Weekly Report on

JU-DNCC Mosquitoes Surveillance Program

Week 122 (October 2-6, 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

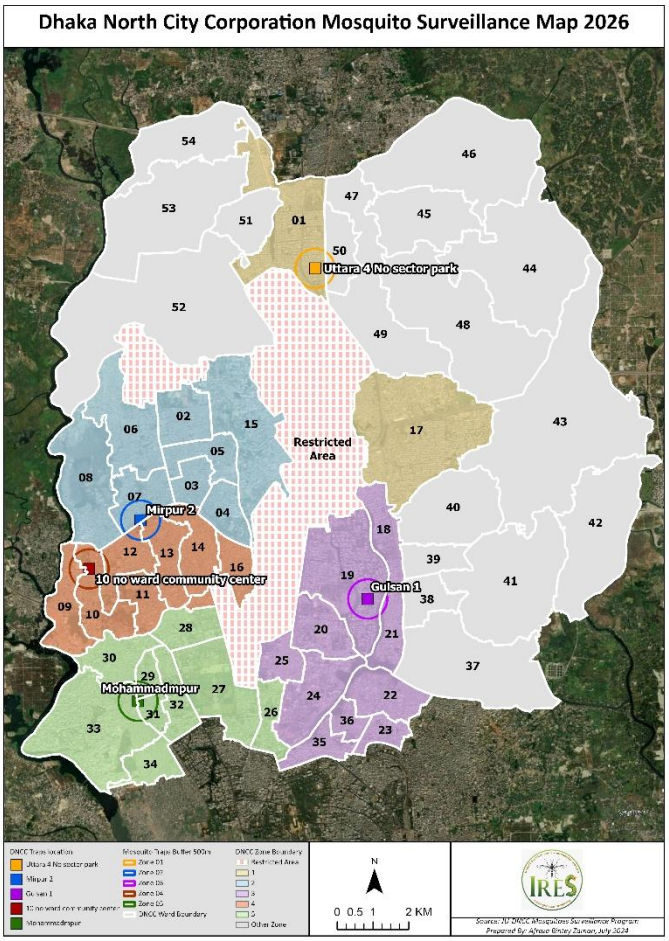
1. Light trap

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 122 (Oct 2-6, 2026)

Zone	*Ae. aegypti*	*Ae. albopictus*	*Cx. quinquefasciatus*	*Cx. tritaeniorhynchus*	*Ar. subalbatus*	*Mn. annulifera*	*Mn. uniformis*	*An. vagus*	*An. subpictus*	*An. annularis*	*Total*	%
1	8	3	1675	586	26	0	0	0	0	0	2298	27.57
2	8	3	165	42	16	0	0	0	1	0	235	2.82
3	16	3	565	242	75	0	3	0	0	0	904	10.85
4	30	9	657	631	296	1	11	15	13	1	1664	19.97
5	23	2	1634	1571	3	0	0	0	0	0	3233	38.79
Total	85	20	4696	3072	416	1	14	15	14	1	8334	100.00
%	1.02	0.24	56.35	36.86	4.99	0.01	0.17	0.18	0.17	0.01	100.00	

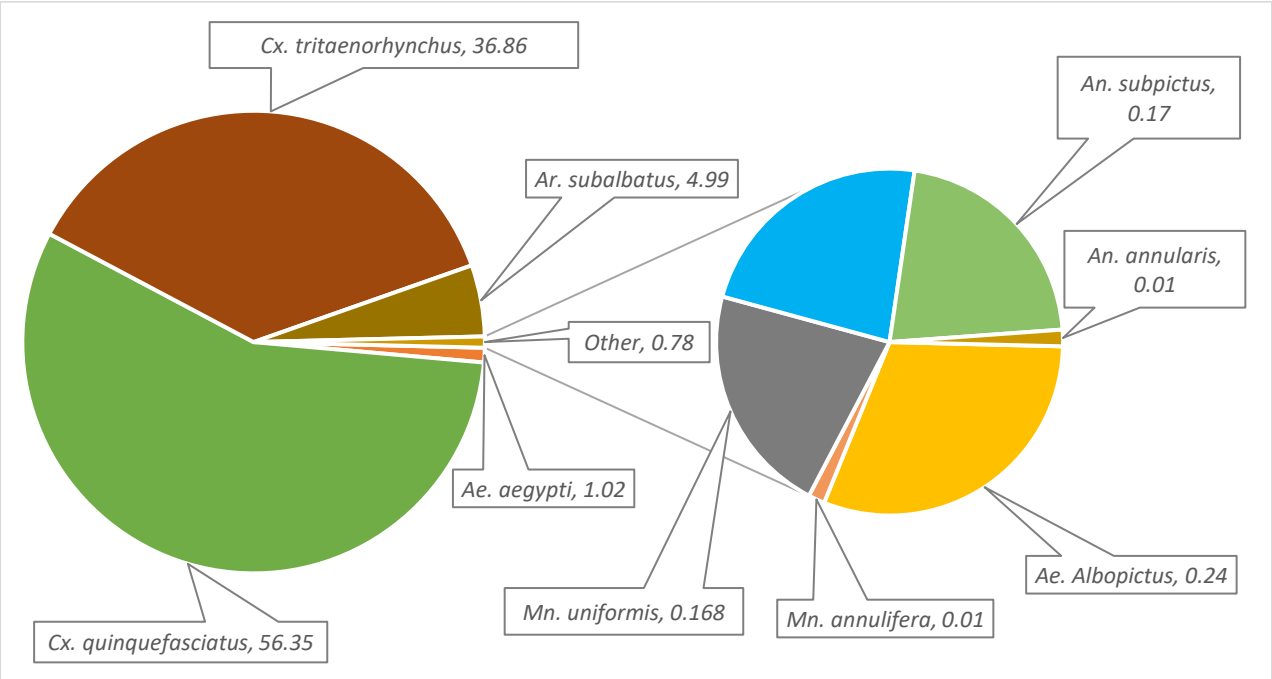


Fig. 1: Percentage of Adult Mosquitoes Collected by Moshar Machine (CO_2) traps in Week 122 (Oct 2-6, 2026)

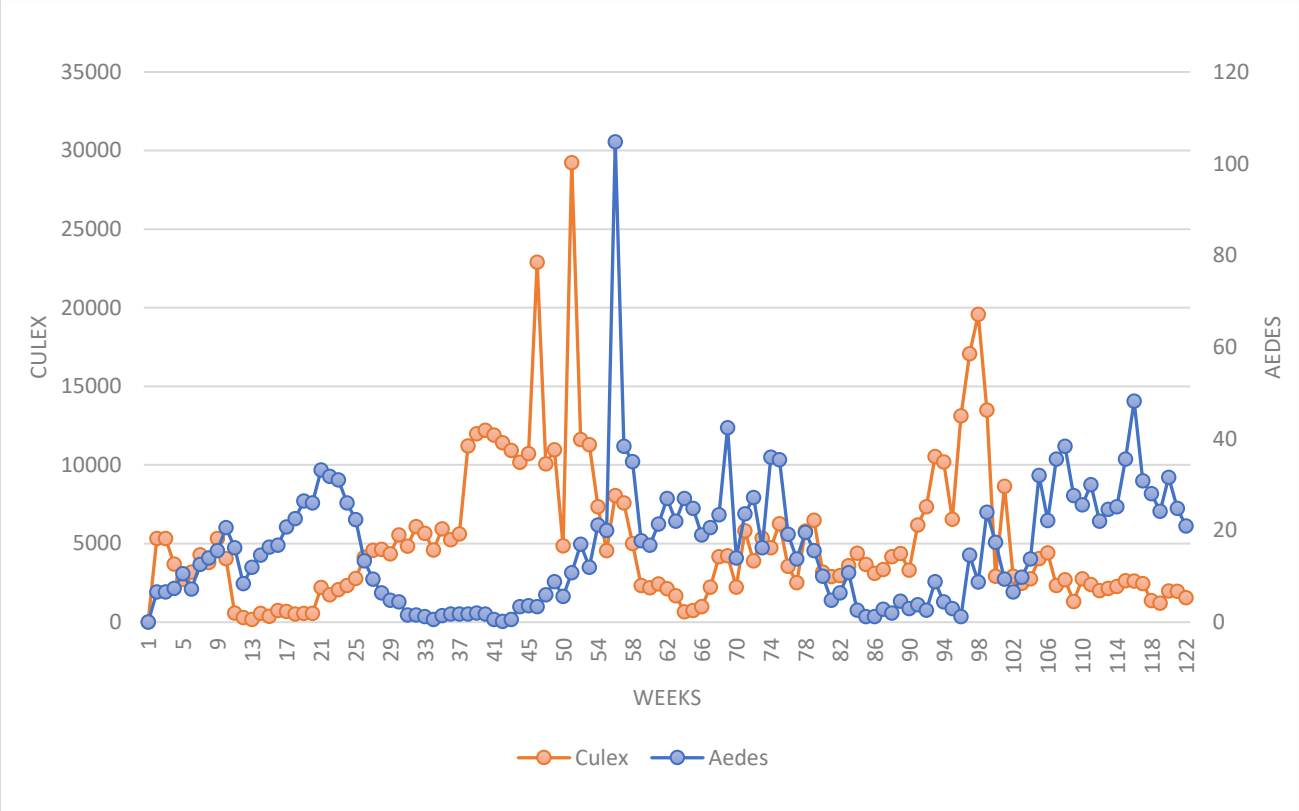


Fig 2: Average number of mosquitoes per Moshar Machine (CO_2) traps from Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

Table 2. Collected Mosquito Larvae from *Aedes* X smart Traps in Week 122 (Oct 2-6, 2026)

Zone	N	*Ae. aegypti*	*Ae. albopictus*
1	22	0	22
2	6	0	6
3	7	0	7
4	0	0	0
5	2	2	0
Total	37	2	35
(%)	100	5.41	94.59





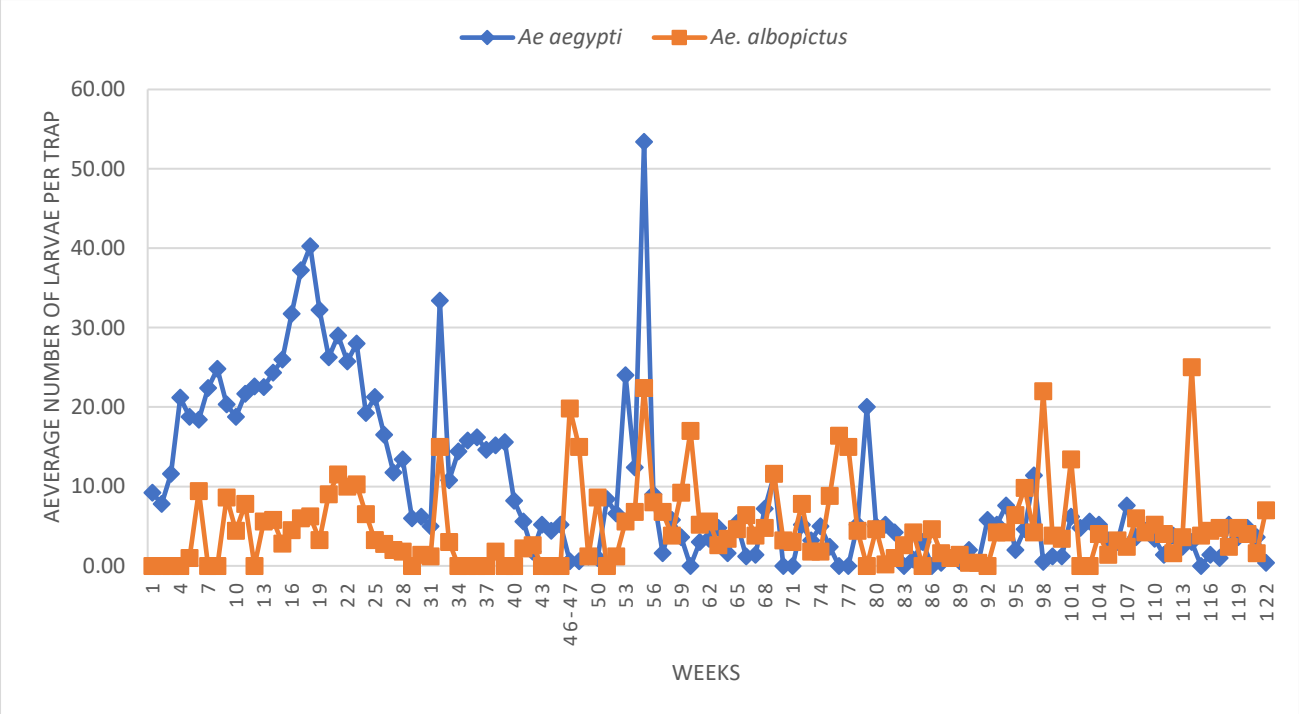


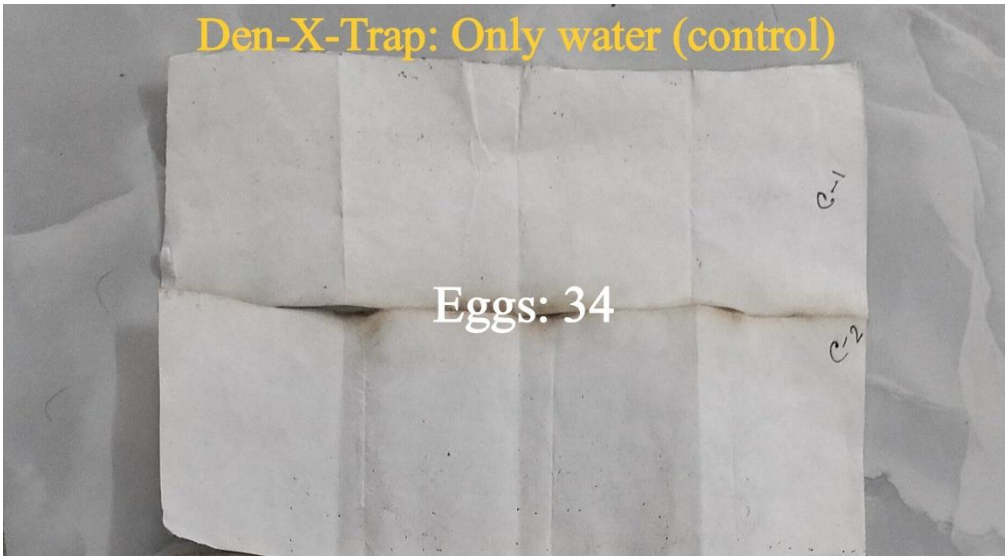
Fig 3: Average Number of *Aedes* Larvae per *Aedes* X Smart Trap in Zones 1-5 from Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

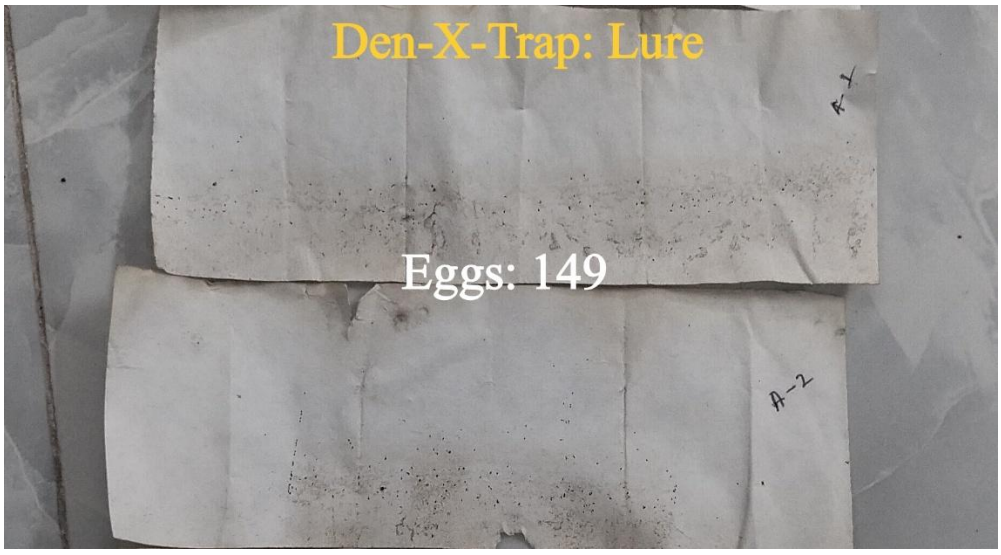
Table 3. Collected *Aedes* Mosquitoes Eggs and Larvae from Den-X-Trap in Week 122 (Oct 2-6, 2026)

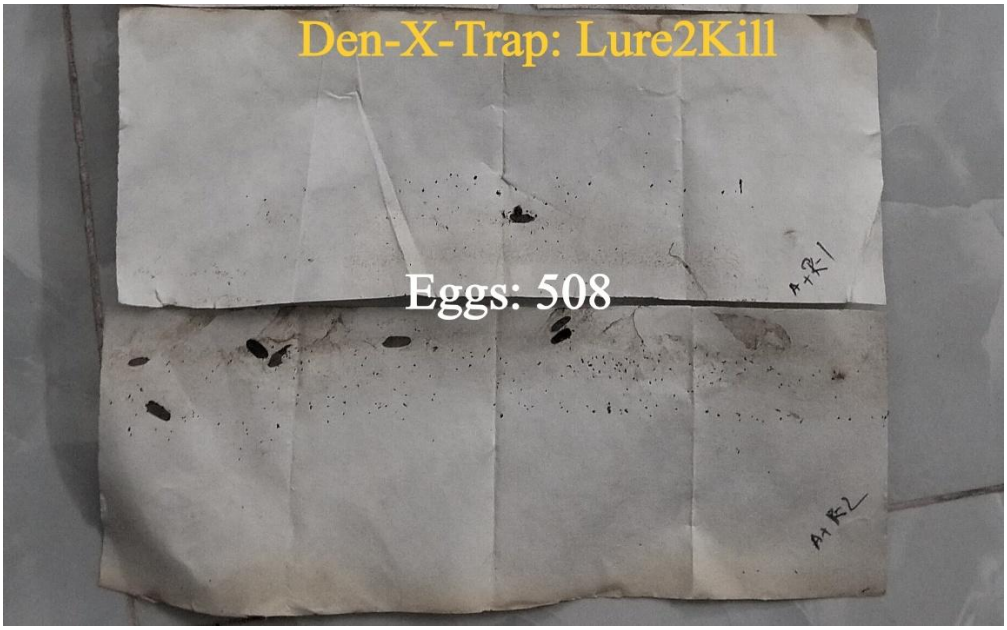
Zone	Only water (Control)		Lure		Lure2Kill	
	Eggs	*Aedes* Larvae	Eggs	*Aedes* Larvae	Eggs	*Aedes* Larvae
1	-	-	-	5	-	-
2	-	-	0	0	-	-
3	-	-	145	6	-	-
4	68	0	240	0	490	0
5	34	0	149	13	508	0
Sub-total	**102**	**0**	**534**	**24**	**998**	**0**
Average	**51**	**0**	**133.5**	**4.8**	**499**	**0**



Aedes Mosquitoes Eggs from Den-X-Trap







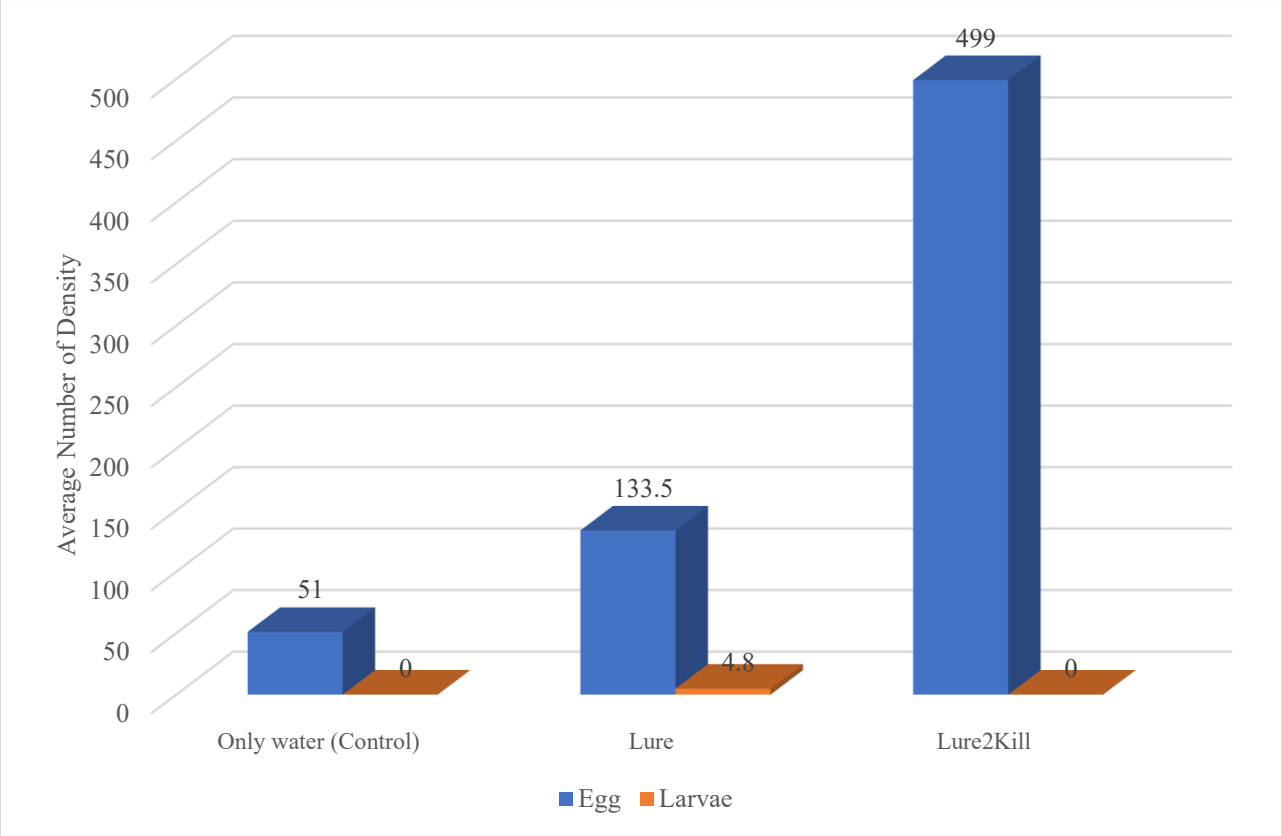


Fig 4: Average number of eggs and larvae of *Aedes* mosquitoes per Den-X-Trap in zones 1-5 in Week 122 (Oct 2-6, 2026)

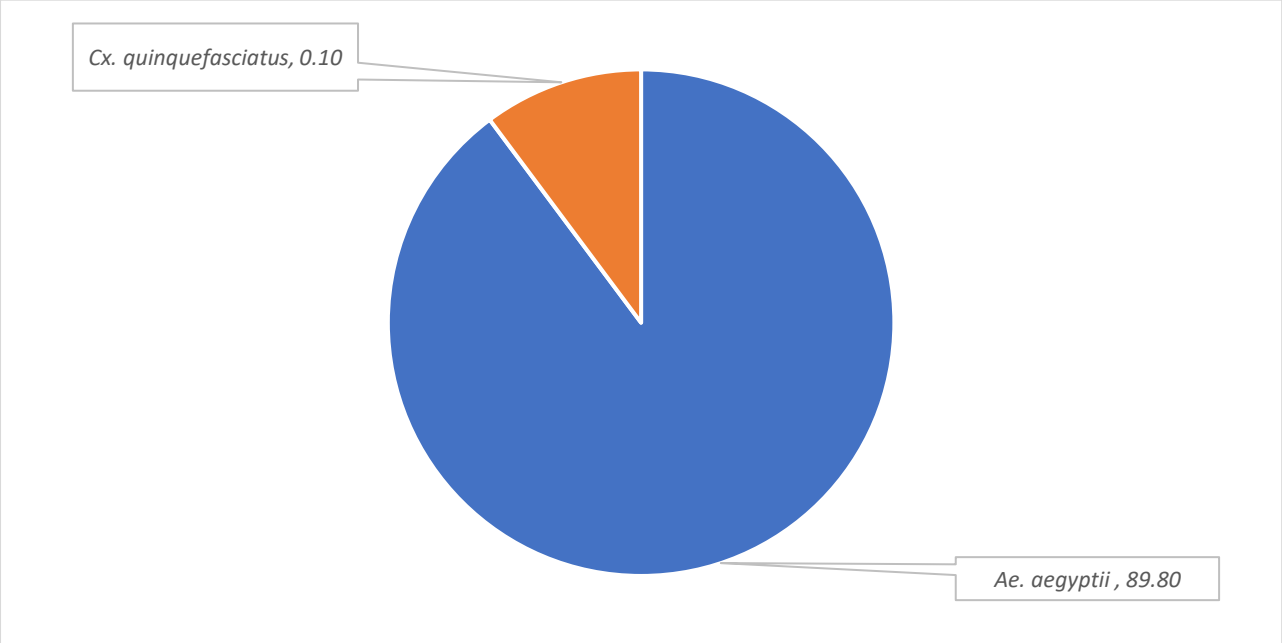
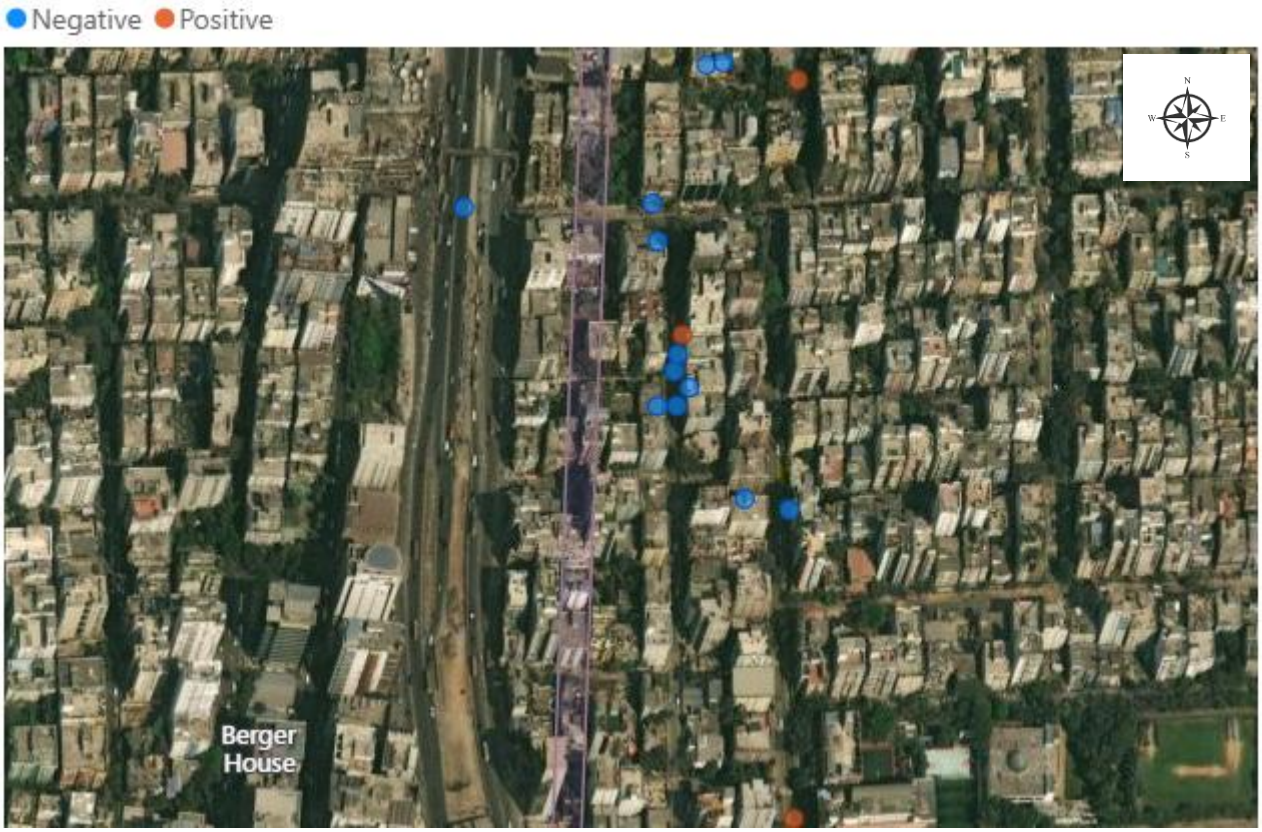


Fig. 5: Percentage of Mosquito Larvae from Zones (1-5) in Week 122 (Oct 2-6, 2026)

Table 4. Positive Larval Spots in Different Zones (1-5) with Estimated Number of Larvae in Week 122 (Oct 2-6, 2026)

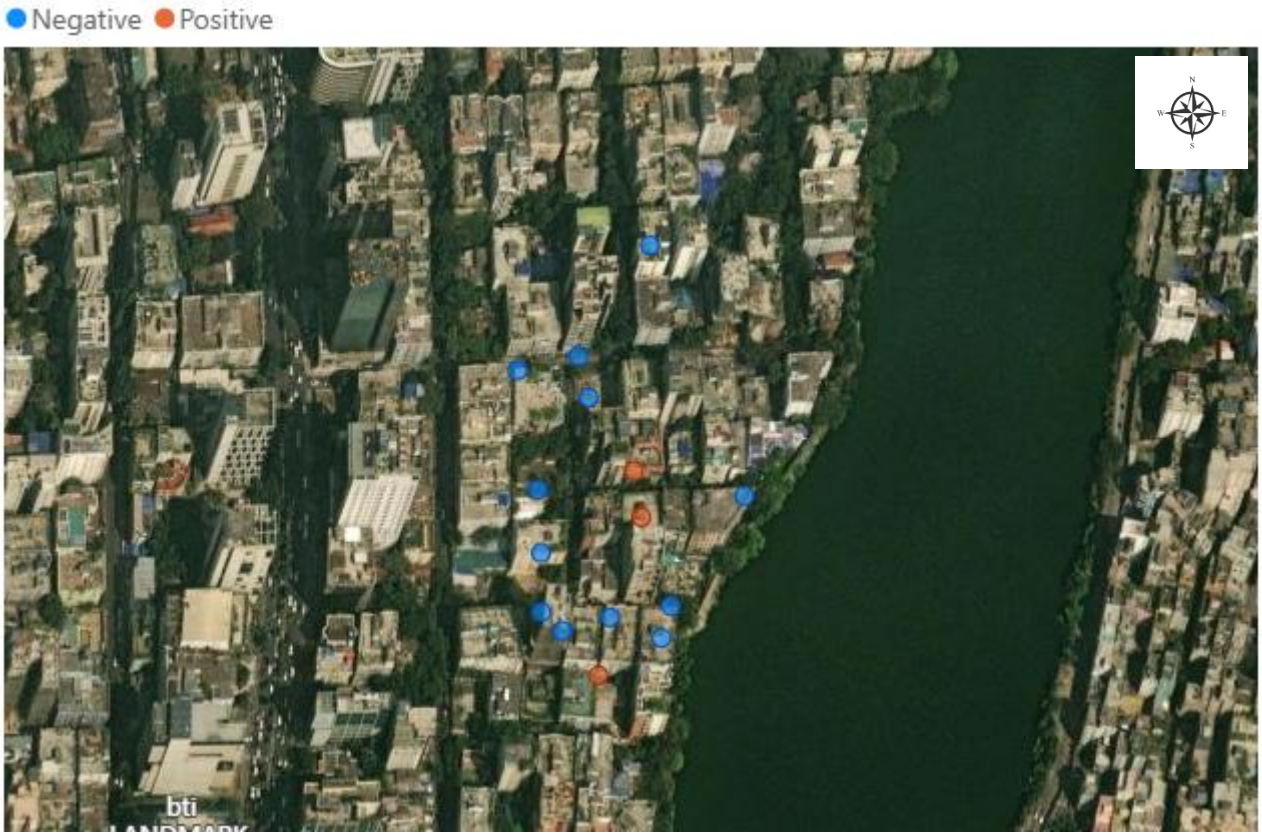
Zone	GPS Location	*Ae. aegypti*	*Ae. albopictus*	*Culex*	*Source*
1	23.86147 90.4017691	0	0	23	Pit
	23.8638407 90.4011712	25	0	0	Gate Channel
	23.865088 90.4017908	40	0	0	Flooded floor (basement or otherwise)
	Total	65	0	23	
2	23.8076519 90.3594468	23	0	0	Used Discarded Tires
	23.8076403 90.3597776	56	0	0	Drain
	Total	79	0	0	
3	23.7844272 90.418895	21	0	0	Basement/Parking
	23.7846537 90.4188543	0	0	24	Basement/Parking
	23.7836499 90.4186645	23	0	0	Polyethylene sheet
	Total	44	0	24	
4	23.7895492 90.345179	52	0	0	Plastic bottle
	23.7899218 90.3446903	23	0	0	Plastic bucket
	23.7899677 90.3443113	41	0	0	Used Discarded Tires
	23.7900803 90.3448362	52	0	0	Plastic Mug/pot/Bodna
	Total	168	0	0	
5	23.7616675 90.3592871	6	0	0	Plastic Mug/pot/Bodna
	23.764932 90.3611691	52	0	0	Flower tub & tray
	Total	58	0	0	
Grand Total		414	0	47	



Map 1: Positive and Negative House of Uttara 4 No. Sector at Weeks 122



Map 2: Positive and Negative House of Mirpur 2 at Weeks 122



Map 3: Positive and Negative House of Gulshan 1 at Weeks 122



Map 4: Positive and Negative House of Mirpur 1 at Weeks 122



Map 5: Positive and Negative House of Mohammadpur at Weeks 122

Table 5: Positive House, Wet Container, BI, CI and HI in Zones (1-5) in Week 122 (Oct 2-6, 2026)

Zone	Total House	Positive House	Total Wet container	Positive Wet Container	BI	CI	HI
1	15	3	41	3	20.00	7.32	20.00
2	15	2	30	2	13.33	6.67	13.33
3	15	3	35	3	20.00	8.57	20.00
4	15	4	27	5	33.33	18.52	26.67
5	15	3	29	3	20.00	10.34	20.00

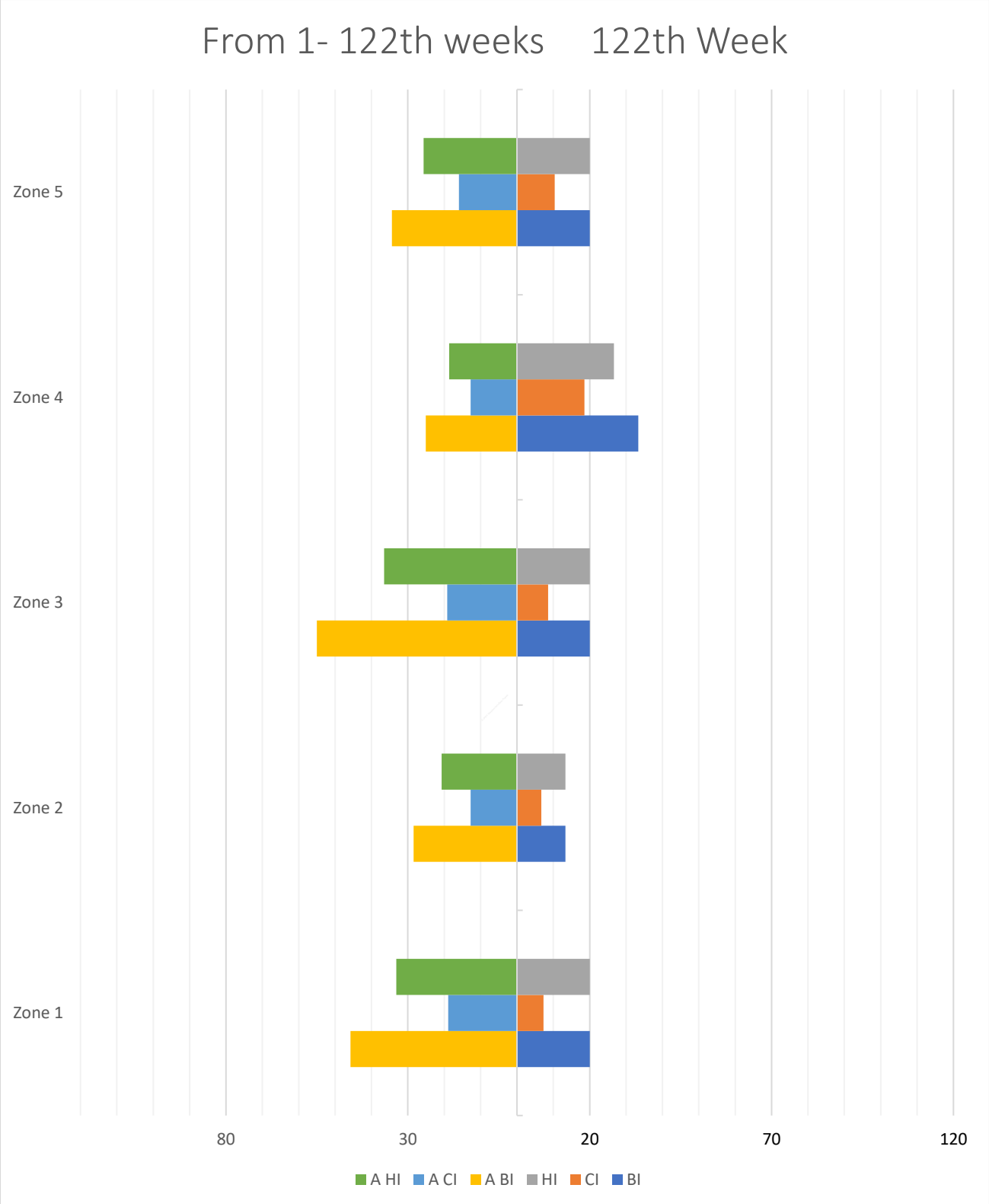


Fig. 6: BI, CI and HI in Different Zones (1-5) of Dhaka north City Corporation

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

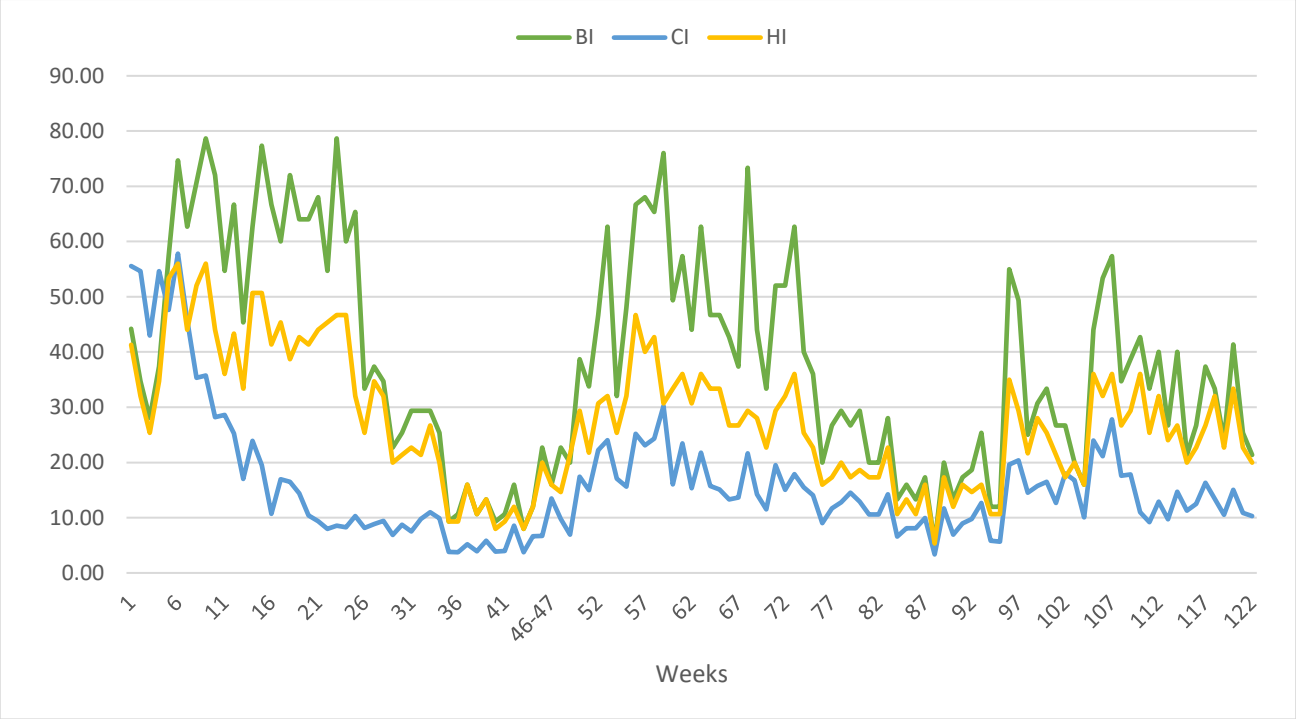


Fig 7: Mosquitoes population fluctuation (BI, CI, HI) from Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

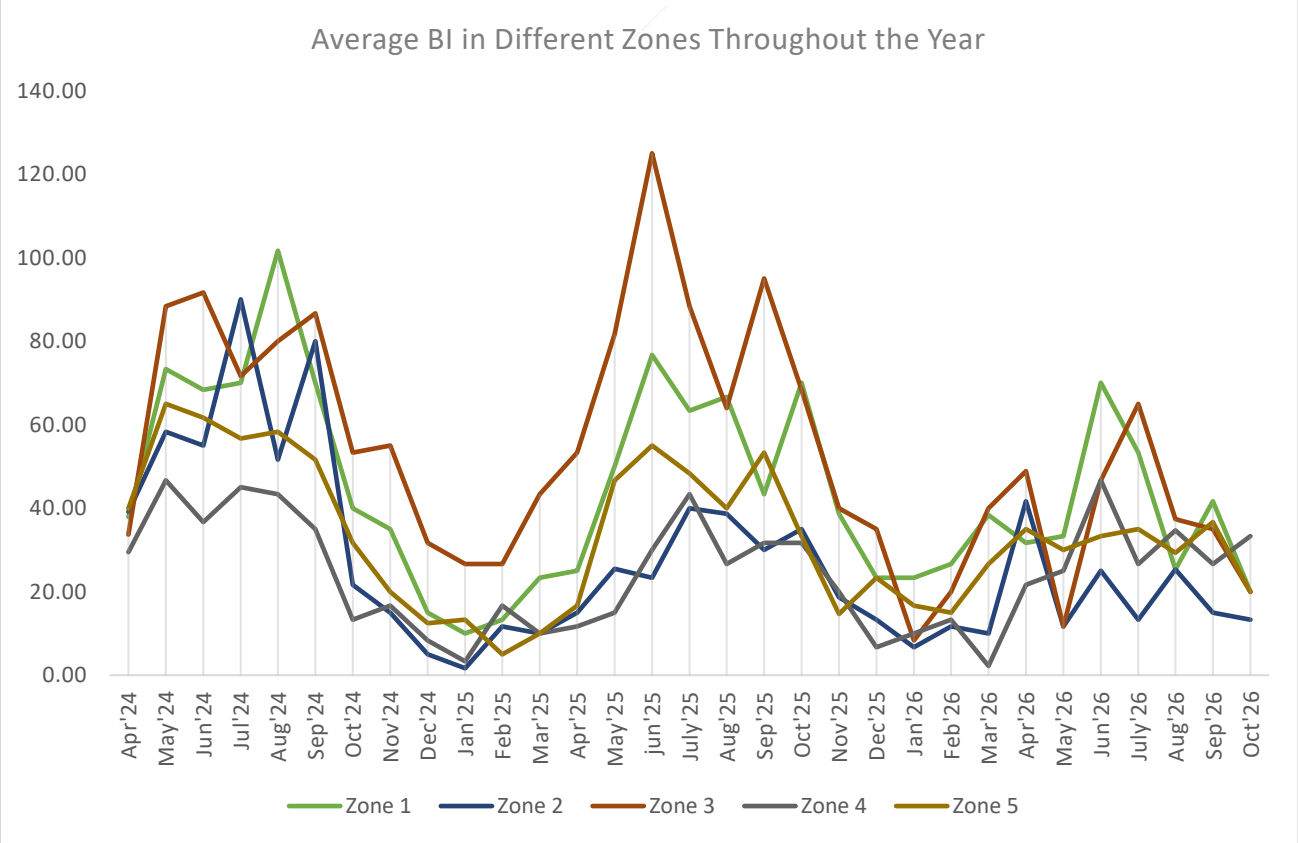


Fig. 8: Breteau Index (BI) in Different Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

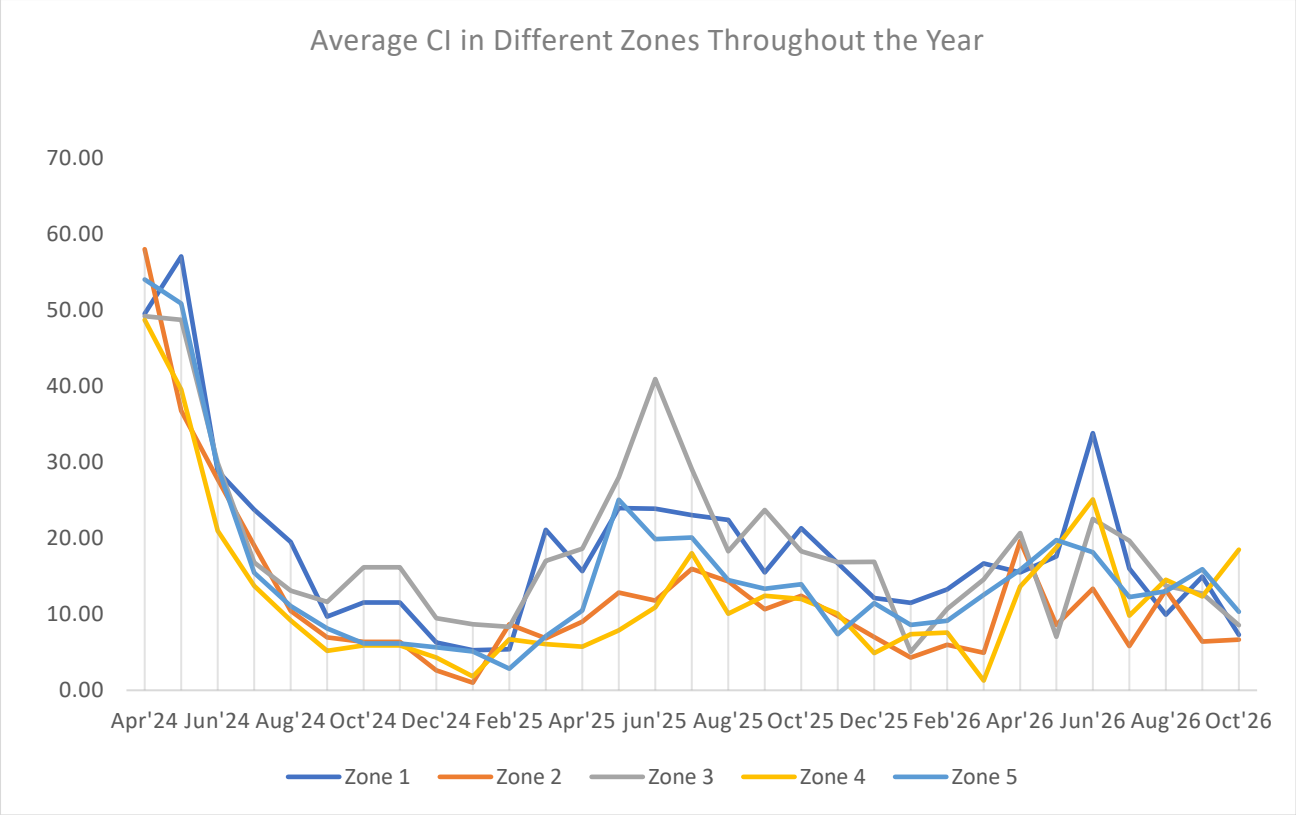


Fig. 9: Container Index (CI) in Different Zones Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

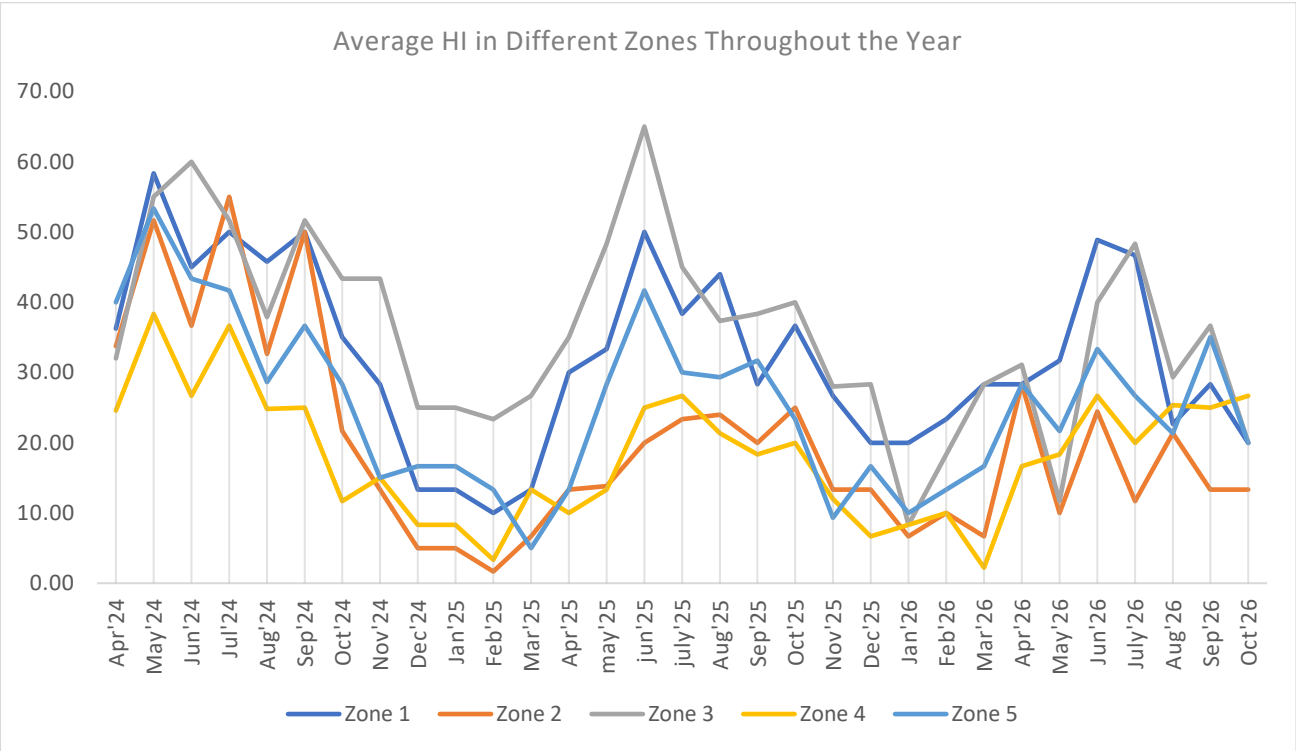


Fig. 10: House Index (HI) in Different Zones Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

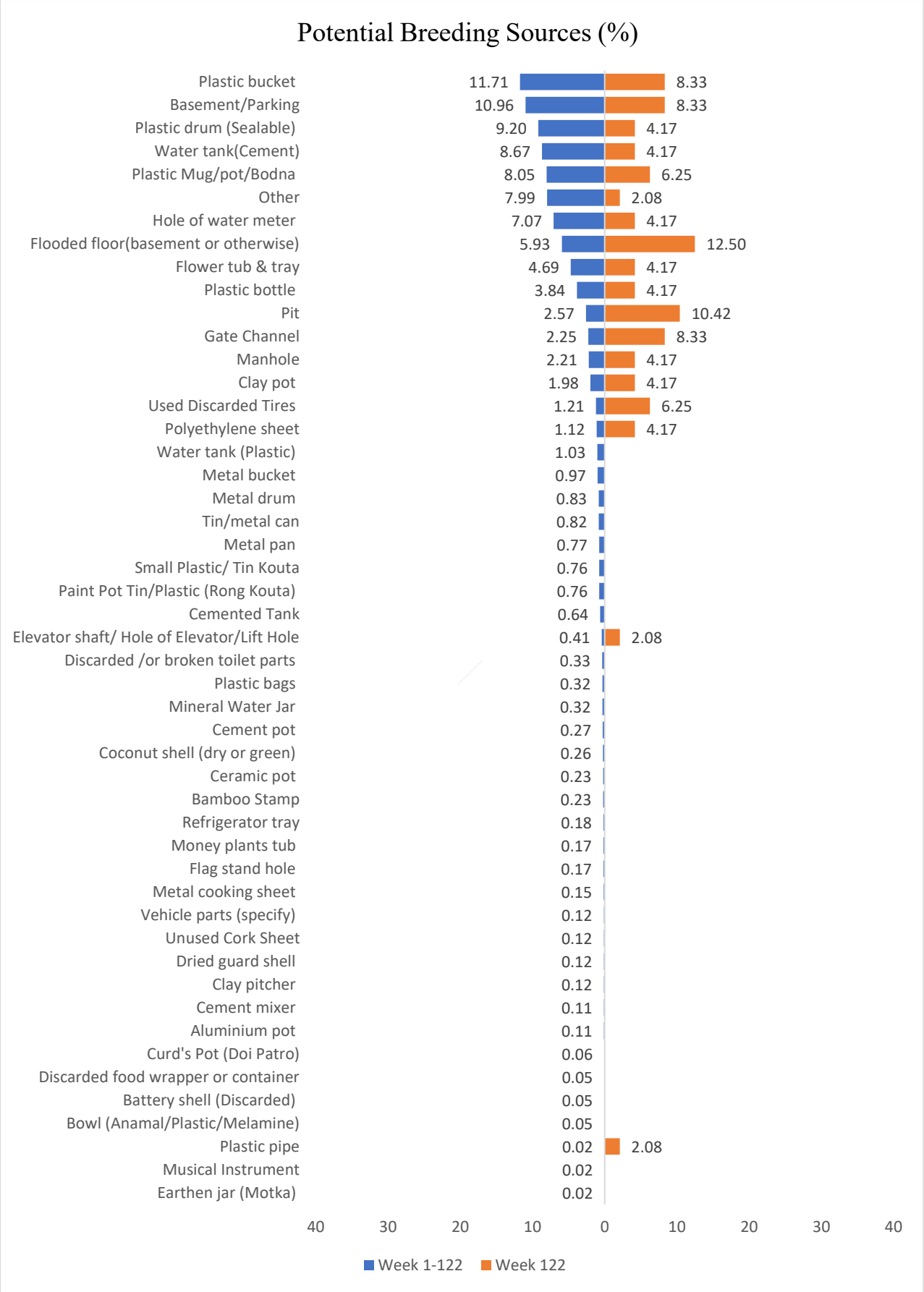


Fig. 11: Container Frequency for *Aedes* mosquitoes in Zones (1-5)

Table 6: Container Productivity of *Aedes* mosquito in DNCC Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

Container	Frequency	Total Estimated Aedes Larvae	Percentage of contribution (%)	Relative productivity index	CCPI
Plastic drum (Sealable)	220	41693	23.25	1.00	1.00
Water tank (Cement)	133	21608	12.05	0.52	0.55
Flooded floor (basement or otherwise)	132	17036	9.50	0.41	0.49
Basement/Parking	196	13965	7.79	0.33	0.56
Plastic bucket	207	16584	9.25	0.40	0.62
Plastic bottle	69	8809	4.91	0.21	0.25
Pit	47	7332	4.09	0.18	0.19
Hole of water meter	83	6166	3.44	0.15	0.24
Plastic Mug/pot/Bodna	154	5709	3.18	0.14	0.36
Flower tub & tray	100	4197	2.34	0.10	0.24
Plastic pipe	81	3691	2.06	0.09	0.20
Clay pot	83	3061	1.71	0.07	0.19
Used Discarded Tires	32	2802	1.56	0.07	0.10
Money plants tub	5	2675	1.49	0.06	0.05
Cemented Tank	15	2248	1.25	0.05	0.06
Other	75	2279	1.27	0.05	0.17
Water tank (Plastic)	18	1987	1.11	0.05	0.06
Manhole	43	1939	1.08	0.05	0.11
Elevator shaft/ Hole of Elevator/Lift Hole	3	1294	0.72	0.03	0.02
Polyethylene sheet	32	1333	0.74	0.03	0.08
Tin/metal can	17	1468	0.82	0.04	0.05
Metal bucket	26	1373	0.77	0.03	0.07
Gate Channel	40	1252	0.70	0.03	0.09
Paint Pot Tin/Plastic (Rong Kouta)	24	1078	0.60	0.03	0.06
Cement pot	14	1067	0.60	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	0.30	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	0.18	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	0.09	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)	7	134	0.07	0.00	0.01
Aluminium pot	3	67	0.04	0.00	0.01
Mineral Water Jar	3	63	0.04	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 122 (Oct 2-6, 2026)

Container	Frequency	Total Aedes Larvae	Percentage of contribution (%)	Relative productivity index	CCPI
Used Discarded Tires	2	64	15.46	1.00	1.00
Plastic Mug/pot/Bodna	2	58	14.01	0.91	0.94
Drain	1	56	13.53	0.88	0.73
Plastic bottle	1	52	12.56	0.81	0.69
Flower tub & tray	1	52	12.56	0.81	0.69
Flooded floor (basement or otherwise)	1	40	9.66	0.63	0.58
Gate Channel	1	25	6.04	0.39	0.43
Polyethylene sheet	1	23	5.56	0.36	0.42
Plastic bucket	1	23	5.56	0.36	0.42
Basement/Parking	1	21	5.07	0.33	0.40

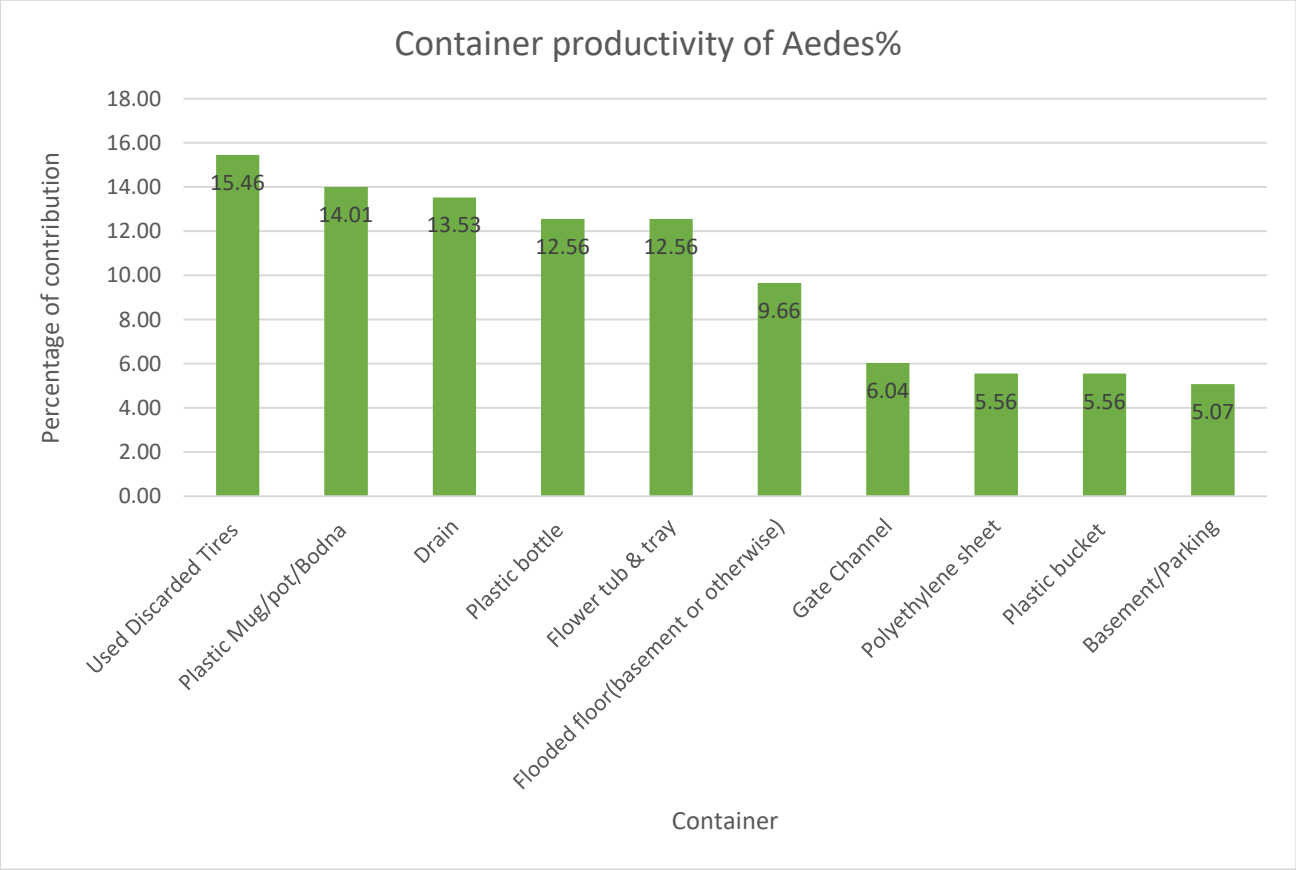


Fig 12: Major container types contributing to Aedes larval production in DNCC in Week 122 (Oct 2-6, 2026)

Table 8: Comparison of the Five highest-CCPI Aedes breeding containers across the overall surveillance period (Weeks 1–122) and the current surveillance Week (Week 122)

Week 1-122	Week 122
 Plastic drum (CCPI=1.00)	 Used Discarded Tires (CCPI=1.00)
 Plastic bucket (CCPI=0.62)	 Plastic Mug/pot/Bodna (CCPI=0.94)
 Basement/Parking (CCPI=0.56)	 Drain (CCPI=0.73)

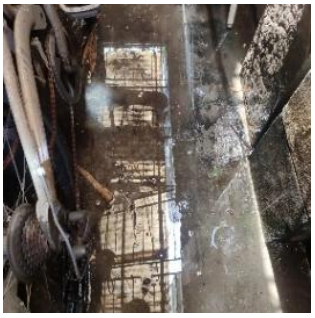
 Water tank(cement) (CCPI=0.55)	 Plastic bottle (CCPI=0.69)
 Flooded floor (CCPI=0.49)	 Flower tub & tray (CCPI=0.69)

Table 9: Container Frequency & Probable potential Wet Container in zones (1-5) from Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

Sources	+House	-WC	+WC	Total WC	% WC	% PWC
Plastic bucket	267	287	487	774	11.71	7.37
Basement/Parking	256	67	657	724	10.96	9.94
Plastic drum (Sealable)	280	83	525	608	9.20	7.94
Water tank (Cement)	183	256	317	573	8.67	4.80
Plastic Mug/pot/Bodna	221	95	437	532	8.05	6.61
Other	255	138	390	528	7.99	5.90
Hole of water meter	91	31	436	467	7.07	6.60
Flooded floor (basement or otherwise)	151	153	239	392	5.93	3.62
Flower tub & tray	113	32	278	310	4.69	4.21
Plastic bottle	99	64	190	254	3.84	2.88
Pit	81	24	146	170	2.57	2.21
Gate Channel	47	34	115	149	2.25	1.74
Manhole	65	44	102	146	2.21	1.54
Clay pot	97	11	120	131	1.98	1.82
Used Discarded Tires	41	19	61	80	1.21	0.92
Polyethylene sheet	43	3	71	74	1.12	1.07
Water tank (Plastic)	22	28	40	68	1.03	0.61
Metal bucket	32	6	58	64	0.97	0.88
Metal drum	21	8	47	55	0.83	0.71
Tin/metal can	32	0	54	54	0.82	0.82
Metal pan	20	3	48	51	0.77	0.73
Paint Pot Tin/Plastic (Rong Kouta)	32	5	45	50	0.76	0.68
Small Plastic/ Tin Kouta	25	9	41	50	0.76	0.62
Cemented Tank	22	13	29	42	0.64	0.44
Elevator shaft/ Hole of Elevator/Lift Hole	8	4	23	27	0.41	0.35
Discarded /or broken toilet parts	13	3	19	22	0.33	0.29
Mineral Water Jar	7	4	17	21	0.32	0.26
Plastic bags	8	2	19	21	0.32	0.29
Cement pot	11	3	15	18	0.27	0.23
Coconut shell (dry or green)	6	0	17	17	0.26	0.26
Bamboo Stamp	11	0	15	15	0.23	0.23
Ceramic pot	13	0	15	15	0.23	0.23
Refrigerator tray	9	0	12	12	0.18	0.18
Flag stand hole	7	1	10	11	0.17	0.15
Money plants tub	8	0	11	11	0.17	0.17
Metal cooking sheet	4	0	10	10	0.15	0.15
Clay pitcher	6	1	7	8	0.12	0.11
Dried guard shell	5	0	8	8	0.12	0.12
Unused Cork Sheet	6	1	7	8	0.12	0.11
Vehicle parts (specify)	5	1	7	8	0.12	0.11
Aluminium pot	4	0	7	7	0.11	0.11
Cement mixer	2	0	7	7	0.11	0.11
Curd's Pot (Doi Patro)	3	0	4	4	0.06	0.06
Bowl (Anamal/Plastic/Melamine)	3	0	3	3	0.05	0.05
Battery shell (Discarded)	0	0	3	3	0.05	0.05
Discarded food wrapper or container	1	1	2	3	0.05	0.03
Earthen jar (Motka)	1	0	1	1	0.02	0.02
Musical Instrument	1	0	1	1	0.02	0.02
Plastic pipe	0		1	1	0.02	0.02

Table 10: Percentage of breeding sources in different zone Week 1 to Week 122 (May 2, 2024 – Oct 6, 2026)

Containers	Percentage of Breeding Sources				
	Zone 01	Zone 02	Zone 03	Zone 04	Zone 05
Plastic bucket	2.09	2.09	2.12	2.95	2.47
Basement/Parking	2.75	1.60	2.98	1.09	2.53
Plastic drum (Sealable)	1.26	2.29	1.50	2.19	1.97
Water tank(Cement)	1.10	1.47	1.18	2.48	2.44
Plastic Mug/pot/Bodna	1.60	1.33	1.47	2.15	1.50
Other	2.51	1.41	2.22	0.71	1.13
Hole of water meter	0.82	1.27	0.48	2.16	2.33
Flooded floor(basement or otherwise)	1.50	1.30	1.03	0.76	1.35
Flower tub & tray	1.20	0.70	1.59	0.83	0.38
Plastic bottle	0.58	0.86	0.54	1.00	0.86
Pit	0.65	0.36	0.88	0.32	0.36
Gate Channel	0.92	0.23	0.58	0.06	0.47
Manhole	0.74	0.23	0.80	0.21	0.23
Clay pot	0.27	0.36	0.53	0.36	0.45
Used Discarded Tires	0.38	0.35	0.20	0.15	0.14
Polyethylene sheet	0.32	0.27	0.23	0.23	0.08
Water tank (Plastic)	0.00	0.62	0.15	0.12	0.14
Metal bucket	0.17	0.11	0.27	0.24	0.18
Metal drum	0.20	0.14	0.17	0.23	0.11
Tin/metal can	0.24	0.21	0.17	0.15	0.05
Metal pan	0.18	0.15	0.21	0.09	0.14
Paint Pot Tin/Plastic (Rong Kouta)	0.18	0.08	0.21	0.17	0.12
Small Plastic/ Tin Kouta	0.20	0.14	0.23	0.09	0.11
Cemented Tank	0.12	0.09	0.15	0.18	0.09
Elevator shaft/ Hole of Elevator/Lift Hole	0.18	0.11	0.06	0.00	0.06
Discarded /or broken toilet parts	0.05	0.12	0.05	0.02	0.11
Mineral Water Jar	0.05	0.02	0.05	0.14	0.08
Plastic bags	0.03	0.02	0.06	0.14	0.08
Cement pot	0.05	0.02	0.09	0.02	0.11
Coconut shell (dry or green)	0.05	0.06	0.06	0.03	0.06
Bamboo Stamp	0.06	0.08	0.03	0.06	0.00
Ceramic pot	0.06	0.02	0.05	0.02	0.09
Refrigerator tray	0.06	0.03	0.05	0.03	0.02
Flag stand hole	0.08	0.02	0.05	0.00	0.03
Money plants tub	0.05	0.03	0.05	0.00	0.05
Metal cooking sheet	0.00	0.02	0.05	0.03	0.06
Clay pitcher	0.05	0.00	0.03	0.03	0.02
Dried guard shell	0.03	0.02	0.06	0.00	0.02
Unused Cork Sheet	0.00	0.02	0.03	0.03	0.05
Vehicle parts (specify)	0.02	0.00	0.05	0.05	0.02
Aluminium pot	0.02	0.03	0.00	0.05	0.02
Cement mixer	0.00	0.03	0.03	0.02	0.03
Curd's Pot (Doi Patro)	0.02	0.02	0.03	0.00	0.00
Bowl (Anamal/Plastic/Melamine)	0.02	0.02	0.00	0.02	0.00
Battery shell (Discarded)	0.02	0.00	0.00	0.02	0.02
Discarded food wrapper or container	0.00	0.00	0.03	0.00	0.02
Earthen jar (Motka)	0.02	0.00	0.00	0.00	0.00
Musical Instrument	0.02	0.00	0.00	0.00	0.00
Plastic pipe	0.00	0.00	0.00	0.00	0.02

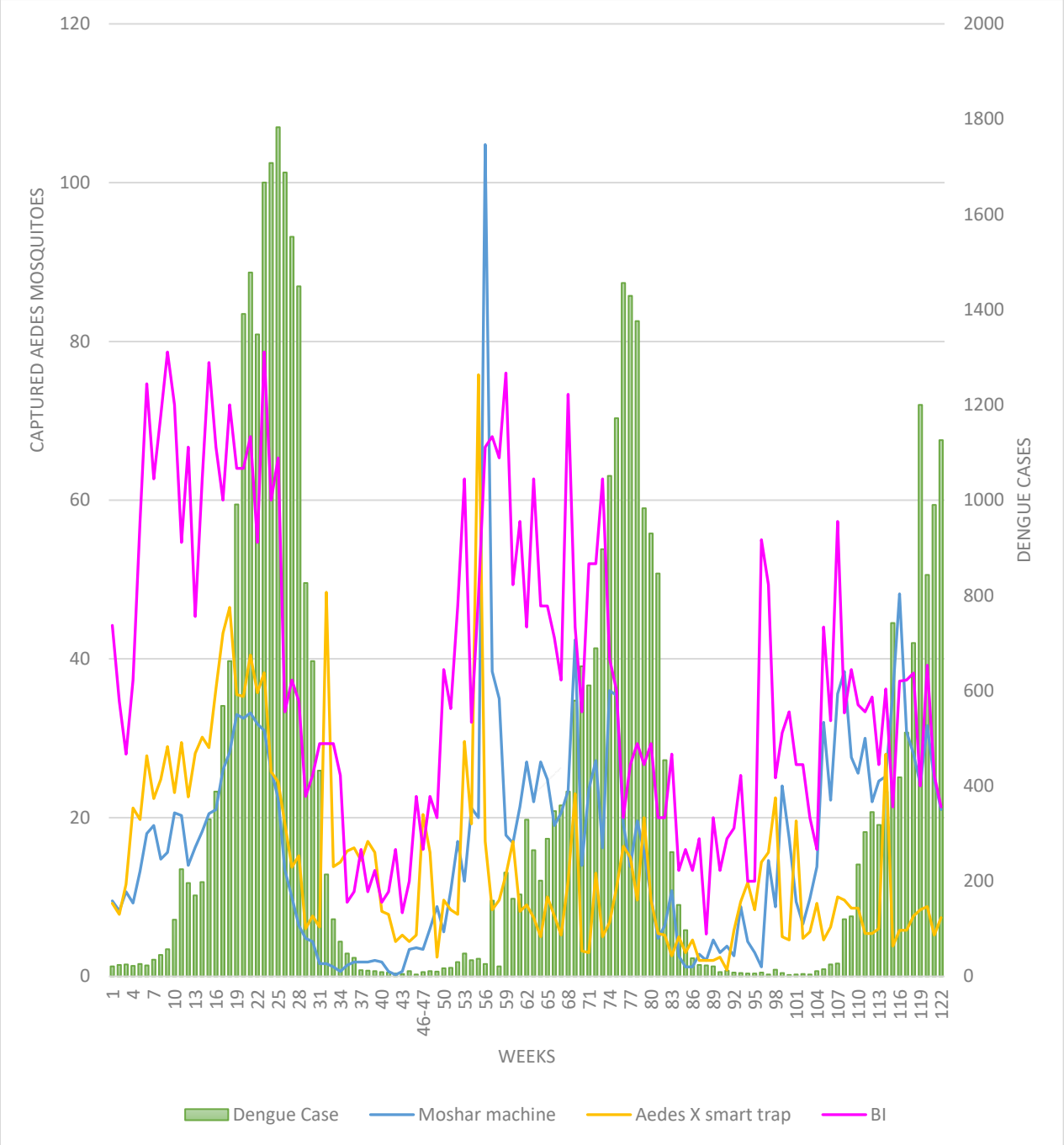


Fig. 13: Correlation between Dengue Cases and *Aedes* Mosquitoes Captured by per Moshar Machine CO_2 traps, Aedes X smart traps

NB: DNCC dengue cases only

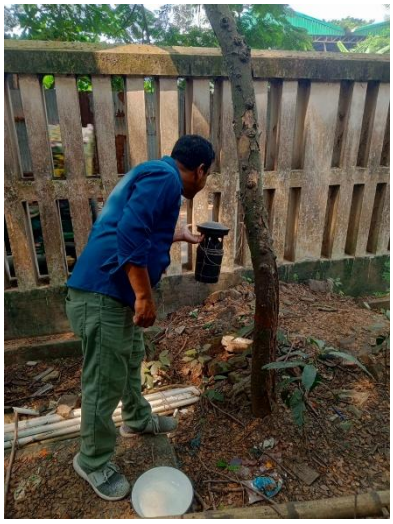
Photographs of Mosquitoes Surveillance











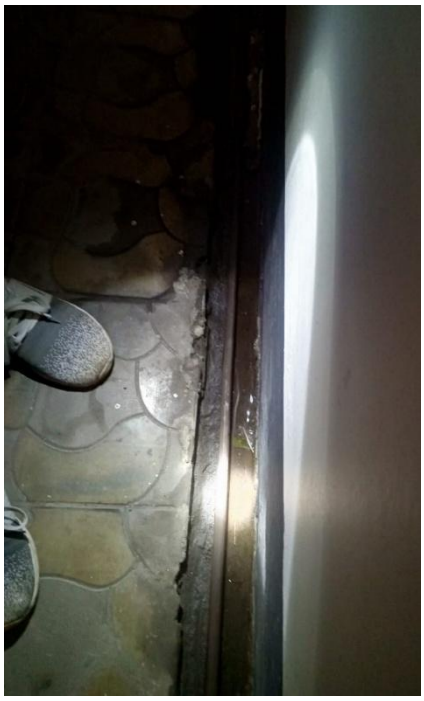






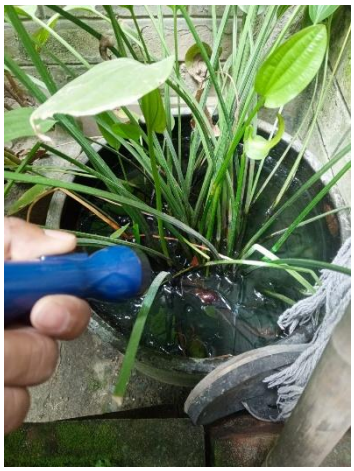


Samples Collection from Field









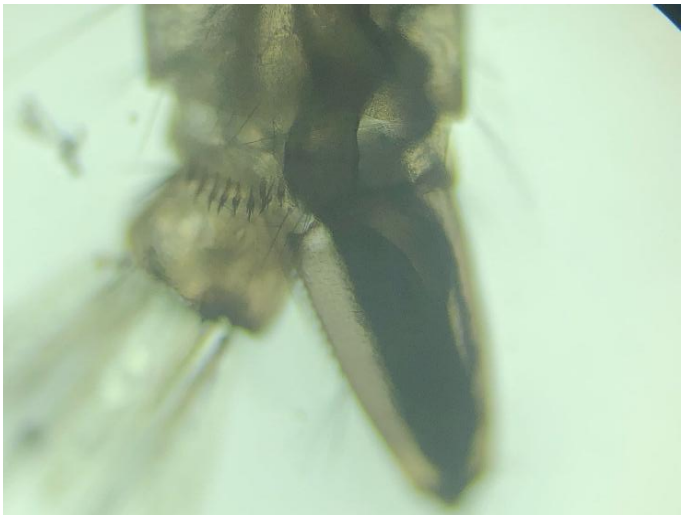


Samples Processing and Identification















Comments:
The mosquito density is decreased and the dengue cases decreasing rapidly. The Breteau Index (BI) is decreased in week 122. 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