

Table 1 Survey locations and number of interviewed VAHWs or villages (one VAHW per village)

Province	District	Commune	Number of VAHWs		
			Male	Female	Total
Kampong Cham	Prey Chhor	Mien	2	0	2
		Chrey Vien	9	1	10
		Trapeang Preas	8	5	13
		Sam Raong	4	1	5
		Srongear	5	2	7
		Lvea	3	1	4
		Sour Saen	5	0	5
		Boung Nay	9	2	11
		Krouch	2	0	2
		Baray	5	1	6
		Thma Pun	3	0	3
		Kor	8	0	8
		Khvet Thom	4	0	4
		Tong Rong	4	1	5
	Total		71	14 (16.5%)	85
Pursat	Sampov Meas	Chamraeun Phal	7	0	7
		Banteay Dei	7	0	7
		Svay At	6	1	7
		Pteas Prey	4	0	4
		Rolork Sar	2	0	2
		Roleap	7	0	7
		Prey Nhi	2	0	2
	Bakan	Svay Duon Kaev	3	0	3
		Svay Por	1	0	1
		Ta Lou	4	0	4
		Ou Tapaong	12	0	12
		Rumlech	5	0	5
		Me Tuek	4	1	5
		Boeng Khnar	14	0	14
		Snam Pras	13	1	14
		Tropeang Chornng	10	0	10
		Boeng Bat Kandal	6	0	6
		Khnar Totueng	3	0	3
	Total		110	3 (2.7%)	113
Total			181	17 (8.6%)	198

Table 2 The uses of loan as reported by the surveyed VAHWs

Use of personal loan	Kampong Cham (n = 26)		Pursat (n = 60)	
	No. of VAHWs	Percentage	No. of VAHWs	Percentage
Buy cattle	3	12	8	13
Buy other animals	1	4	4	7
Buy veterinary equipment, drugs, vaccines	5	19	5	8
Buy other agricultural materials	11	42	36	60
Buy basic household needs	6	23	10	17
Pay for school fees	5	19	7	12
Pay for health services	0	0	6	10
Pay for other urgent needs	11	42	8	13
Pay debt	7	27	6	10

Table 3 Details of number of villages and number of VAHWs including gender, by province in Cambodia from 2011-2020

No.	Province	No. village	Number of VAHWs									
			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Bantey Meanchey	652	647	569	590	600	600	541	631	588	631	431
2	Battambang	821	849	817	846	807	807	807	800	743	800	513
3	Kampong Cham	916	1,694	1,493	1,520	675	675	843	843	780	855	483
4	Kampong Chhnang	569	636	511	674	618	618	556	500	493	509	474
5	Kampong Speu	1,363	1,411	1,233	1,210	1,177	1,177	1,177	1,177	1,116	744	621
6	Kampong Thom	765	722	729	728	728	728	701	723	619	713	728
7	Kampot	488	511	416	484	511	546	504	504	504	492	490
8	Kandal	1,010	677	614	663	663	663	663	663	663	663	221
9	Koh Kong	119	121	121	104	88	88	114	116	92	110	110
10	Kratie	258	347	330	237	211	185	178	178	178	150	129
11	Monduliri	92	158	158	173	173	173	173	83	77	83	27
12	Phnom Penh	953	807	724	814	64	64	64	64	64	40	12
13	Preah Vihear	232	257	275	257	295	300	292	340	248	293	311
14	Prey Veng	1,149	1,081	1,006	1,065	984	831	831	858	786	788	800
15	Pursat	511	826	522	520	508	508	508	514	497	493	454
16	Rattanakiri	243	323	303	300	275	275	184	162	159	161	156
17	Siem Reap	909	1,089	999	1,032	644	692	687	687	687	602	255
18	Preah Sihanouk	111	155	153	149	149	149	131	83	90	57	93
19	Steung Treng	128	163	163	168	166	166	165	165	165	164	153
20	Svay Rieng	690	584	690	649	742	742	624	640	565	664	644
21	Takeo	1,119	1,294	1,255	1,255	1,411	1,337	1,337	1,337	1,337	1,351	1,273
22	Oddar Meanchey	304	394	241	244	223	223	223	115	109	189	189
23	Kep	18	30	30	32	35	35	29	32	30	32	11
24	Pailin	90	85	82	82	82	82	77	77	77	35	31
25	Thbong Kmum	873	0	0	0	557	557	1,128	1,128	1,128	1,128	311
Total (Female, %)		14,383	14,861 (1,479, 10.0%)	13,434 (1,225, 9.3%)	13,796 (1,225, 8.9%)	12,386 (984, 7.9%)	12,221 (942, 7.7%)	12,537 (1,009, 8.0%)	12,420 (1,039, 8.4%)	11,795 (977, 8.3%)	11,747 (927, 7.9%)	8,920 (551, 6.2%)

Table 4 Proportion of female and active VAHWs in each province in Cambodia during the last four years 2017-2020

Province	Female VAHWs (%)				Active VAHWs (%)			
	2017	2018	2019	2020	2017	2018	2019	2020
Bantey Meanchey	6.8	6.6	5.7	5.3	30.1	32.3	29.5	39.7
Battambang	8.1	8.6	8.1	6.0	40.9	44.0	40.9	94.0
Kampong Cham	7.5	8.1	8.1	6.6	18.5	20.0	18.7	32.5
Kampong Chhnang	1.4	1.2	2.9	2.1	61.2	62.1	60.5	87.1
Kampong Speu	5.7	5.5	3.8	2.7	47.4	50.0	56.3	36.7
Kampong Thom	14.0	15.8	14.2	14.6	22.7	26.5	27.5	54.1
Kampot	8.1	7.3	8.3	8.4	89.1	89.1	85.4	85.3
Kandal	3.9	3.8	6.2	1.8	31.1	31.1	31.1	58.4
Koh Kong	20.7	22.8	20.0	35.5	32.8	41.3	26.4	26.4
Kratie	11.8	10.1	12.7	7.0	48.9	48.9	36.7	93.0
Monduliri	7.2	5.2	7.2	11.1	24.1	26.0	24.1	29.6
Phnom Penh	3.1	3.1	2.5	0.0	57.8	57.8	52.5	100.0
Preah Vihear	27.1	35.5	25.6	17.0	37.9	52.0	19.5	28.0
Prey Veng	8.4	8.5	5.8	5.0	58.4	63.7	59.8	52.6
Pursat	3.3	3.0	3.4	1.1	49.4	51.1	44.0	74.0
Rattanakiri	1.9	1.3	0.6	1.3	7.4	7.5	10.6	17.3
Siem Reap	11.1	10.3	8.8	7.1	59.2	59.2	28.1	52.9
Preah Sihanouk	7.2	4.4	7.0	3.2	100.0	100.0	54.4	53.8
Steung Treng	2.4	1.2	2.4	3.9	21.2	21.2	31.1	32.0
Svay Rieng	11.7	12.2	6.6	2.5	23.4	26.5	40.5	81.7
Takeo	3.9	3.9	5.0	4.9	47.8	47.8	35.7	38.1
Oddar Meanchey	5.2	4.6	4.2	3.7	50.4	53.2	62.4	34.4
Kep	6.3	6.7	6.3	0.0	31.3	33.3	31.3	90.9
Pailin	9.1	6.5	0.0	3.2	45.5	45.5	71.4	51.6
Thbong Kmum	14.3	13.9	14.3	7.1	39.9	39.7	28.2	47.3
Mean (SD)	8.40 (± 5.9)	8.41 (±7.5)	7.60 (±5.9)	6.45 (±7.3)	43.05 (±21.1)	45.00 (±20.8)	40.25 (±18.3)	55.66 (±25.3)

Table 5 Perception of VAHWs on obstacles and ways to improve the uptake and effectiveness of vaccination program in their rural communities (%)

Statements	Very important	Important	Somehow important	Not important
Factors or obstacles preventing farmers from participating in the vaccination program				
Lack of knowledge on animal diseases and vaccination by farmers	86	6	5	4
Poor vaccination campaign	47	32	10	12
High cost for vaccination	23	19	22	35
Farmer did not trust vaccination (past experiences)	32	22	32	13
Lack of accessibility of FMD vaccines for farmers' animals	48	28	9	16
Contribution of local authorities at the village, commune, and district level in improving the farmers' participation in the vaccination programs				
Improve local authorities' knowledge on animal diseases and vaccination	87	12	1	0
Improve communication between local authorities and the district and provincial veterinarians on vaccination	72	23	4	1
Raise this vaccination issue in every meeting with farmers to make sure they well understood vaccination	65	24	10	2
Contribution of POAHP and DOAHP in improving the farmers' participation in the vaccination program				
They should have appropriate planning for the vaccination program	86	11	3	0
They should improve the current vaccination campaign awareness	76	22	2	1
Organise training program for farmers (animal diseases and vaccination)	89	8	2	1
Contribution of veterinary authorities in improving the effectiveness of the vaccination program				
Establish an appropriate vaccination program for farmers (planning)	89	8	2	1
Use only good quality vaccines for the vaccination program	85	14	0	1
Prepare appropriate crush sites for the vaccination activities	74	21	4.5	1
Work with different stakeholders to get more farmers' participation in the vaccination program	78	17	4	2

