

CAMBODIA MALARIA BULLETIN

JUNE 2013 BULLETIN, DATA TO 2ND QUARTER, CNM, CAMBODIA

Estimated coverage with LLIN or retreated mosquito net	Target ¹	Mobile ²
No. of persons at risk of malaria	3,340,275	448,680
No. of LLIN distributed YTD	2,072	2,024
No. of LLIN distributed YTD	1,607	167
No. of conventional nets distributed and retreated YTD	23,553	300
No. of long lasting nets distributed in last 3 years	2,921,313	2,191
Estimated coverage with LLIN / treated net (1 net / 1 pers)	88%	1%

¹ Pop of target villages

² Mobile pop (est from census)

Indicators	HIS			VMW			Total		
	2012	2013	Change	2012	2013	Change	2012	2013	Change
Malaria cases	23,879	11,415	-52%	15,036	7,288	-52%	38,915	18,703	-52%
Malaria Incidence ³	1.62	0.76	-53%	12.80	6.43	-50%	2.65	1.24	-53%
Malaria deaths	28	3	-89%	0	0	0%	28	3	-89%
Mortality rate ⁴	0.19	0.02	-90%	0.00	0.00	0%	0.19	0.02	-90%

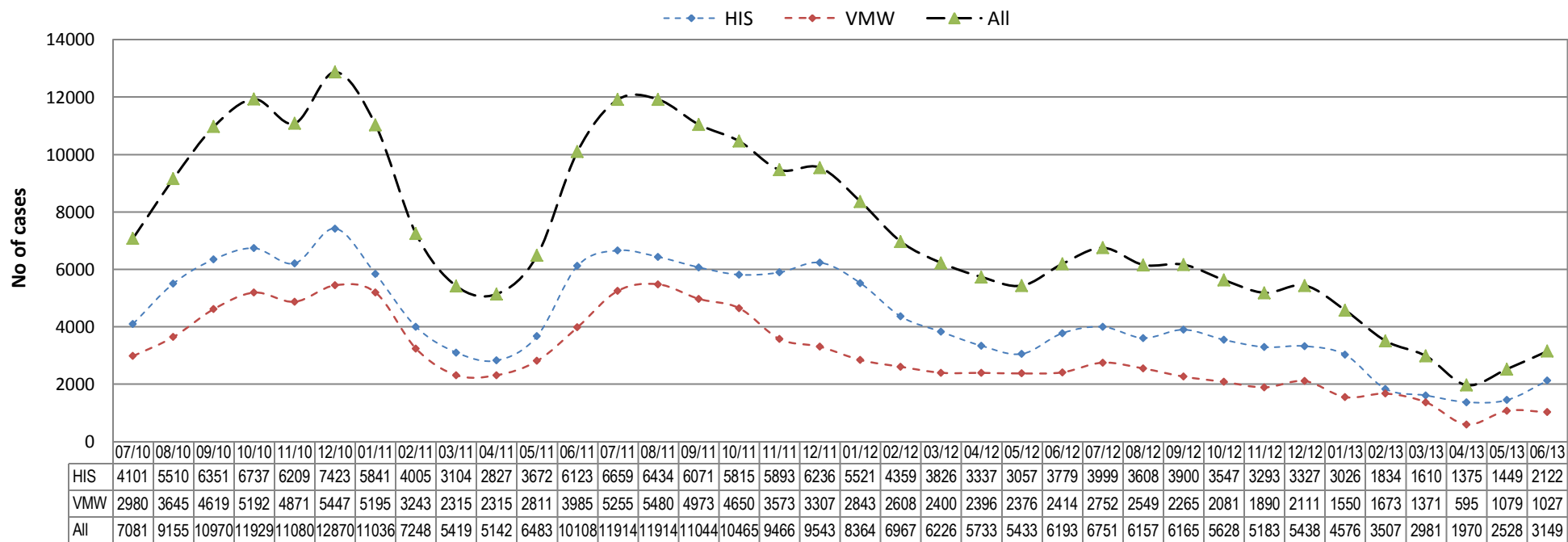
³ Cases per 1000 pop

⁴ Deaths per 100,000 pop

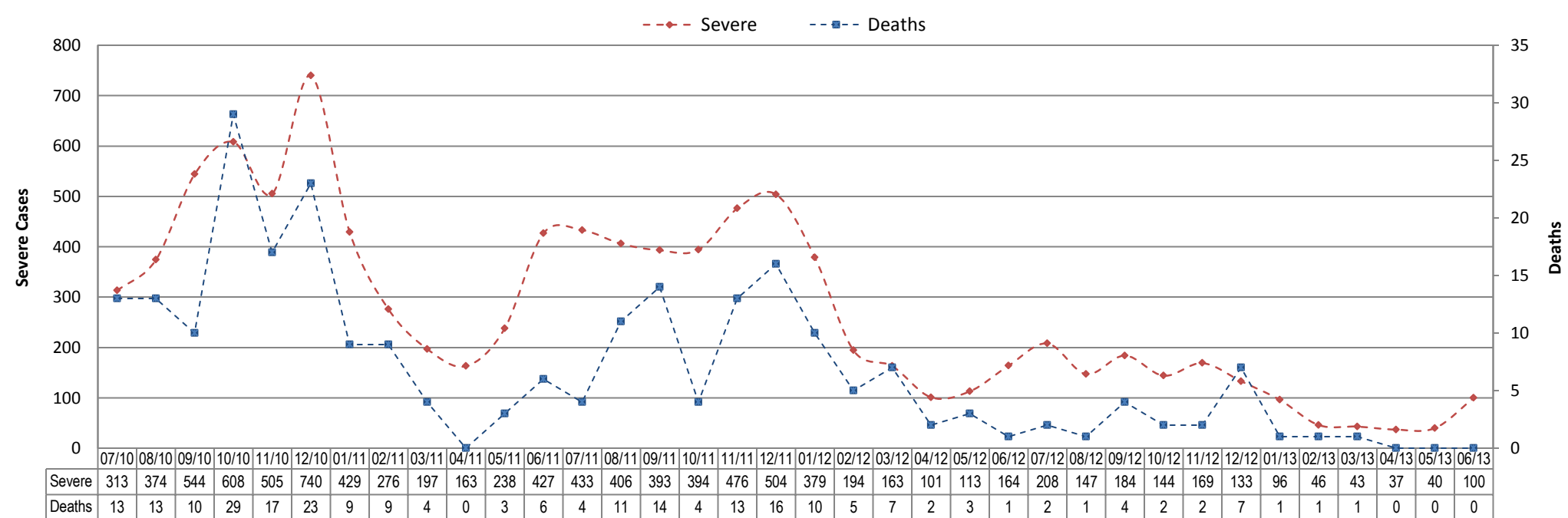
^{4.5} VMW rates uses VMW village populations

TRENDS IN SURVEILLANCE

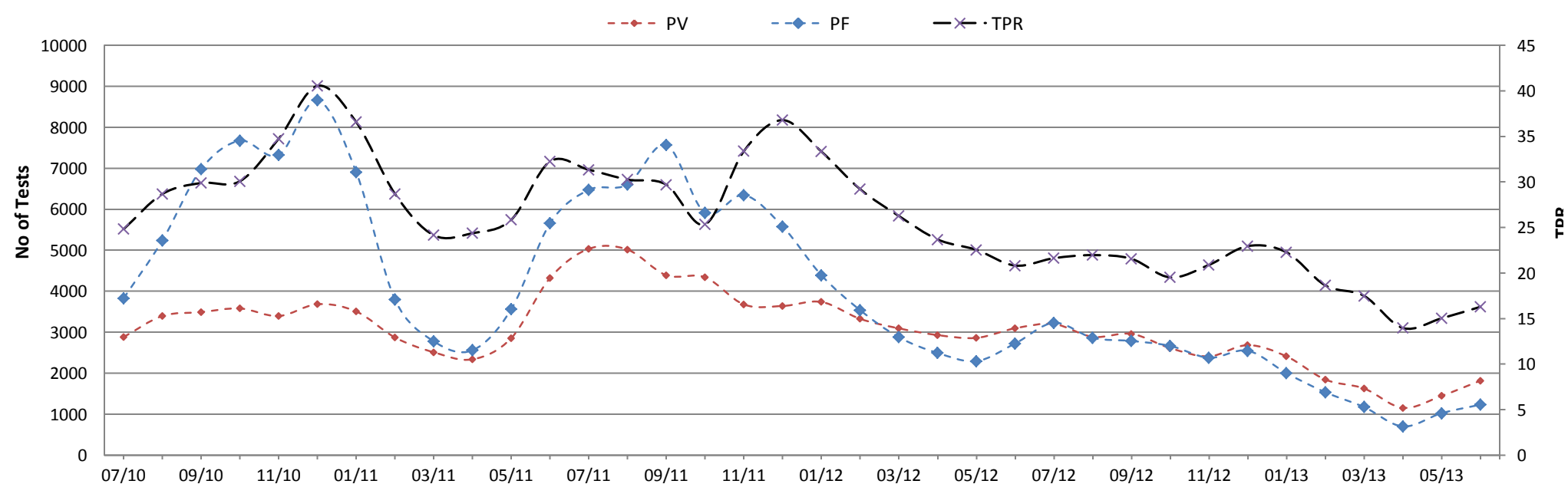
Treated malaria cases from HIS and VMW by month



Severe malaria cases and deaths from HIS by month



Malaria test results (VMW and HIS) by species⁶

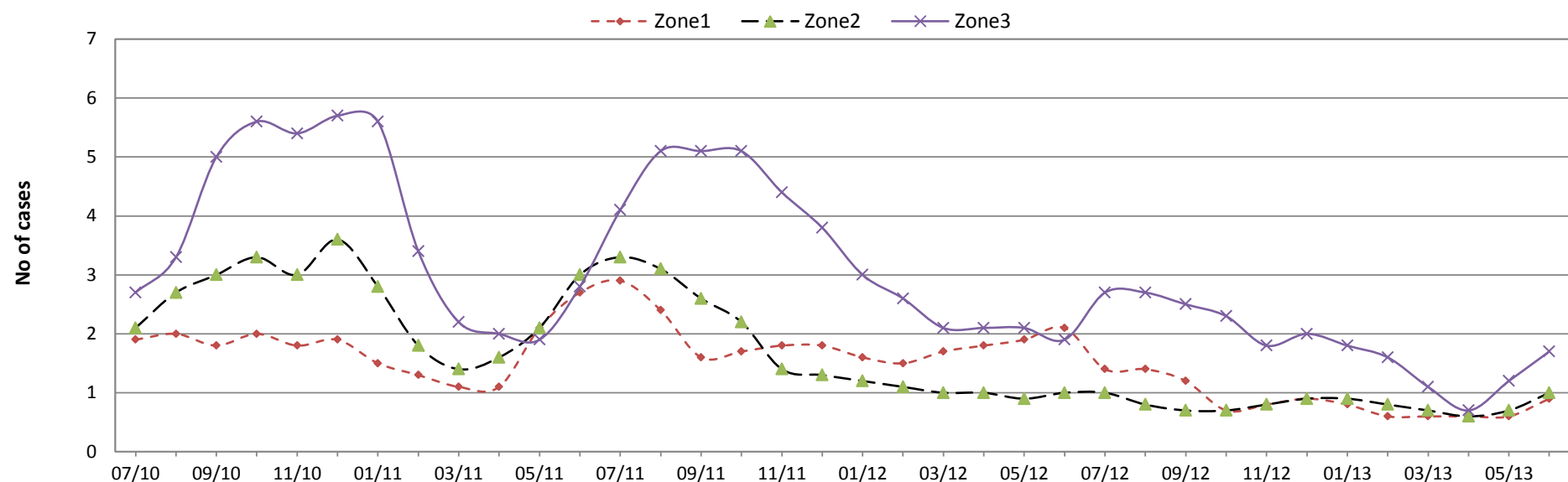


CONTAINMENT INDICATORS

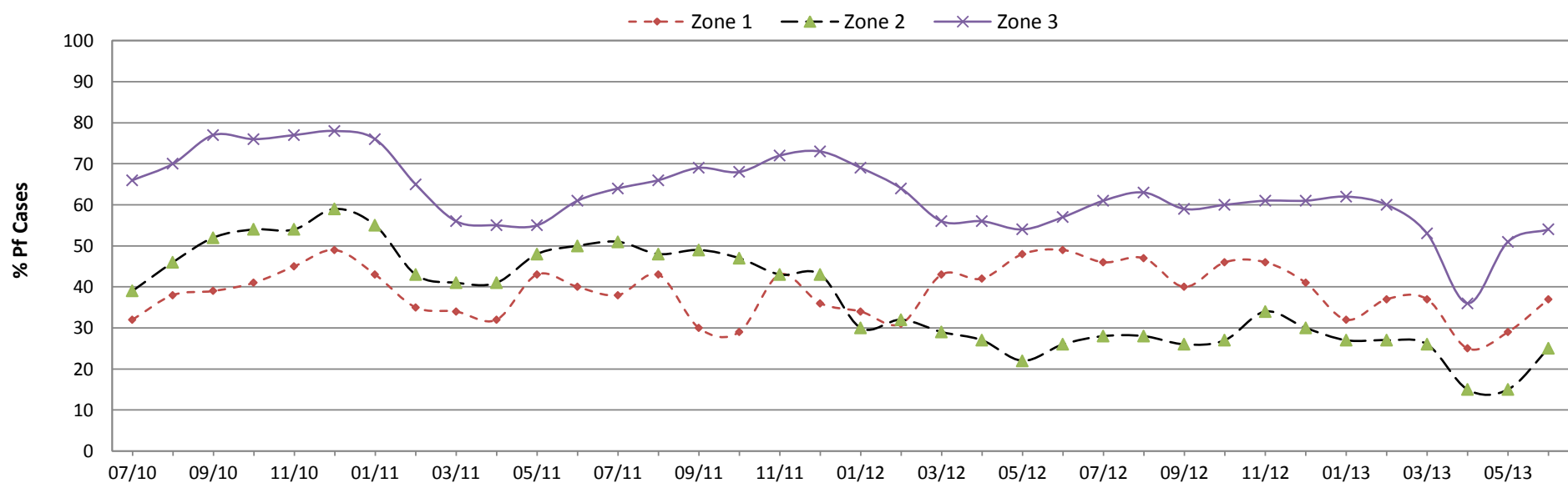
Estimated coverage (possession) with LLIN or retreated mosquito net					VMW RDT tests						
Indicators	Zone 1	Zone 2	Zone 3	Total	Zone	TPR			%Pf		
						2012	2013	Change	2012	2013	Change
No. of persons at risk of malaria (pop of target villages)	381,083	1,354,753	1,589,931	3,340,275	Zone 1	39%	28%	-30%	42%	32%	-23%
No. of LLIN distributed YTD	80	50	1,942	2,072	Zone 2	23%	20%	-14%	28%	25%	-11%
No. of LLIHN distributed YTD	0	0	1,607	1,607	Zone 3	33%	25%	-25%	60%	55%	-8%
No. of conventional nets distributed and retreated YTD	7,611	10,739	4,891	23,241							
No. of long lasting nets distributed in previous 3 years	260,225	1,092,476	1,555,550	2,908,251							
Estimated coverage with LLIN / treated net (1 net / 1 pers)	70%	81%	98%	88%							

National Surveillance data for the period Jan - Jun												
Indicators	HIS treated cases			VMW treated cases			Total treated cases			Incidence (per 1000 pop)		
	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change
Z1 Total malaria cases	1,782	761	-57%	2,664	1,479	-44%	4,446	2,240	-50%	11.67	5.88	-50%
Z1 Severe malaria cases	142	29	-80%				142	29	-80%	0.37	0.08	-80%
Z1 Malaria deaths	1	0	-100%	0	0	0%	1	0	-100%	0.00	0.00	-100%
Z2 Total malaria cases	7,105	3,126	-56%	4,920	2,328	-53%	12,025	5,454	-55%	8.88	4.03	-55%
Z2 Severe malaria cases	288	105	-64%				288	105	-64%	0.21	0.08	-64%
Z2 Malaria deaths	3	0	-100%	0	0	0%	3	0	-100%	0.00	0.00	-100%
Z3 Total malaria cases	8,823	4,278	-52%	7,441	3,479	-53%	16,264	7,757	-52%	10.23	4.88	-52%
Z3 Severe malaria cases	491	159	-68%				491	159	-68%	0.31	0.10	-68%
Z3 Malaria deaths	18	3	-83%	0	0	0%	18	3	-83%	0.01	0.00	-83%
Z4 Total malaria cases	6,169	3,251	-47%	1	7	600%	6,170	3,258	-47%	n/a	n/a	n/a
Z4 Severe malaria cases	193	69	-64%				193	69	-64%	n/a	n/a	n/a
Z4 Malaria deaths	6	0	-100%	0	0	0%	6	0	-100%	n/a	n/a	n/a

Malaria Cases per VMW by month



Percentage of Pf cases diagnosed by VMW per month



Surveillance Data by District, Jan-Jun 2013

Province / Op. District	Population (x1000)		Health Facility (HIS)									Village Malaria Workers												Incidence (per 1000 pop)								
			All Cases			Severe			Deaths			All Cases			Treated Pf			Treated Pv			Referred Pf			Referred Pv			TPR					
			2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change
Ang Snuol	0	0	3	10	233%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Kean Svay	0	0	4	27	575%	0	1	100%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Koh Thom	0	0	56	40	-29%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Ksach Kandal	0	0	35	31	-11%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Muk Kam Poul	0	0	48	12	-75%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Ponhea Leu	0	0	1	31	3000%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Saang	0	0	8	18	125%	0	0	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Takhmau	0	0	60	3	-95%	1	1	0%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%			
Kandal	1390	1424	215	172	-20%	1	2	100%	0	0	0%	0	0	0	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.15	0.12	-22%			
Smach Mean Chey	63	65	224	68	-70%	16	7	-56%	0	0	0%	179	62	-65%	48	28	-42%	131	34	-74%	0	0	0%	0	0	0%	21%	18%	-13%	6.37	2.01	-68%
Srae Ambel	67	68	97	35	-64%	7	3	-57%	0	0	0%	20	3	-85%	3	2	-33%	16	1	-94%	0	0	0%	1	0	-100%	28%	17%	-40%	1.74	0.56	-68%
Koh Kong	129	132	321	103	-68%	23	10	-57%	0	0	0%	199	65	-67%	51	30	-41%	147	35	-76%	0	0	0%	1	0	-100%	22%	18%	-15%	4.02	1.27	-68%
Chhlong	100	102	685	291	-58%	131	15	-89%	1	0	-100%	148	77	-48%	69	30	-57%	79	46	-42%	0	1	100%	0	0	0%	30%	25%	-16%	8.34	3.59	-57%
Kratie	244	250	1543	743	-52%	61	25	-59%	3	0	-100%	1242	944	-24%	873	653	-25%	368	291	-21%	1	0	-100%	0	0	0%	44%	40%	-9%	11.42	6.76	-41%
Kratie	350	359	2228	1034	-54%	192	40	-79%	4	0	-100%	1390	1021	-27%	943	683	-28%	447	337	-25%	1	1	0%	0	0	0%	42%	38%	-9%	10.33	5.73	-45%
Sen Monorom	65	67	855	594	-31%	7	3	-57%	0	1	100%	604	374	-38%	359	230	-36%	243	144	-41%	2	0	-100%	0	0	0%	32%	0%	-100%	22.28	14.46	-35%
Mondul Kiri	67	69	855	594	-31%	7	3	-57%	0	1	100%	604	374	-38%	359	230	-36%	243	144	-41%	2	0	-100%	0	0	0%	32%	25%	-22%	21.73	14.10	-35%
Cheung	0	0	0	1	100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Kandal	0	0	137	30	-78%	3	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Lech	0	0	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Tbong	0	0	12	19	58%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
MOH Central Office	0	0	179	68	-62%	108	27	-75%	3	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Phnom Penh	1456	1491	328	118	-64%	111	27	-76%	3	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.23	0.08	-65%
Tbeng Meanchey	181	185	1881	1038	-45%	86	33	-62%	0	0	0%	918	423	-54%	323	155	-52%	561	260	-54%	13	4	-69%	21	4	-81%	19%	19%	0%	15.30	7.85	-49%
Preah Vihear	185	190	1881	1038	-45%	86	33	-62%	0	0	0%	918	423	-54%	323	155	-52%	561	260	-54%	13	4	-69%	21	4	-81%	19%	19%	0%	14.93	7.66	-49%
Kamchay Mear	0	0	75	50	-33%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Kampong Trabek	0	0	27	5	-81%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Mesang	0	0	6	2	-67%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Neak Loeung	0	0	25	29	16%	0	4	400%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Peareang	0	0	47	19	-60%	0	7	700%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Preah Sdach	0	0	60	17	-72%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Prey Veng	0	0	12	7	-42%	7	1	-86%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0	0	0%
Prey Veng	1041	1066	252	129	-49%	7	12	71%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0.24	0.12	-50%	
Bakan	137	141	317	90	-72%	8	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	2.31	0.64	-72%
Sampov Meas	299	306	1548	397	-74%	53	6	-89%	0	0	0%	1383	599	-57%	639	152	-76%	738	445	-40%	3	1	-67%	3	1	-67%	53%	31%	-41%	9.79	3.25	-67%
Pursat	436	446	1865	487	-74%	61	6	-90%	0	0	0%	1383	598	-57%	639	152	-76%	738	445	-40%	3	1	-67%	3	1	-67%	53%	31%	-41%	7.44	2.43	-67%
Ratanakiri	166	170	1618	1016	-37%	52	40	-23%	1	0	-100%	2170	532	-75%	1512	326	-78%	655	206	-69%	3	0	-100%	0	0	0%	29%	15%	-47%	22.82	9.12	-60%
Ratanak Kiri	165	169	1618	1016	-37%	52	40	-23%	1	0	-100%	2170	532	-75%	1512	326	-78%	655	206	-69%	3	0	-100%	0	0	0%	29%	15%	-47%	22.92	9.15	-60%

Surveillance Data by District, Jan-Jun 2013

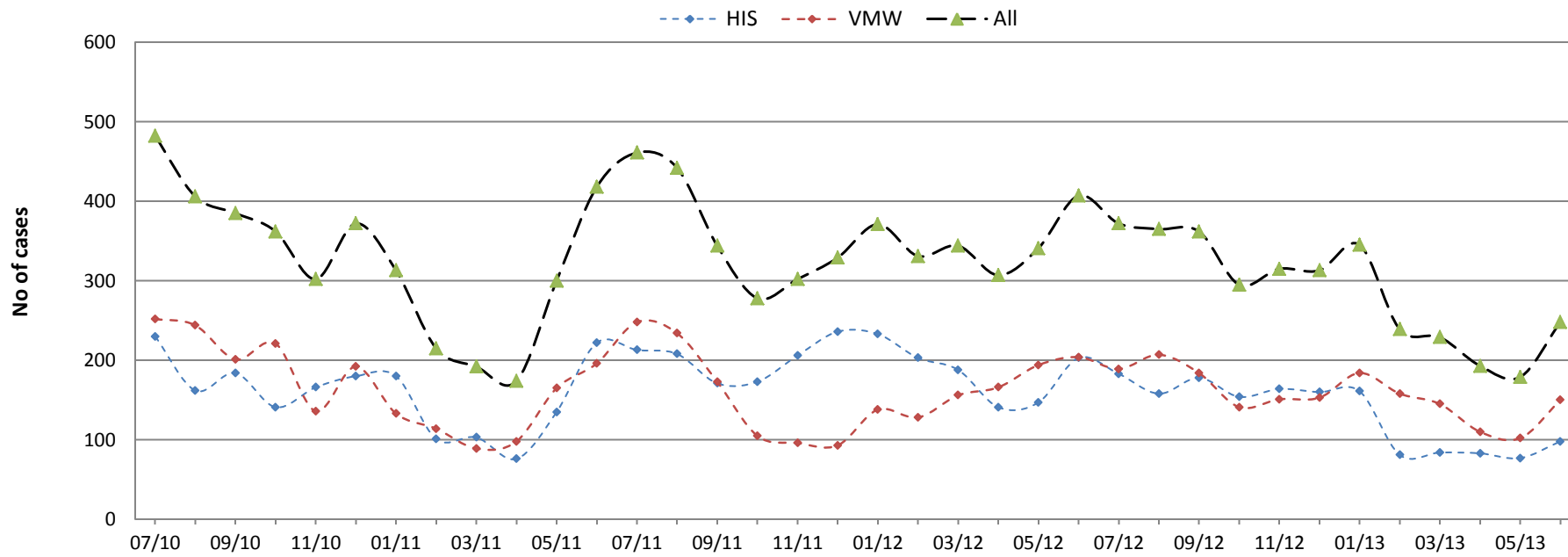
Province / Op. District	Population (x1000)		Health Facility (HIS)									Village Malaria Workers												Incidence (per 1000 pop)								
			All Cases			Severe			Deaths			All Cases			Treated Pf			Treated Pv			Referred Pf			Referred Pv			TPR					
			2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change	2012	2013	Change
Kralanh	89	91	134	91	-32%	14	9	-36%	0	0	0%	101	57	-44%	58	32	-45%	43	25	-42%	0	0	0%	0	0	0%	5%	7%	37%	2.64	1.63	-38%
Siem Reap	395	404	627	307	-51%	33	2	-94%	2	0	-100%	490	94	-81%	150	17	-89%	321	77	-76%	6	0	-100%	13	0	-100%	38%	12%	-68%	2.78	0.99	-64%
Sot Nikum	278	285	759	390	-49%	1	0	-100%	0	0	0%	344	169	-51%	134	37	-72%	210	131	-38%	0	0	0%	0	1	100%	27%	18%	-35%	3.97	1.96	-51%
Ankor Chhum	215	220	557	212	-62%	0	1	100%	0	0	0%	308	81	-74%	96	21	-78%	209	59	-72%	0	0	0%	3	1	-67%	19%	7%	-61%	4.01	1.33	-67%
Siem Reap	980	1003	2077	1000	-52%	48	12	-75%	2	0	-100%	1242	395	-68%	437	106	-76%	784	288	-63%	6	0	-100%	16	2	-88%	21%	11%	-46%	3.37	1.39	-59%
Sihanouk	241	247	183	89	-51%	3	0	-100%	0	0	0%	43	7	-84%	11	4	-64%	31	3	-90%	0	0	0%	1	0	-100%	42%	35%	-17%	0.93	0.39	-58%
Sihanoukville	243	249	183	89	-51%	3	0	-100%	0	0	0%	43	7	-84%	11	4	-64%	31	3	-90%	0	0	0%	1	0	-100%	42%	35%	-17%	0.92	0.39	-58%
Steung Treng	122.02	124.95	1010	517	-49%	32	12	-63%	2	0	-100%	1662	694	-58%	1096	440	-60%	557	253	-55%	8	0	-100%	1	1	0%	37%	29%	-21%	21.82	9.68	-56%
Stung Treng	122.02	124.95	1010	517	-49%	32	12	-63%	2	0	-100%	1662	694	-58%	1096	440	-60%	557	253	-55%	8	0	-100%	1	1	0%	37%	29%	-21%	21.82	9.68	-56%
Chi Phu	0.00	0.00	11	5	-55%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%			0%
Romeas Hek	0.00	0.00	58	10	-83%	4	2	-50%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%			0%
Svay Rieng	0.00	0.00	62	15	-76%	9	1	-89%	2	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%			0%
Svay Rieng	530.83	543.57	131	30	-77%	13	3	-77%	2	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.25	0.06	-78%
Ang Rokar	127.17	130.22	364	137	-62%	8	2	-75%	0	0	0%	16	0	-100%	1	0	-100%	15	0	-100%	0	0	0%	0	0	0%	0%	0%	0%	2.99	1.05	-65%
Bati	199.98	204.78	26	24	-8%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.13	0.12	-10%
Daun Keo	202.75	207.61	57	25	-56%	4	0	-100%	1	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.28	0.12	-57%
Kirivong	248.82	254.79	94	78	-17%	2	0	-100%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.38	0.31	-19%
Prey Kabass	150.09	153.69	11	5	-55%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.07	0.03	-56%
Takeo	928.80	951.09	552	269	-51%	14	2	-86%	1	0	-100%	16	0	-100%	1	0	-100%	15	0	-100%	0	0	0%	0	0	0%	28%	0%	-100%	0.61	0.28	-54%
Samraong	202.75	207.61	1289	714	-45%	36	30	-17%	0	0	0%	1063	955	-10%	85	98	15%	958	836	-13%	2	6	200%	18	15	-17%	31%	33%	6%	11.50	7.94	-31%
Oddar Meanchey	202.75	207.61	1289	714	-45%	36	30	-17%	0	0	0%	1063	955	-10%	85	98	15%	960	836	-13%	2	6	200%	18	15	-17%	31%	33%	6%	11.51	7.94	-31%
Kep	39.31	40.25	33	17	-48%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.84	0.42	-50%
Kep	39.31	40.25	33	17	-48%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	0.84	0.42	-50%
Pailin	77.38	79.23	241	104	-57%	8	2	-75%	0	0	0%	210	188	-10%	23	36	57%	172	128	-26%	12	2	-83%	3	22	633%	30%	28%	-4%	5.63	3.38	-40%
Pailin	77.37	79.23	241	104	-57%	8	2	-75%	0	0	0%	210	188	-10%	25	36	44%	172	128	-26%	12	2	-83%	3	22	633%	30%	28%	-4%	5.66	3.38	-40%
National Total	14702.42	15055.15	23879	11415	-52%	1114	362	-68%	28	3	-89%	15280	7387	-52%	6963	2993	-57%	8073	4295	-47%	117	25	-79%	138	76	-45%	30%	24%	-21%	2.65	1.24	-53%

Malaria Bulletin Ver 2 - Generated from CNM Malaria Database on 23/07/2013 17:18:59 including data from Online MOH HIS

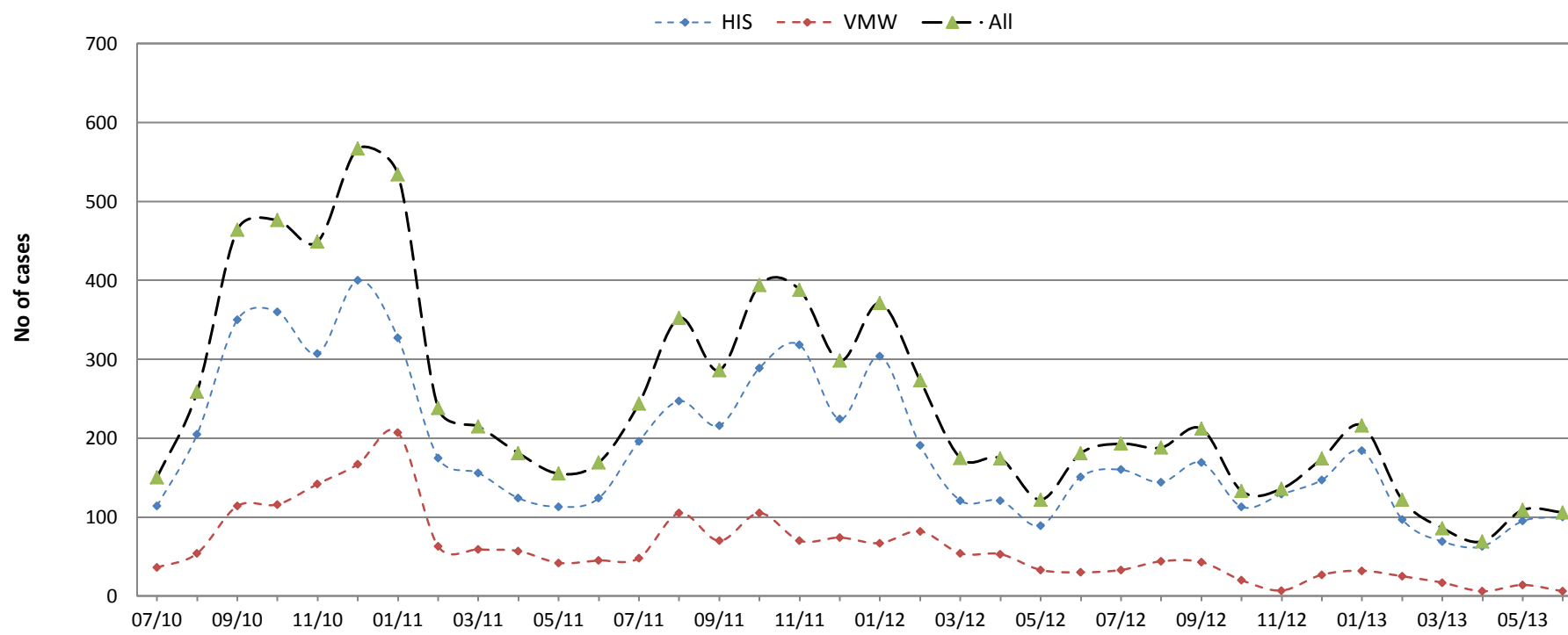
CAMBODIA MALARIA BULLETIN

MALARIA TRENDS IN BORDER AREAS*

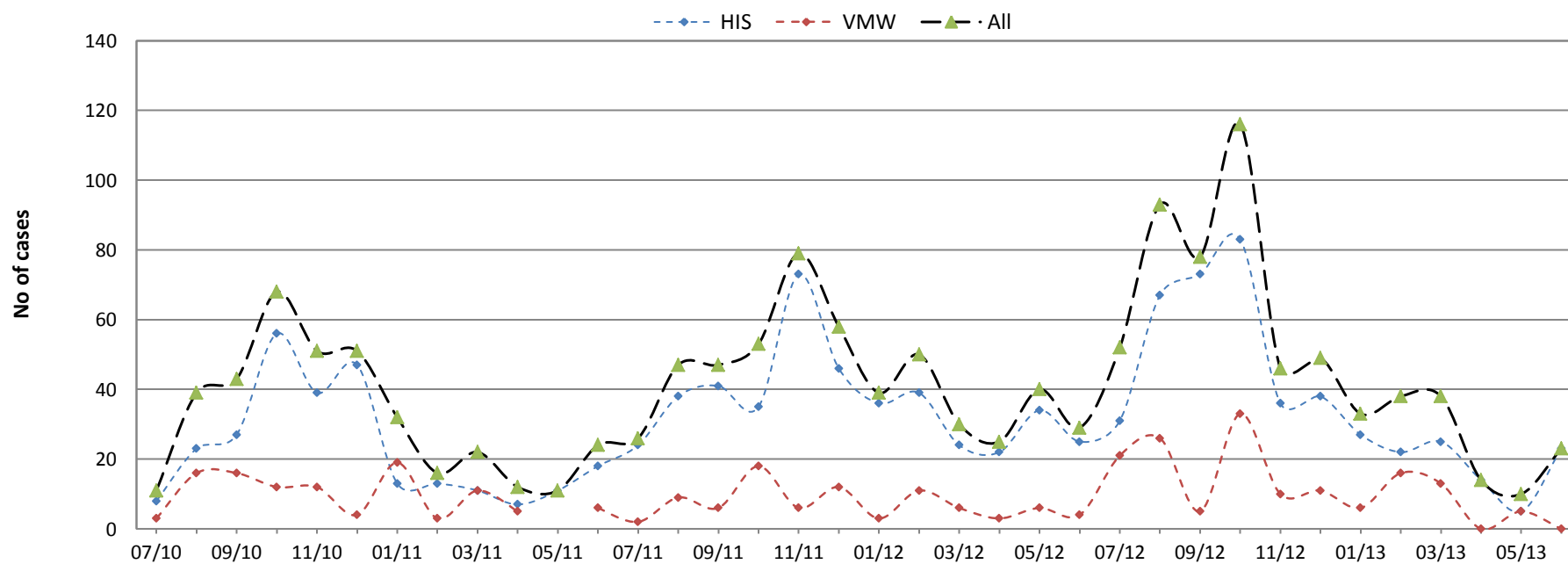
Thailand



Vietnam



Laos



* HIS data from health facilities serving border villages plus VMW data from border villages (<10km from the border).