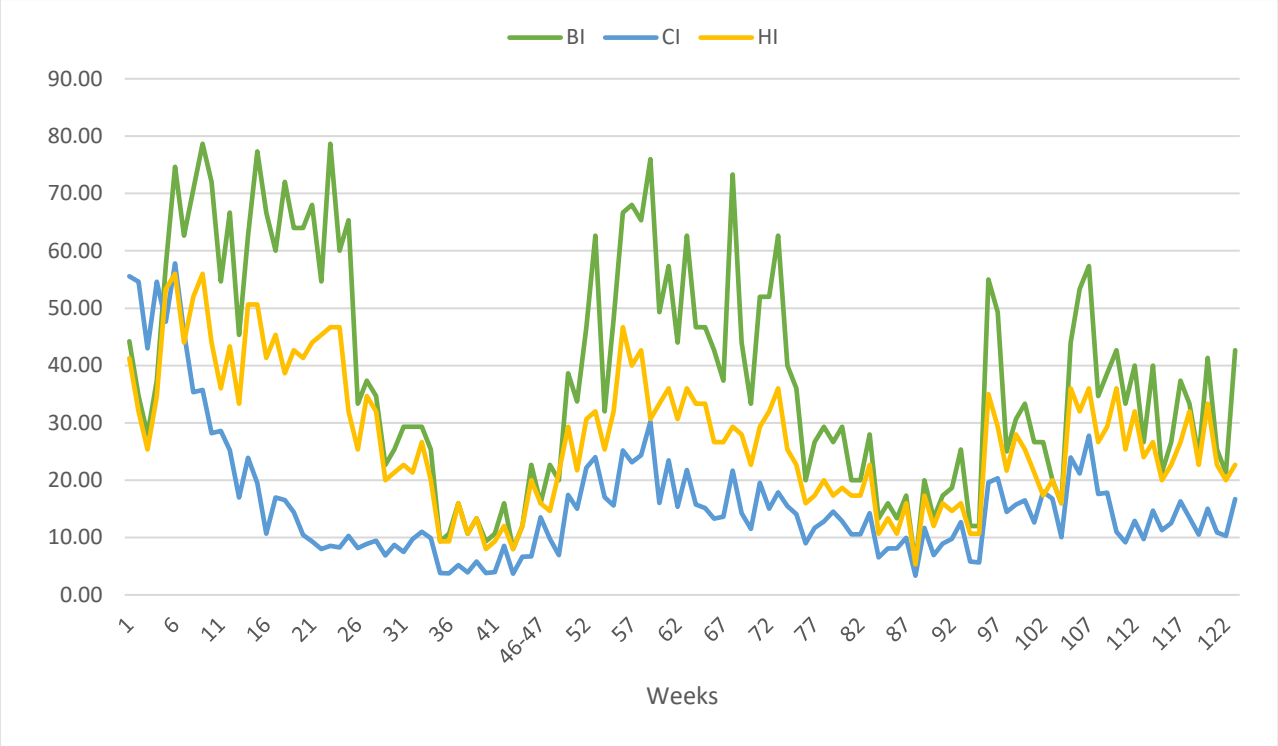


Fig 7: Mosquitoes population fluctuation (BI, CI, HI) from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

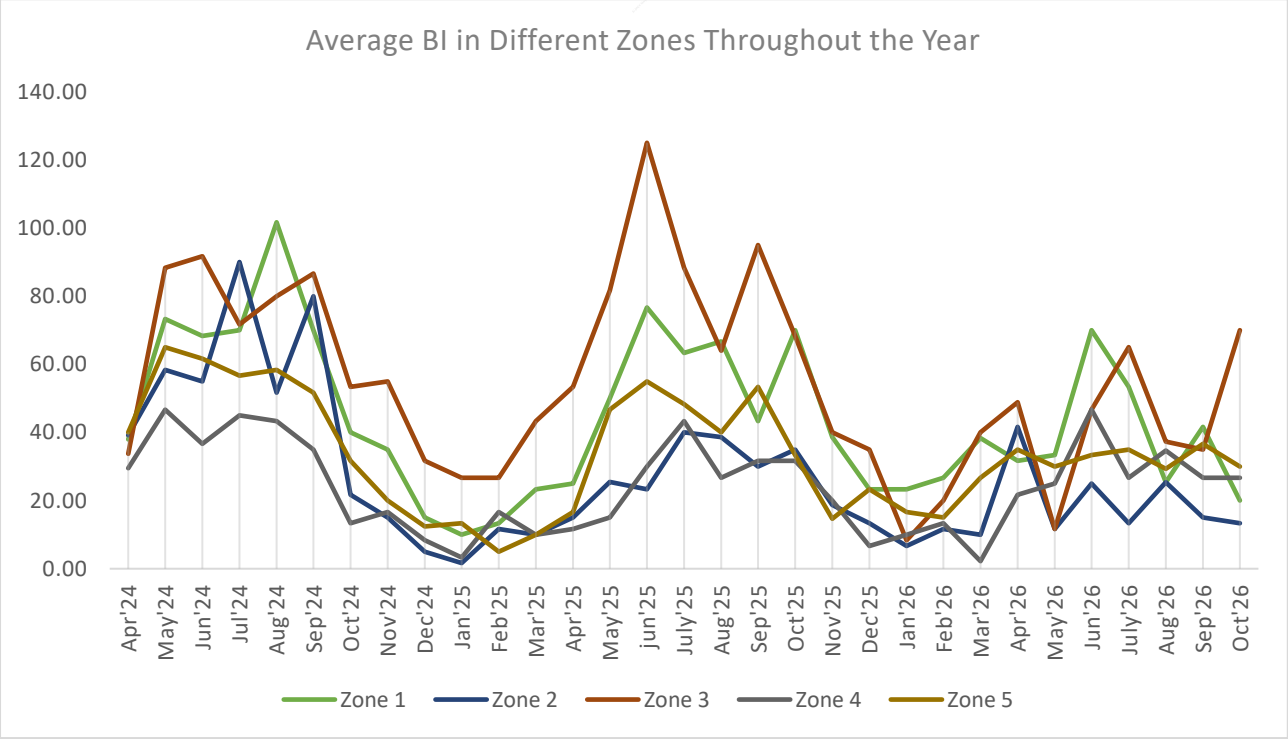


Fig. 8: Breteau Index (BI) in Different from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

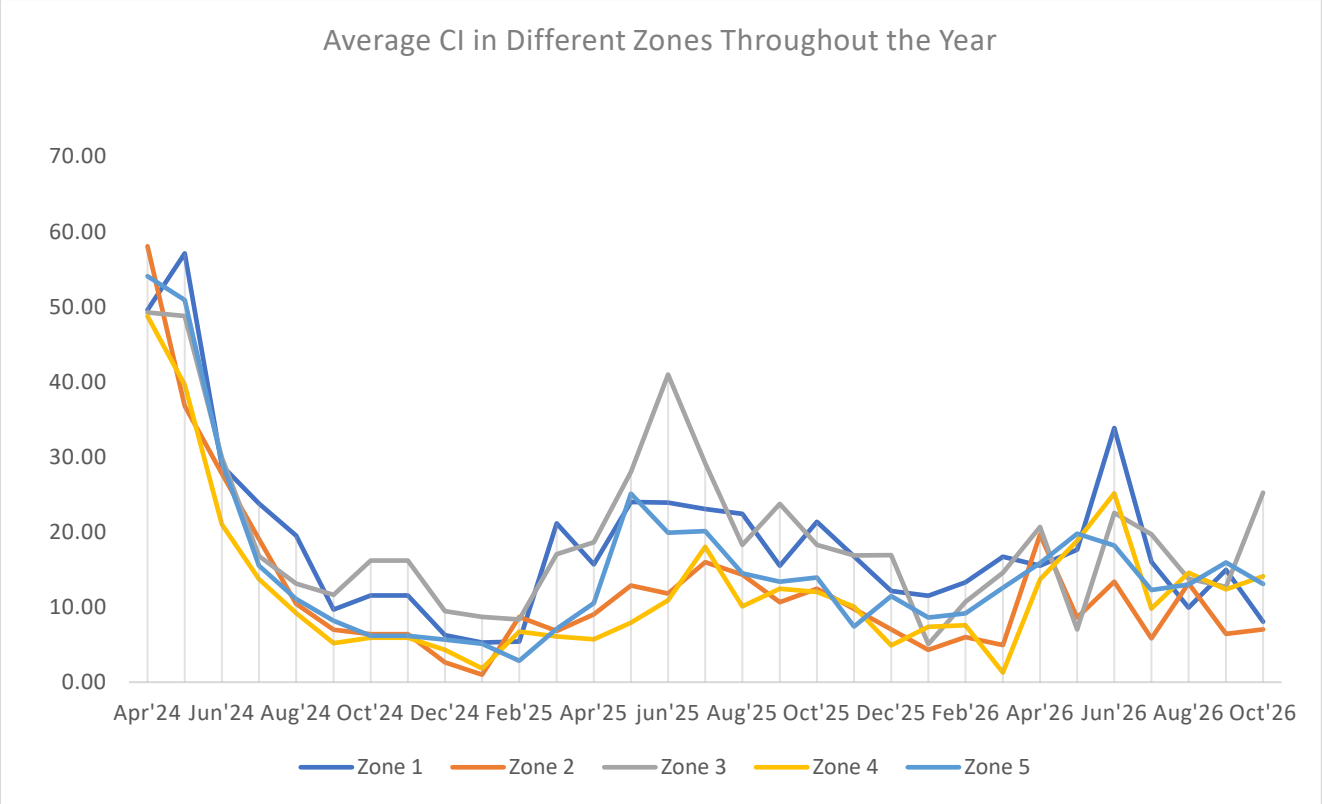


Fig. 9: Container Index (CI) in Different Zones from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

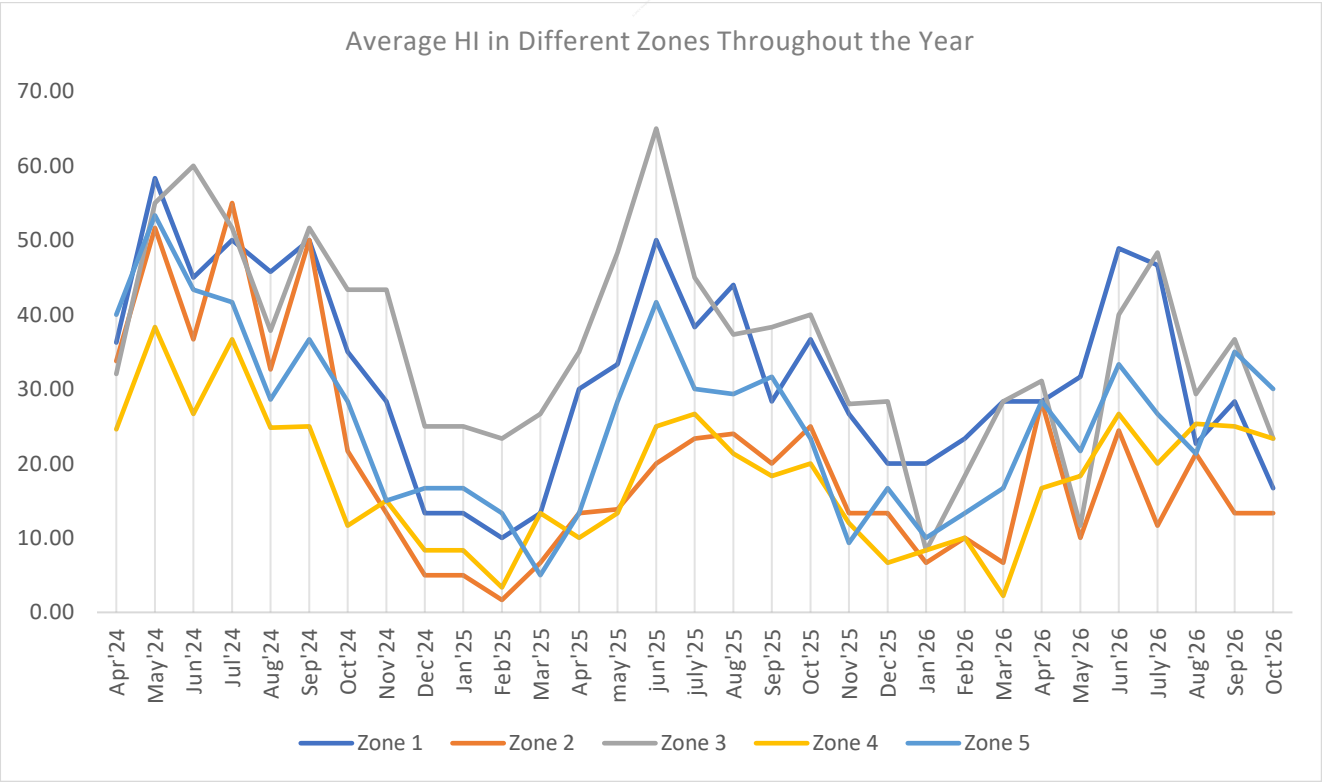


Fig. 10: House Index (HI) in Different Zones from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

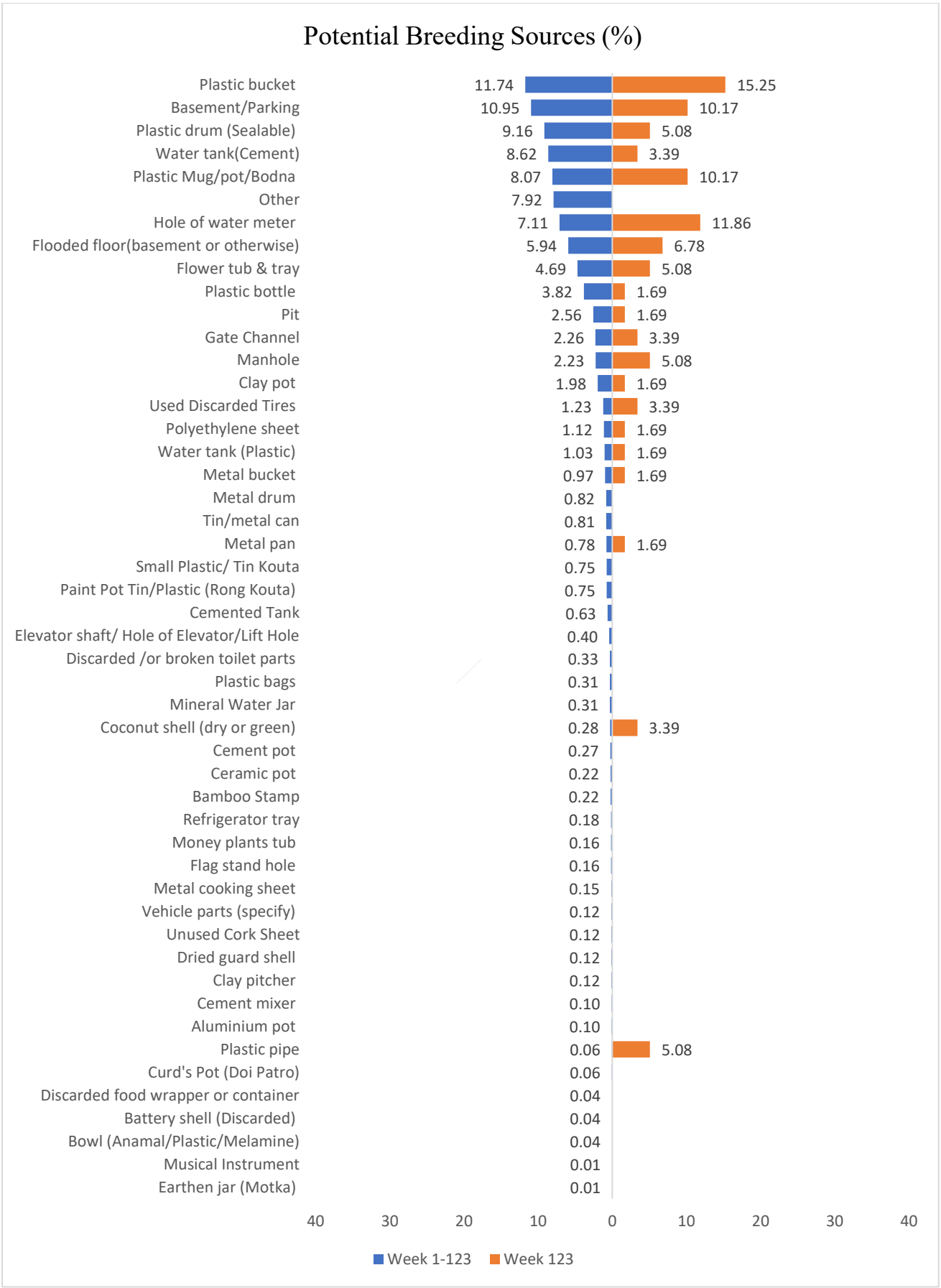


Fig. 11: Container Frequency for *Aedes* mosquitoes in Zones (1-5)

Table 6: Container Productivity of *Aedes* mosquito in DNCC Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

Container	Frequency	Total Estimated Aedes Larvae	Percentage of contribution (%)	Relative productivity index	CCPI
Plastic drum (Sealable)	220	41693	23.08	1.00	1.00
Water tank (Cement)	134	21855	12.10	0.52	0.56
Flooded floor (basement or otherwise)	133	17048	9.44	0.41	0.49
Basement/Parking	197	14422	7.98	0.35	0.57
Plastic bucket	211	16875	9.34	0.40	0.63
Plastic bottle	70	8834	4.89	0.21	0.25
Pit	47	7332	4.06	0.18	0.19
Hole of water meter	86	6315	3.50	0.15	0.25
Plastic Mug/pot/Bodna	156	5776	3.20	0.14	0.37
Flower tub & tray	100	4197	2.32	0.10	0.24
Plastic pipe	81	3691	2.04	0.09	0.20
Clay pot	84	3073	1.70	0.07	0.20
Used Discarded Tires	32	2802	1.55	0.07	0.10
Money plants tub	5	2675	1.48	0.06	0.05
Cemented Tank	15	2248	1.24	0.05	0.06
Other	75	2279	1.26	0.05	0.17
Water tank (Plastic)	18	1987	1.10	0.05	0.06
Manhole	44	1944	1.08	0.05	0.11
Elevator shaft/ Hole of Elevator/Lift Hole	3	1294	0.72	0.03	0.02
Polyethylene sheet	33	1344	0.74	0.03	0.08
Tin/metal can	17	1468	0.81	0.04	0.05
Metal bucket	26	1373	0.76	0.03	0.07
Gate Channel	40	1252	0.69	0.03	0.09
Paint Pot Tin/Plastic (Rong Kouta)	24	1078	0.60	0.03	0.06
Cement pot	14	1067	0.59	0.03	0.04
Muddy land	3	754	0.42	0.02	0.02
Metal drum	17	660	0.37	0.02	0.04
Ceramic pot	10	504	0.28	0.01	0.03
Small Plastic/ Tin Kouta	15	503	0.28	0.01	0.03
Drain	7	532	0.29	0.01	0.02
Metal pan	10	484	0.27	0.01	0.03
Discarded /or broken toilet parts	10	325	0.18	0.01	0.02
Dried guard shell	4	307	0.17	0.01	0.01
Bamboo Stamp	10	315	0.17	0.01	0.02
Unused Cork Sheet	5	283	0.16	0.01	0.01
Curd's Pot (Doi Patro)	3	224	0.12	0.01	0.01
Tree Hole	5	183	0.10	0.00	0.01
Refrigerator tray	5	153	0.08	0.00	0.01
Mineral Water Jar	3	144	0.08	0.00	0.01
Bowl (Anamal/Plastic/Melamine)	2	142	0.08	0.00	0.01
Plastic outgoing pipe	4	136	0.08	0.00	0.01
Flag stand hole	5	139	0.08	0.00	0.01
Vehicle parts (specify)	3	100	0.06	0.00	0.01
Plastic bags	5	97	0.05	0.00	0.01
Clay pitcher	3	90	0.05	0.00	0.01
Coconut shell (dry or green)	8	190	0.11	0.00	0.02
Aluminium pot	3	67	0.04	0.00	0.01
Mineral Water Jar	3	63	0.03	0.00	0.01
Metal cooking sheet	4	303	0.17	0.01	0.01

Table 7: Container Productivity of *Aedes* mosquito in DNCC in Week 123 (Oct 9-13, 2026)

Container	Frequency	Total Aedes Larvae	Percentage of contribution (%)	Relative productivity index	CCPI
Basement/Parking	1	457	34.31	1.00	0.70
Plastic bucket	4	291	21.85	0.64	0.78
Water tank (Cement)	1	247	18.54	0.54	0.42
Hole of water meter	3	149	11.19	0.33	0.50
Plastic Mug/pot/Bodna	2	67	5.03	0.15	0.29
Coconut shell (dry or green)	1	56	4.20	0.12	0.17
Plastic bottle	1	25	1.88	0.05	0.13
Clay pot	1	12	0.90	0.03	0.12
Flooded floor (basement or otherwise)	1	12	0.90	0.03	0.12
Polyethylene sheet	1	11	0.83	0.02	0.11
Manhole	1	5	0.38	0.01	0.11

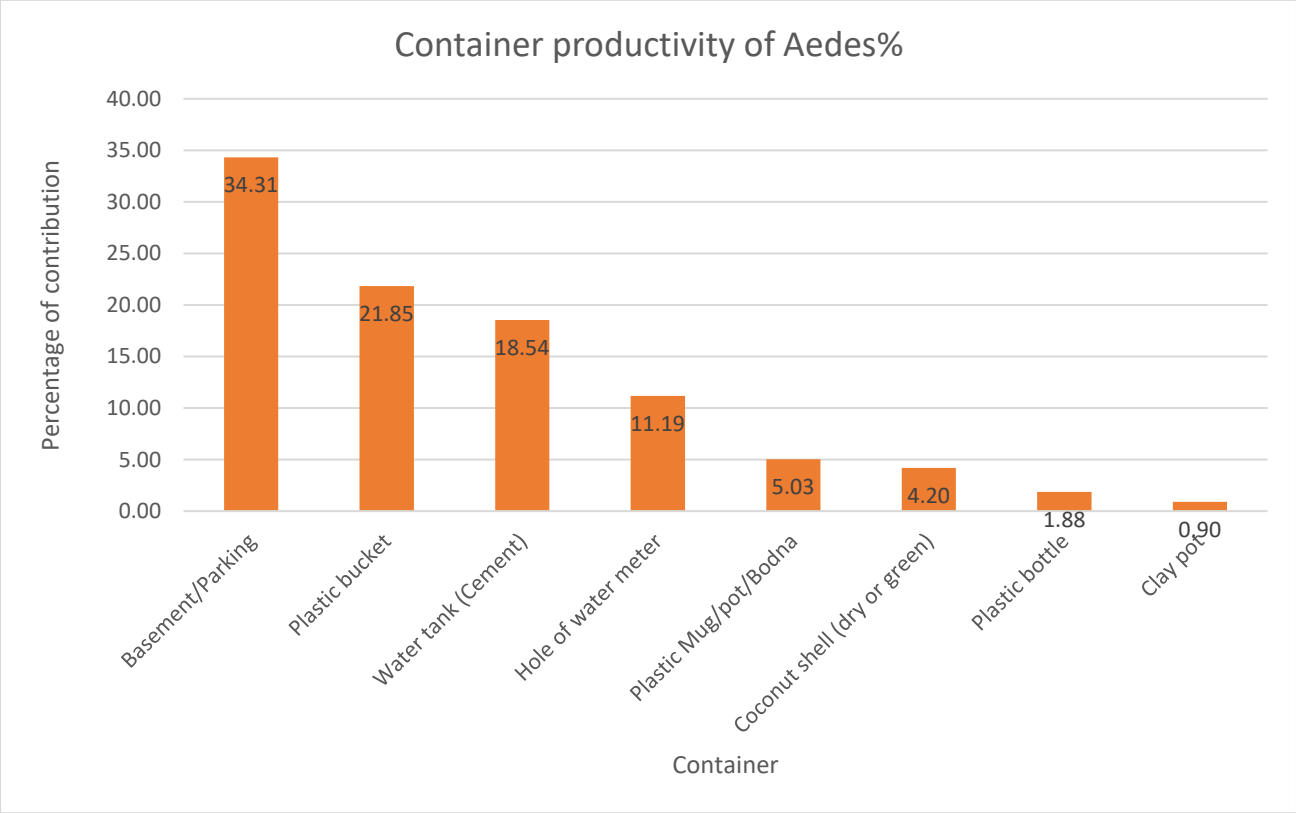
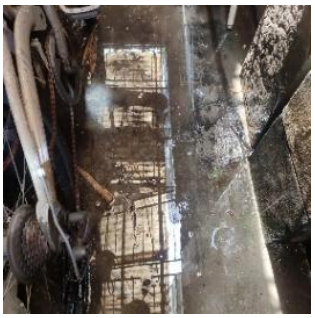


Fig 12: Major container types contributing to Aedes larval production in DNCC in Week 123 (Oct 9-13, 2026)

Table 8: Comparison of the Five highest-CCPI Aedes breeding containers across the overall surveillance period (Weeks 1–123) and the current surveillance Week (Week 123)

Week 1-123	Week 123
 Plastic drum (CCPI=1.00)	 Plastic drum (CCPI=0.78)
 Plastic bucket (CCPI=0.63)	 Basement/Parking (CCPI=0.70)
 Basement/Parking (CCPI=0.57)	 Hole of water meter (CCPI=0.50)
 Water tank(cement) (CCPI=0.56)	 Water tank(cement) (CCPI=0.42)



Flooded floor (CCPI=0.49)



Plastic Mug/pot/Bodna (CCPI=0.29)

Table 9: Container Frequency & Probable potential Wet Container in zones (1-5) from Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

Sources	+House	-WC	+WC	Total WC	% WC	% PWC
Plastic bucket	270	287	496	783	11.74	7.44
Basement/Parking	249	67	663	730	10.95	9.94
Plastic drum (Sealable)	280	83	528	611	9.16	7.92
Water tank(Cement)	182	257	318	575	8.62	4.77
Plastic Mug/pot/Bodna	222	95	443	538	8.07	6.64
Other	252	138	390	528	7.92	5.85
Hole of water meter	94	31	443	474	7.11	6.64
Flooded floor(basement or otherwise)	152	153	243	396	5.94	3.64
Flower tub & tray	112	32	281	313	4.69	4.21
Plastic bottle	100	64	191	255	3.82	2.86
Pit	81	24	147	171	2.56	2.20
Gate Channel	47	34	117	151	2.26	1.75
Manhole	67	44	105	149	2.23	1.57
Clay pot	98	11	121	132	1.98	1.81
Used Discarded Tires	41	19	63	82	1.23	0.94
Polyethylene sheet	44	3	72	75	1.12	1.08
Water tank (Plastic)	22	28	41	69	1.03	0.61
Metal bucket	32	6	59	65	0.97	0.88
Metal drum	21	8	47	55	0.82	0.70
Tin/metal can	32	0	54	54	0.81	0.81
Metal pan	19	3	49	52	0.78	0.73
Paint Pot Tin/Plastic (Rong Kouta)	32	5	45	50	0.75	0.67
Small Plastic/ Tin Kouta	25	9	41	50	0.75	0.61
Cemented Tank	22	13	29	42	0.63	0.43
Elevator shaft/ Hole of Elevator/Lift Hole	8	4	23	27	0.40	0.34
Discarded /or broken toilet parts	13	3	19	22	0.33	0.28
Mineral Water Jar	7	4	17	21	0.31	0.25
Plastic bags	8	2	19	21	0.31	0.28
Coconut shell (dry or green)	7	0	19	19	0.28	0.28
Cement pot	11	3	15	18	0.27	0.22
Bamboo Stamp	11	0	15	15	0.22	0.22
Ceramic pot	13	0	15	15	0.22	0.22
Refrigerator tray	9	0	12	12	0.18	0.18

Flag stand hole	7	1	10	11	0.16	0.15
Money plants tub	8	0	11	11	0.16	0.16
Metal cooking sheet	4	0	10	10	0.15	0.15
Clay pitcher	6	1	7	8	0.12	0.10
Dried guard shell	5	0	8	8	0.12	0.12
Unused Cork Sheet	6	1	7	8	0.12	0.10
Vehicle parts (specify)	5	1	7	8	0.12	0.10
Aluminium pot	4	0	7	7	0.10	0.10
Cement mixer	2	0	7	7	0.10	0.10
Curd's Pot (Doi Patro)	3	0	4	4	0.06	0.06
Plastic pipe	0	0	4	4	0.06	0.06
Bowl (Anamal/Plastic/Melamine)	3	0	3	3	0.04	0.04
Battery shell (Discarded)	0	0	3	3	0.04	0.04
Discarded food wrapper or container	1	1	2	3	0.04	0.03
Earthen jar (Motka)	1	0	1	1	0.01	0.01
Musical Instrument	1	0	1	1	0.01	0.01

Table 10: Percentage of breeding sources in different zone Week 1 to Week 123 (May 2, 2024 – Oct 13, 2026)

Containers	Percentage of Breeding Sources				
	Zone 01	Zone 02	Zone 03	Zone 04	Zone 05
Plastic bucket	2.13	2.08	2.13	2.94	2.46
Basement/Parking	2.73	1.65	2.97	1.08	2.52
Plastic drum (Sealable)	1.26	2.28	1.48	2.19	1.95
Water tank (Cement)	1.09	1.47	1.17	2.47	2.41
Plastic Mug/pot/Bodna	1.60	1.32	1.50	2.16	1.48
Other	2.49	1.39	2.20	0.70	1.12
Hole of water meter	0.81	1.26	0.48	2.16	2.40
Flooded floor (basement or otherwise)	1.51	1.29	1.03	0.75	1.35
Flower tub & tray	1.20	0.69	1.59	0.84	0.37
Plastic bottle	0.57	0.85	0.55	0.99	0.85
Pit	0.66	0.36	0.87	0.31	0.36
Gate Channel	0.91	0.22	0.57	0.06	0.49
Manhole	0.75	0.22	0.82	0.21	0.22
Clay pot	0.27	0.36	0.54	0.36	0.45
Used Discarded Tires	0.39	0.34	0.19	0.16	0.13
Polyethylene sheet	0.31	0.27	0.22	0.24	0.07
Water tank (Plastic)	0.00	0.61	0.15	0.13	0.13
Metal bucket	0.16	0.12	0.27	0.24	0.18
Metal drum	0.19	0.13	0.16	0.22	0.10
Tin/metal can	0.24	0.21	0.16	0.15	0.04
Metal pan	0.18	0.15	0.22	0.09	0.13
Paint Pot Tin/Plastic (Rong Kouta)	0.18	0.07	0.21	0.16	0.12
Small Plastic/ Tin Kouta	0.19	0.13	0.22	0.09	0.10
Cemented Tank	0.12	0.09	0.15	0.18	0.09
Elevator shaft/ Hole of Elevator/Lift Hole	0.18	0.10	0.06	0.00	0.06
Discarded /or broken toilet parts	0.04	0.12	0.04	0.01	0.10
Mineral Water Jar	0.04	0.01	0.04	0.13	0.07
Plastic bags	0.03	0.01	0.06	0.13	0.07
Cement pot	0.04	0.06	0.07	0.03	0.07
Coconut shell (dry or green)	0.04	0.01	0.09	0.01	0.10
Bamboo Stamp	0.06	0.07	0.03	0.06	0.00

Ceramic pot	0.06	0.01	0.04	0.01	0.09
Refrigerator tray	0.06	0.03	0.04	0.03	0.01
Flag stand hole	0.07	0.01	0.04	0.00	0.03
Money plants tub	0.04	0.03	0.04	0.00	0.04
Metal cooking sheet	0.00	0.01	0.04	0.03	0.06
Clay pitcher	0.04	0.00	0.03	0.03	0.01
Dried guard shell	0.03	0.01	0.06	0.00	0.01
Unused Cork Sheet	0.00	0.01	0.03	0.03	0.04
Vehicle parts (specify)	0.01	0.00	0.04	0.04	0.01
Aluminium pot	0.01	0.03	0.00	0.04	0.01
Cement mixer	0.00	0.03	0.03	0.01	0.03
Curd's Pot (Doi Patro)	0.01	0.01	0.03	0.00	0.00
Bowl (Anamal/Plastic/Melamine)	0.00	0.03	0.00	0.01	0.01
Battery shell (Discarded)	0.01	0.01	0.00	0.01	0.00
Discarded food wrapper or container	0.01	0.00	0.00	0.01	0.01
Earthen jar (Motka)	0.00	0.00	0.03	0.00	0.01
Musical Instrument	0.01	0.00	0.00	0.00	0.00
Plastic pipe	0.01	0.00	0.00	0.00	0.00

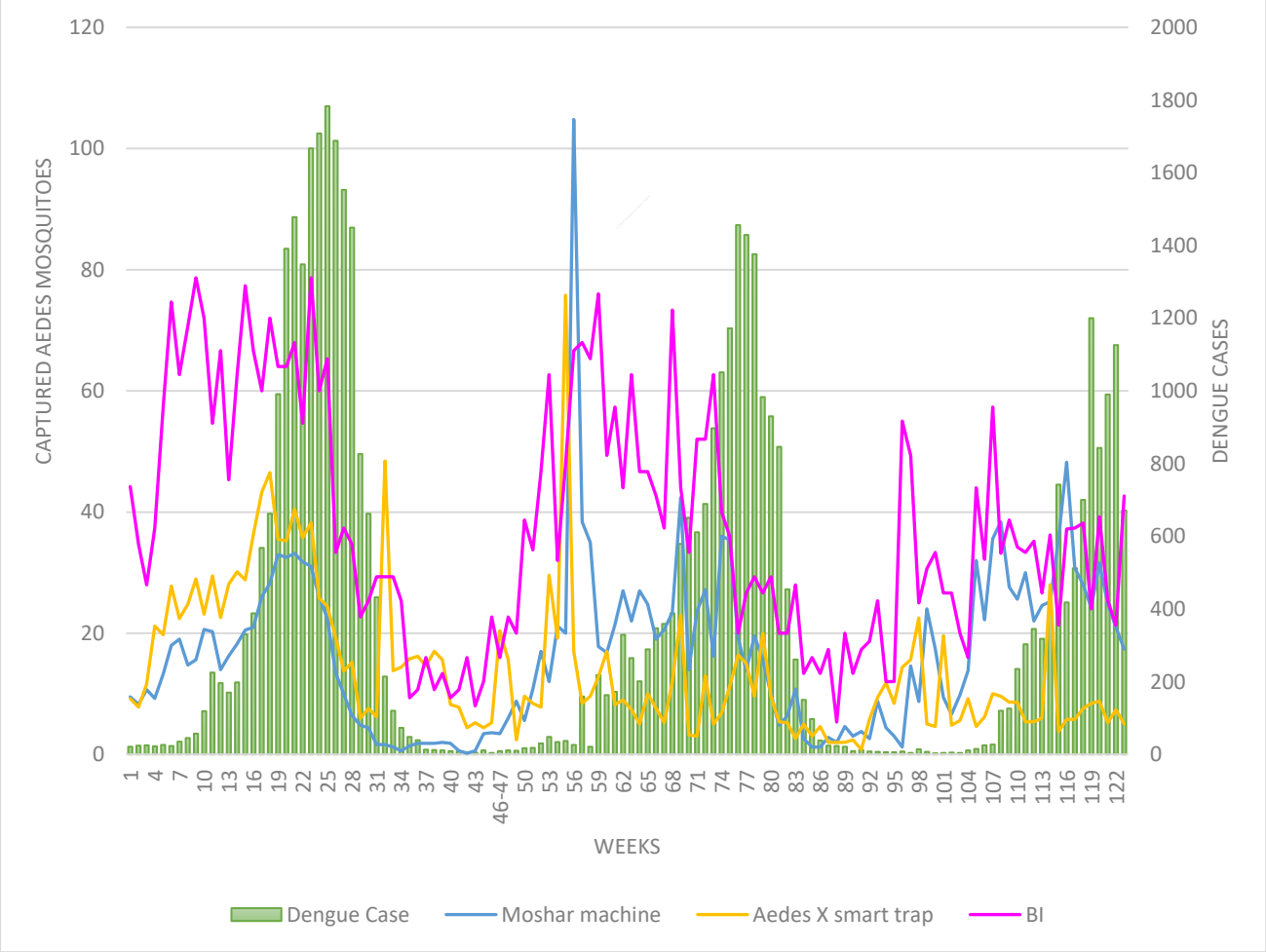


Fig. 13: Correlation between Dengue Cases and *Aedes* Mosquitoes Captured by per Moshar Machine CO_2 traps, Aedes X smart traps

NB: DNCC dengue cases only

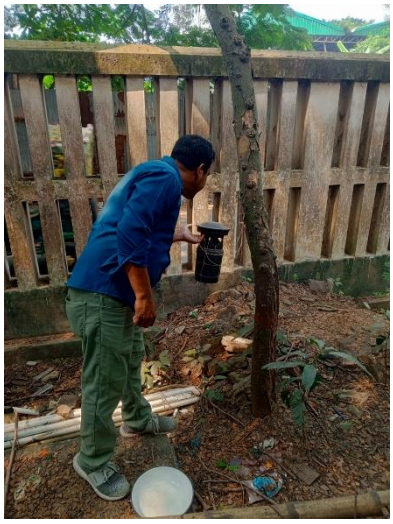
Photographs of Mosquitoes Surveillance











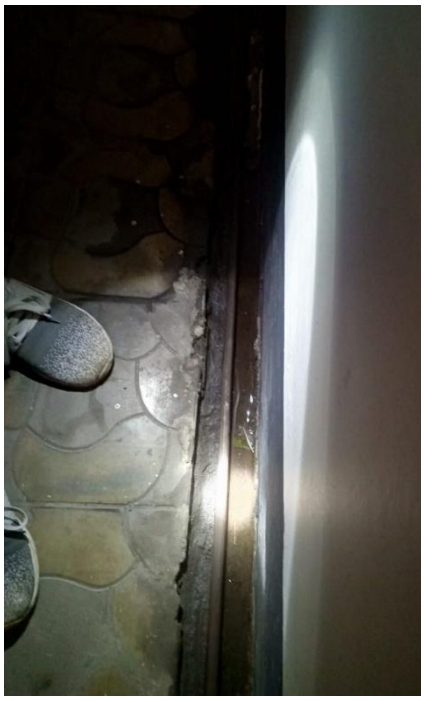






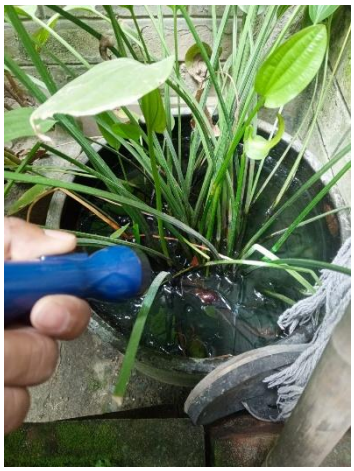


Samples Collection from Field









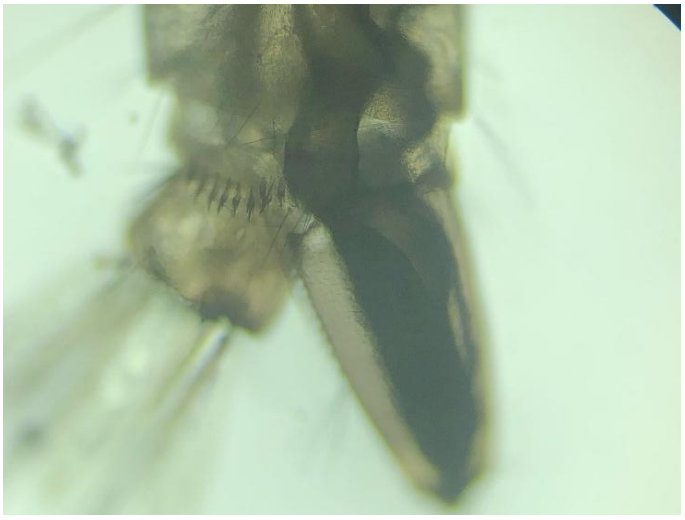


Samples Processing and Identification















Comments:
The mosquito density is increased and the dengue cases decreasing rapidly. The Breteau Index (BI) is increased in week 123. It is time for taking precaution and preparation for higher mosquito control. Moreover, this highlights the importance of continued surveillance to uncover hidden risks and to guide timely interventions.

For Aedes Mosquito Control

 Aedes mosquito density varies across locations, with notable breeding found in plastic drums, buckets, flooded basements, and water tanks, as seen in larval and trap data.

 Continuous surveillance is essential to monitor trends and target control interventions effectively.

 Frequent cleaning and management of water-holding containers (e.g., pots, bottles, plastic drums, and construction site debris) are vital.

 Permanent breeding habitats should be managed with larvicides or Insect Growth Regulators (IGRs) for sustained control.

 Construction sites must be regularly inspected and treated due to their high potential for breeding.

For Other Mosquito Control

 Drainage systems should be kept flowing to prevent stagnant water accumulation.

 Canals, ponds, lakes, and muddy lowlands should be cleaned of waste, weeds, and organic matter.

 Septic tanks must be covered and regularly maintained.

 Emphasis should be placed on slum areas and waterlogged urban zones, which are significant breeding grounds for Culex mosquitoes.

Public Awareness and Community Involvement

 Launch targeted awareness campaigns, especially in vulnerable and high-risk areas.

 Encourage communities to eliminate standing water regularly.

 Promote participatory surveillance and control efforts, including homeowner engagement in larval source reduction.

Copy sent for your information and further action (FYI/FA):

1. CHO, Health Department, Dhaka North City Corporation
2. Secretary, Dhaka North City Corporation
3. PS to Administrator, Dhaka North City Corporation
4. Staff Officer of CEO, Dhaka North City Corporation
5. Office Copy

(Robin Hossain)
Entomologist
IRES
JU-DNCC Collaboration Center

(Prof. Dr. Kabirul Bashar)
Focal person
IRES
JU-DNCC Collaboration Center