



MEETS WEST FOUNDATION



CENTER FOR ENVIRONMENT AND HEALTH STUDIES

REPORT

INDEPENDENT MONITORING OF MASS DRUG
ADMINISTRATION CAMPAIGNS IN PHU THO,
HOA BINH, THANH HOA AND NGHE AN

HANOI – December 2016

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The Independent Monitoring of Schools and Commune Health Centers during Mass Drug Administration Campaigns in Phu Tho, Hoa Binh, Thanh Hoa and Nghe An was completed as scheduled. We would like to express our sincere gratitude to the East Meets West Foundation (EMW) for its technical and financial support for this assessment. Special thank goes to Mr. Paul Monaghan, Mrs. Ha Thi Thu Huong and Ms. Nguyen Hong Nhung for their valuable support.

We would like to give many thanks to Provincial Preventive Medicine Centers, Provincial Departments of Education and Training, District Departments of Education and Training, and surveyed schools in 4 target provinces for their strong support and cooperation in data collection.

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ABBREVIATION

CEHS : Center for Environment and Health Studies

CHC : Commune Health Center

CHW : Commune Health worker

DW : Deworming Day

EMW : East Meets West

MDA : Mass Drug Administration

MUD : Mop-up Day

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1. General introduction

1.1. Background

East Meets West (EMW) is partnering with Evidence Action and the Vietnamese government to implement a school-based deworming program in Phu Tho, Hoa Binh, Thanh Hoa and Nghe An. School-based mass drug administration (MDA) campaigns, whereby anthelmintic medication is administered to school-age children, are a model proven to cost-effectively control intestinal worm infections.

The first round of school-based deworming as part of this program was conducted in April 2016. The second round was scheduled to be implemented in the week of November 28 to December 5, 2016. Deworming was implemented in primary schools in two phases: (i) the main deworming day was implemented over a 1-to-2 day period (November 28 and/or November 29) targeting all school-age children attending primary schools; and (ii) a 'mop-up' day was implemented on December 5, targeting children who could not receive deworming medication on the main deworming day.

Monitoring and evaluation (M&E) is an integral component of any large-scale drug-distribution program. M&E is an essential mechanism to ensure the efficient implementation of the program so that the target population achieves maximum benefit through cost-effective treatment.

The Center for Environment and Health Studies conducted the monitoring activities in primary schools and commune health centers across the four provinces targeted by the school-based deworming program, as well as at selected training sessions in advance of deworming day. All data below is the results of the monitoring visits.

1.2. Monitoring objectives

The purpose of this monitoring exercise is to:

- Assess the quality of training provided to commune health workers and teachers
- Assess whether the expected processes are followed by commune health workers and teachers during the school-based deworming campaign
- Assess the accuracy of the reporting by the commune health staff

1.3. Study subjects

Head of the commune health centers; Front Line Workers (Commune-health workers and teachers); Head teacher; Class teachers; Students of primary schools.

1.4. Location, time and monitoring activities

Table 1. Location and time for monitoring

Monitoring Activity	Number of Monitoring Visits				Total	Dates for Monitoring
	Phu Tho	Hoa Binh	Thanh Hoa	Nghe An		
Monitoring of training of front line workers	5	4	10	8	27	Nov 16-24
Monitoring of deworming at schools	12	10	25	19	66	Nov 28-29
Coverage validation at schools & commune health centers	24	20	50	38	132	Dec. 7-9
Total number of monitoring visits	41	34	85	65	225	

The random-selection was performed by EMW/Evidence Action and the list of selected schools and alternative schools was provided to CEHS. During the week of November 16-24, 27 training sessions across the four provinces were visited. A total of 66 schools were visited on deworming day on November 28 and 29; 132 schools and CHCs were also visited for coverage validation from December 7-9. According to the original design, the assessment of coverage will be conducted in 66 main schools and 66 satellite schools following to the EMW provides. However, the satellite school of area B (Ninh Dan commune, Thanh Ba district, Phu Tho province) was merged into the main school of Ninh Dan commune in 10/2016. Therefore, the data of this school was transferred from the satellite school to the main school. Thus, the number of monitored main schools were 67 and the number of monitored satellite schools were 65.

2. How to implement and manage the monitoring

2.1. Recruitment and training of monitors

Recruitment

Sixty six monitors who are CEHS's staff, officers/lecturers from Thai Binh Medical and Pharmaceutical University were recruited to conduct the monitoring visits. All of them are required as follows:

- Having at least bachelor of public health or higher;
- Having at least 5 experience-years in implementing studies, monitoring on public health, parasites and social medicine;
- Having ability to work with high pressure and travel in difficult areas;
- Having high responsibility and ability to work independently in the field.

Training

Sixty six monitors were divided to join in two training sessions which was held in Hanoi during 2 days before implementing the official monitoring in the field. The facilitator for two training sessions was the team leader. The purpose of the training sessions was to

provide necessary information, protocols to be followed and interviewing skills for monitors. The monitors were trained and thoroughly discussed about the possible answers given for each question. For each question, the monitors were required to understand why this information should be collected. The participation of representation from East Meets West and Evidence Action contributed to further clarify the meaning of each question and any comments from monitors during the training.

Training of the independent monitors was taken place the week prior to deworming, on November 14 and 15.

2.2. How to implement and manage the monitoring

A total of 27 monitors monitored at the 27 training sessions, each monitor for one training session.

Similarly, 66 monitors visited 66 primary schools on the deworming day, each monitor for one school. The monitoring at some of selected primary schools entailed visiting both the main school and one associated satellite school.

Coverage validation was conducted on December 7-9, so one monitor visited 2 pairs of commune health centers and schools or more. It means that each monitor visited 2 commune health centers and 2 primary schools or more than 2 pairs. Thus, 66 monitors continued to conduct these monitoring visits.

Before each monitoring visit, all monitors received the list of training sessions/primary schools with the the implementation date from East Meets West and Evidence Action. All the organizers of the training sessions and selected primary schools were not be made aware in advance of the monitoring visit.

2.3. Data processing and analysis

Analysis of Data was implemented in accordance with the following process:

- Cleaning raw data: all the interviews and checklists which were collected in the field was checked, detected errors and completed before entering.
- Programming data entry by Epi Data 3.1 software.
- Data was entered twice, each time by one data entry operator by Epi Data 3.1 software. After that, comparison was made to detect and correct discrepancies in order to minimize data entry errors.
- Using SPSS software for cleaning data according to the logic of the questionnaires.

- Data analysis: The quantitative data was analyzed using SPSS 17.0 software. The statistical parameters including rate, p value, etc will be calculated. During the data analysis, the consulting firm consulted opinions from East Meets West.

Data from Training of Front Line Workers: analysis of findings from observational monitoring of the training sessions was completed. At each monitored training session, participants were asked to complete a pre- and post-test designed by EMW and Evidence Action to assess the quality of training. These tests were collected by the independent monitors and subsequently scored according to a scoring template provided by EMW and Evidence Action. The scores were inputted into a spreadsheet provided in advance by EMW and Evidence Action, but no analysis of the data was required on the part of CEHS. However, we did:

- Provide the individual spreadsheets provided by each monitor, corresponding to each training session that was monitored (27 spreadsheets in total)
- Provide a consolidated spreadsheet for each province (4 spreadsheets in total)
- Provide a consolidated spreadsheet for the four provinces combined (1 spreadsheet in total)

Data from Monitoring of Mass Drug Administration and Coverage Validation:

Analysis of findings from observational monitoring and from interviews of commune health workers, head teachers, teachers and students performed at schools on deworming day was conducted.

Data was presented for each province, as well as a combined total for the complete target area; additionally, data was also presented to differentiate between main schools and satellite schools, as well as a combined total for all schools visited.

All raw data collected during the various surveys in Excel format in English and Vietnamese was submitted to East Meets West and Evidence Action.

2.4. Problems arisen during the monitoring in the field

Due to the large monitoring areas in all districts of four provinces, during the monitoring process, the monitors had met some problems in the field, however, CEHS's coordinator in combination with staff from East Meets West had addressed all problems timely to ensure the best quality of the monitoring.

Table 2. Some problems arisen during the monitoring in the field and how to solve

Problems	How to solve
Some localities did not conduct the training on the scheduled date/venue	Monitors informed this to CEHS's coordinator. CEHS's coordinator called to confirm this with the locality and informed the monitors about date/venue for replacement.
Some districts held 2 training sessions on the day of monitoring	Monitors informed this to CEHS's coordinator. CEHS's coordinator called to confirm this with the locality and got feedbacks from EMW, then informed the monitors to select only training session, focusing on the training for CHC's staff
Some schools did not conduct deworming on the scheduled date (November 28 and/or 29) or name of satellite school was not correct	Monitors informed this to CEHS's coordinator. CEHS's coordinator called to confirm this with the locality and informed the monitors about name of the school for replacement.
During the day of the Coverage Validation monitoring, two schools had the Party Meeting at the commune, all students did not go to school.	Monitors informed this to CEHS's coordinator. CEHS's coordinator called to confirm this with the locality and got feedbacks from EMW, then informed the monitors to interview with children at their home.
A monitor who conducted the Coverage Validation in Phu Tho town suddenly got gastrointestinal diseases.	Monitors informed this to CEHS's coordinator. CEHS's coordinator got feedbacks from EMW, then replaced by other monitor to conduct the Coverage Validation on 12-13/12/2016 instead of 8-9/12/2016.
In some communes of the border areas, when knowing about the monitor's visit at school, the local authorities and border guards also visited the school to confirm information and ask about the monitor's identity, that made the monitor inconvenient during the monitoring.	The monitor immediately informed this to CEHS's coordinator. Then, CEHS's coordinator urgently contacted with local contact persons for their support. This problem was solved in 10-15 minutes after receiving the information from the monitor to ensure the monitoring carried out as planned.

3. Main findings

3.1. Some detailed information of time and location of the monitoring

Table 3. Information on monitoring activities in 4 provinces

Information	Hoa Binh	Nghe An	Phu Tho	Thanh Hoa	Total
Monitoring of Training of Front Line Workers					
• Number of training session	4	8	5	10	27
Main deworming day					
• Number of main school	10	19	12	25	66
• Number of satellite school (*)	5	6	1	7	19
Coverage validation					
• Number of main school	10	19	13	25	67
• Number of satellite school	10	19	11	25	65

(*) Satellite schools were only visited if deworming was implemented on the same day as at the main school

The table above shows all information on the monitoring activities of training of front line workers, deworming day and coverage validation. Twenty seven training sessions in 27 districts across 4 provinces were monitored; 66 main schools and 19 satellite schools were visited on the deworming day; 67 main schools and 65 satellite schools in 123 communes were visited for coverage validation (9 communes with both main and satellite schools).

Table 4. List of districts for Monitoring of Training

No.	District	Date of training	Training location	Note
Hoa Binh				
1	Yen Thuy	22 Nov-2016	Yen Thuy DHC	
2	Mai Chau	21 Nov-2016	Department of Education and Training	Changed from 22 Nov-2016
3	Luong Son	17 Nov-2016	Luong Son DHC	Changed from CPC of Cao Thang
4	Kim Boi	22 Nov-2016	Bo town CPC	
Phu Tho				
1	Tan Son	22 Nov-2016	Tan Son DHC	
2	Lam Thao	22 Nov-2016	Lam Thao DHC	
3	Doan Hung	18 Nov-2016	Doan Hung DHC	
4	Cam Khe	22 Nov-2016	Cam Khe DHC	
5	Thanh Thuy	16 Nov-2016	Thanh Thuy DHC	
Thanh Hoa				
1	Muong Lat	23 Nov-2016	Muong Lat DHC	
2	Lang Chanh	23 Nov-2016	Giao An CPC	
3	Ngoc Lac	24 Nov-2016	Cao Ngoc CPC	Changed from 23 Nov-2016
4	Cam Thuy	17 Nov-2016	Cam Yen CPC	

No.	District	Date of training	Training location	Note
5	Thach Thanh	16 Nov-2016	Thach Thanh DHC	Changed from 17 Nov-2016; Thanh Tien commune
6	Nhu Thanh	23 Nov-2016	Hai Long CPC	
7	Nhu Xuan	21 Nov-2016	Nhu Xuan DHC	Changed from Hoa Quy commune
8	Tho Xuan	24 Nov-2016	Tho Xuan DHC	Changed from 23 Nov-2016; Xuan Bai commune
9	Quang Xuong	23 Nov-2016	Political for fostering center	
10	Hau Loc	21 Nov-2016	Phu Loc CPC	Changed from 24 Nov-2016
Nghe An				
1	Quynh Luu	24 Nov-2016	Quynh Luu DHC	Changed from 22 Nov-2016
2	Vinh city	22 Nov-2016	Vinh city DHC	Changed from 18 Nov-2016
3	Ky Son	21 Nov-2016	Ky Son DHC	
4	Do Luong	21 Nov-2016	Do Luong DHC	
5	Thai Hoa town	21 Nov-2016	Thai Hoa town DHC	Changed from 22 Nov-2016
6	Tuong Duong	21 Nov-2016	Tuong Duong DHC	Changed from 18 Nov-2016
7	Nghia Dan	22 Nov-2016	Nghia Dan DHC	
8	Que Phong	22 Nov-2016	Que Phong DHC	

A total of 27 training sessions for front line workers across 4 provinces were monitored. There were changes of time in 9 training sessions and changes of training venue in 4 sessions compared with the plan.

Table 5. List of schools for monitoring on the main deworming day

No.	District	Commune	Main school	Date of deworming day	Have satellite school	Satellite school visited
Hoa Binh						
1	Tan Lac	Nam Son	Nam Son	29 Nov-2016 ⁽¹⁾	x	x
2	Luong Son	Hoa Son B	Hoa Son B	28 Nov-2016	x	x
3	Lac Thuy	Dong Tam	Dong Tam	28 Nov-2016		
4	Lac Son	Tan My	Tan My B	28 Nov-2016	x	x
5	Ky Son	Dan Ha	Dan Ha	28 Nov-2016		
6	Da Bac	Muong Chieng	Na Muoi	28 Nov-2016	x	x
7	TP Hoa Binh	Dan Chu	Dan Chu	28 Nov-2016		
8	Mai Chau	Hang Kia ⁽²⁾	Hang Kia B	28 Nov-2016		x (*)
9	Kim Boi	Kim Truy	Kim Truy	28 Nov-2016		

⁽¹⁾ Changed from 28/11/2016 as planned

⁽²⁾ Changed from Hang Kia B commune. Hang Kia B is a main school in Hang Kia commune, not a commune. Hang Kia B school is called with a different name of Thung Man school.

No.	District	Commune	Main school	Date of deworming day	Have satellite school	Satellite school visited
10	Cao Phong	Dung Phong	Xom Bai Be 1	29 Nov-2016 ⁽¹⁾		
Phu Tho						
1	Ha Hoa	Gia Dien	Gia Dien	28 Nov-2016		
2	Thanh Son	Tan Lap	Tan Lap	28 Nov-2016	x	x
3	Phu Ninh	Lien Hoa	Lien Hoa	28 Nov-2016		
4	Tan Son	Thach Kiet	Cuong Thinh I	28 Nov-2016	x	
5	Lam Thao	Hung Son	Supe	29 Nov-2016 ⁽¹⁾		
6	Thanh Ba	Dong Thanh	Dong Thanh	29 Nov-2016 ⁽¹⁾		
7	Tam Nong	Xuan Quang	Xuan Quang	29 Nov-2016 ⁽¹⁾		
8	Doan Hung	Tay Coc	Tay Coc	29 Nov-2016 ⁽¹⁾		
9	Cam Khe	Hien Da	Hien Da	28 Nov-2016		
10	Thanh Thuy	Dao Xa	Dao Xa 1	28 Nov-2016		
11	Viet Tri	Phuong Lau	Phuong Lau	28 Nov-2016		
12	Phu Tho town	Phu Ho	Phu Ho 1 ⁽³⁾	29 Nov-2016 ⁽¹⁾		
Thanh Hoa						
1	Sam Son	Truong Son	Khu A	28 Nov-2016	x	x
2	Cam Thuy	Cam Ngoc	Lang Song	29 Nov-2016	x	x
3	Ha Trung	Ha Linh	Ha Linh 2	28 Nov-2016		
4	Nong Cong	Minh Khoi	Minh Khoi	28 Nov-2016		
5	Quan Hoa	Thanh Xuan	Diem chinh	28 Nov-2016	x	x
6	Ngoc Lac	Kien Tho	Kien Tho 1 ⁽⁴⁾	29 Nov-2016	x	x
7	Vinh Loc	Vinh Khang	Vinh Khang	29 Nov-2016		
8	Hau Loc	Tuy Loc	Tuy Loc	28 Nov-2016		
9	Dong Son	Dong Minh	Dong Minh	28 Nov-2016		
10	Trieu Son	Trieu Thanh	Trieu Thanh	28 Nov-2016		
11	Hoang Hoa	Hoang Dat	Hoang Dat	29 Nov-2016		
12	Quan Son	Son Ha	Khu Ha	28 Nov-2016	x	x
13	Lang Chanh	Yen Thang	Khu Van	29 Nov-2016 ⁽¹⁾	x	x
14	Tho Xuan	Tho Xuan	Tho Xuan	28 Nov-2016		
15	Quang Xuong	Thi Tran	Thi Tran	29 Nov-2016		
16	Nga Son	Nga Tan	Nga Tan	29 Nov-2016		
17	Thuong Xuan	Xuan Le	Xuan Le	28 Nov-2016	x	
18	Thach Thanh	Thanh Van	Thanh Van	28 Nov-2016		

⁽³⁾ Phu Ho commune has 2 main schools: Phu Ho 1 has over 800 students, Phu Ho 2 has about 400 students. The monitor mis-selected the name of school visiting (selected Phu Ho 1 with more students).

⁽⁴⁾ The main school fo Kien Tho 3 has just merged into Kien Tho 1 since late 7/2016, so there was a change of school name from Kien Tho 3 to Kien Tho 1

No.	District	Commune	Main school	Date of deworming day	Have satellite school	Satellite school visited
19	Muong Lat	Quang Chieu	Quang Chieu 1	28 Nov-2016	x	
20	Thanh Hoa city	Thieu Khanh	Thieu Khanh	29 Nov-2016		
21	Tinh Gia	Mai Lam	Mai Lam	28 Nov-2016		
22	Yen Dinh	Yen Tho	Yen Tho	28 Nov-2016		
23	Bim Son	Ha Lan	Ha Lan	28 Nov-2016		
24	Nhu Xuan	Bai Tranh	Thon Cau	28 Nov-2016	x	x
25	Nhu Thanh	Hai Van	Hai Van	29 Nov-2016		
Nghe An						
1	Vinh city	Hung Binh	Hung Binh	29 Nov-2016 ⁽¹⁾		
2	Cua Lo town	Thu Thuy	Thu Thuy	28 Nov-2016		
3	Hung Nguyen	Hung Khanh	Le Loi ⁽⁵⁾	28 Nov-2016		
4	Nam Dan	Xuan Hoa ⁽⁶⁾	Le Hong Son	28 Nov-2016		
5	Nghi Loc	Nghi Phong	Nghi Phong	28 Nov-2016		
6	Quynh Luu	Quynh Hoa	Quynh Hoa	28 Nov-2016		
7	Yen Thanh	Cong Thanh	Cong Thanh 1	28 Nov-2016		
8	Do Luong	Hoa Son	Hoa son	28 Nov-2016		
9	Thanh Chuong	Thanh Thuy	Thanh Thuy	28 Nov-2016		
10	Anh Son	Tao Son	Tao Son	29 Nov-2016 ⁽¹⁾		
11	Tan Ky	Dong Van ⁽⁷⁾	Dong Van 1	28 Nov-2016		
12	Nghia Dan	Nghia Minh	Nghia Minh	28 Nov-2016		
13	Quy Hop	Chau Ly	Chau Ly 2	28 Nov-2016	x	x
14	Quy Chau	Chau Hoan	Chau Hoan	28 Nov-2016	x	x
15	Que Phong	Cam Muon 2	Cam Muon 2	28 Nov-2016	x	x
16	Tuong Duong	Thach Giam	Thach Giam	28 Nov-2016	x	x
17	Ky Son	Keng Du	Keng Du 2	28 Nov-2016	x	x
18	Thai Hoa town	Quang Phong	Quang Phong	28 Nov-2016		
19	Hoang Mai town	Quynh Xuan	Quynh Xuan A	28 Nov-2016	x	x

(*) Hang Kia commune has 2 schools including Hang Kia A and Hang Kia B. Hang Kia A has satellite schools, and Hang Kia B has no satellite schools. The monitor conducted monitoring in the satellite school of Thung Mai under the main school of Hang Kia A.

⁽⁵⁾ Name was changed from Hung Khanh school

⁽⁶⁾ Le Hong Son was changed to Xuan Hoa (Le Hong Son schools in Xuan Hoa commune)

⁽⁷⁾ Changed from Ky Son; Dong Van commune have 2 main schools, Dong Van 1 school have no satellite, Dong Van 2 school have a satellite.

On the main deworming day, if the main school had a satellite school that was implementing deworming day on the same day, that satellite school was visited after completing the monitoring at the main schools; if more than one satellite school was implementing deworming, the monitor randomly-selected one to visit. A total of 66 main schools and 19 satellite schools were visited on the deworming day (including Thung Mai satellite school, Hang Kia commune, Mai Chau, Hoa Binh). Three schools which have satellites were not visited because the deworming was not implemented on the same day with the main school.

According to initial plans, a monitor would visit the main school in Ky Son commune (Tan Ky district, Nghe An) on the deworming day, however, Ky Son implemented deworming activity on 25/11/2016, thus Ky Son was replaced by Dong Van with the consent of EMW. Therefore, 100% of monitored schools implemented the main deworming day on November 28 and/or 29 as planned.

Table 6. List of schools for coverage validation

No.	District	Main school		Satellite school	
		Commune	Main school	Commune	Satellite school
Hoa Binh					
1	Tan Lac	Quyet Chien	Trung tam	Trung Hoa	Xom Ong
2	Luong Son	Long Son	Long Son	Thanh Luong	Thanh Xuan
3	Lac Thuy	Thanh Nong	Trung tam	Thanh Nong	Ba Buong
4	Lac Son	Binh Hem	Diem chinh	Van Son	Chi Ray
5	Ky Son	Doc Lap	Doc Lap	Hop Thinh	Xom Tom
6	Da Bac	Dong Chum	Dong Chum B	Hao Ly	Suoi Thuong
7	Hoa Binh city	Thai Binh	Thai Binh	-	-
8	Mai Chau	Noong Luong	Noong Luong	Tan Mai	Nanh
9	Kim Boi	Kim Son	Xom Muon	Kim Son	Xom Lot
10	Cao Phong	Thung Nai	Xom Nai	Nam Phong	Xom Mac
11	Yen Thuy	-	-	Bao Hieu	Khuyen
Phu Tho					
1	Ha Hoa	Yen Luat	Yen Luat ⁽⁸⁾	-	-
2	Thanh Son	Cu Dong	Cu Dong	Vo Mieu	Thanh Ha
3	Phu Ninh	Phu Nham	Phu Nham	Tien Du	Khu 8
4	Tan Son	Thu Ngac	Mang Ha	Long Coc	Khu Can
5	Lam Thao	Tien Kien	Tien Kien	Tien Kien	Tien Kien le
6	Thanh Ba	Khai Xuan	Khai Xuan	-	-
		Ninh Dan	Ninh Dan	-	-

(8) Commune Party meeting, students did not go to school. Monitor interviewed with a student at his home.

No.	District	Main school		Satellite school	
		Commune	Main school	Commune	Satellite school
7	Tam Nong	Te Le	Te Le	Te Le	Khu B
8	Yen Lap	Nga Hoang	Nga Hoang ⁽⁸⁾	Trung Son	Dang
9	Cam Khe	Ta Xa 1	Ta Xa 2	Phuong Vi	Khu B
10	Thanh Thuy	Doan Ha	Doan Ha	Dao Xa	Ba Tri
11	Viet Tri	Van Co	Van Co	Van Phu	Khu B
12	Phu Tho town ⁽⁹⁾	Truong Thinh	Truong Thinh	Phu Ho	Phu Cuong
13	Doan Hung	-	-	Que Lam	Khu B
Thanh Hoa					
1	Sam Son	Quang Chau	Quang Chau	Truong Son	Khu B
2	Cam Thuy	Cam Yen	Thon 102A	Cam Son	Truong Son
3	Ha Trung	Ha Toai	Ha Toai	Ha Binh	Dong Trung
4	Nong Cong	Cong Chinh	Cong Chinh	Cong Binh	Khu B
5	Quan Hoa	Nam Tien	Pho Moi	Nam Tien	Coc 2
				Trung Son	Bo
6	Ngoc Lac	Van Am	Van Am 2	Van Am	Dong Van
7	Vinh Loc	Vinh Tan	Vinh Tan	Vinh Hung	Hung Dong
8	Hau Loc	Tuy Loc	Tuy Loc	Da Loc	Da Loc B
9	Dong Son	Dong Xuan	Dong Xuan	-	-
10	Trieu Son	Minh Chau	Minh Chau	-	-
11	Hoang Hoa	Hoang Tan	Hoang Tan	-	-
12	Quan Son	Son Ha	Khu Ha	Trung Tien	Khu Pong
				Trung Thuong	Khu Khan
13	Lang Chanh	Quang Hien	Quang Tan	Yen Thang	Khu Vin
14	Tho Xuan	Xuan Phong	Xuan Phong	Quang Phu	Nuc - mo
15	Ba Thuoc	Luong Trung	Luong Trung II	Ha Trung	Co Con
16	Quang Xuong	Quang Nham	Quang Nham 1	-	-
17	Nga Son	Nga Lien	Nga Lien 1	Nga Phu	Khu le
18	Thuong Xuan	Yen Nhan	Yen Nhan 2	Luong Son	Ngoc Thuong
				Luan Khe	Trang Cat
19	Thach Thanh	Van Du	Van Du	Thanh Long	Thanh Son
20	Muong Lat	Muong Ly ⁽¹⁰⁾	Tay Tien	Muong Ly	Muong I
21	Tinh Gia	Ninh Hai	Ninh Hai	Tan Truong	Dong Lach
22	Yen Dinh	Yen Lac	Yen Lac	Yen Lam	Khu le

(9) Changed from 8-9/12/2016 to 12-13/12/2016 because of monitor's health.

(10) Changed from Tây Tiến commune to Mường Lý because Tây Tiến school belongs to Mường Lý commune, not Tây Tiến commune.

No.	District	Main school		Satellite school	
		Commune	Main school	Commune	Satellite school
23	Bim Son	Bac Son	Bac Son	Bac Son	Khu doi 4
24	Nhu Xuan	Xuan Binh	Thon Mo	Thanh Phong	Xuan Phong
25	Nhu Thanh	Phuong Nghi	Phuong Nghi	Xuan Thai	Yen Vinh
26	Thanh Hoa city	-	-	Quang Thanh	Thanh Mai
Nghe An					
1	Vinh city	Nghi Kim	Nghi Kim	-	-
2	Cua Lo town	Nghi Tan	Nghi Tan	-	-
3	Hung Nguyen	Hung Yen Bac	HungYen Bac	Hung Trung	Co so 2
4	Nam Dan	Hung Tien	Hung Tien	Nam Thanh	Xom 8B
5	Nghi Loc	Nghi Kieu	Nghi Kieu 1	Nghi Yen	La Nham
6	Dien Chau	Dien Hoang	Dien Hoang	-	-
7	Quynh Luu	Quynh Nghia	Quynh Nghia	Tan Thang	Tan Viet
8	Yen Thanh	Nam Thanh	Nam Thanh	Lang Thanh	Khu vuc 3
9	Do Luong	Xuan Son	Xuan Son	Nam Son	Diem le
10	Thanh Chuong	Thanh Van	Thanh Van	Ngoc Lam ⁽¹¹⁾	Huong Tien
11	Anh Son	Tuong Son	Tuong Son	Duc Son	Dong Trong
12	Nghia Dan	Nghia Minh	Nghia Minh	Nghia Phu	Diem 2
13	Quy Hop	Van Loi	Van Loi	Chau Ly	Ban Xet
14	Quy Chau	Chau Hoan	Chau Hoan	Chau Hoi	Ban Tan
15	Que Phong	Nam Nhoong	Nam Nhoong	Hanh Dich	Muong Dan
16	Tuong Duong	Yen Thang	Yen Thang 2	Huu Khuong	Ban Xan
				Yen Tinh	Cha Lum
17	Ky Son	Keng Du	Keng Du 1	My Ly	Huoi Pun
				Muong Ai	Ai Khe
18	Thai Hoa town	Tay Hieu	Tay Hieu	Tay Hieu	Hung Cong
19	Hoang Mai town	Quynh Lien	Quynh Lien	-	-
20	Tan Ky	-	-	Tan Hop	Hong Son
21	Con Cuong	-	-	Thach Ngan	Ke Tat

A total of 67 main schools and 65 satellite schools at 123 communes in 71 out of the 72 districts across 4 provinces were visited for coverage validation. Most of schools and communes were monitored from December 7-9, 2016. Particularly for Phu Tho town, coverage validation was conducted on December 12-13, 2016 because of monitor's health.

⁽¹¹⁾ Changed from *Huong Tien* commune to *Ngoc Lam* because *Huong Tien* school belongs to *Ngoc Lam* commune, not *Huong Tien* commune.

3.2. Results of monitoring of training of front line workers

A total of 27 training sessions in 27 districts were selected randomly in 4 provinces for monitoring, in which, 4 training sessions in Hoa Binh, 5 sessions in Phu Tho, 10 sessions in Thanh Hoa and 8 sessions in Nghe An.

3.2.1. General information about training sessions

Facilitators and trainees

There were 41 facilitators for 27 training sessions, 1.5 facilitator per each training session on average. All facilitators were staff of DHCs. The percentage of facilitators attending the training session in the Provincial capital was 68.3% (28/41 facilitators), the percentage of facilitators receiving information from a representative who attended the training in the Provincial capital was 84.6% (11/13 facilitators). Fourteen among of 27 training sessions (51.9%) had 2 facilitators, 13 remaining sessions had only 1 facilitator.

According to data from the monitors' counting, there were four training sessions for CHC's staff only, including Yen Thuy (Hoa Binh), Doan Hung, Thanh Thuy (Phu Tho) and Tuong Duong (Nghe An), one training session for teachers only (Cam Khe, Phu Tho) and 22 remaining sessions with participation of both CHC's staff and teachers.

Table 7. Percentage of CHC's staff and teachers attending the training sessions

Information	Expected by the facilitators			Counted by monitors			
	CHC's staff	Teacher	Total	CHC's staff	Teacher	Total	
Hoa Binh	Number	100	125	225	89	72	161
	%	44.4	55.6	100.0	55.3	44.7	100.0
Phu Tho	Number	122	150	272	109	100	209
	%	44.9	55.1	100.0	52.2	47.8	100.0
Thanh Hoa	Number	268	314	582	235	302	555
	%	46.0	54.0	100.0	42.3	54.4	100.0
Nghe An	Number	207	179	386 (*)	184	139	323 (**)
	%	53.6	46.4	100.0	57.0	43.0	100.0
Total	Number	697	768	1,465	635	613	1,248
	%	47.6	52.4	100.0	50.9	49.1	100.0

(*) – Excluding 14 DHC's staff in the training session of Que Phong district; (**) – Excluding 11 DHC's staff in the training session of Que Phong district

As expected by the facilitators, there were a total of 1465 trainees (excluding 14 DHC's staff in the training session of Que Phong district), in fact, according to the data from the monitors' counting, number of trainees were 1248 (excluding 11 DHC's staff in the training session of Que Phong district). There was no significant difference between percentage of CHC's staff and teachers as expected of the facilitators (47.6% and 52.4% respectively) as well as data from the monitors' counting (50.9% and 49,1% respectively).

In six training sessions in Yen Thuy district (Hoa Binh province), Cam Thuy, Ngoc Lac, Nhu Thanh, Thach Thanh districts (Thanh Hoa province) and Ky Son district (Nghe An province), the trainers did not know the number of teachers at the main schools and satellite schools.

Table 8. Percentage of teachers in main schools and satellite schools attending the training sessions

Information		Expected by the facilitators			Counted by monitors		
		Main school	Satellite school	Total	Main school	Satellite school	Total
Hoa Binh	Number	44	75	119	67	5	72
	%	37.0	63.0	100.0	93.1	6.9	100.0
Phu Tho	Number	106	44	150	90	10	100
	%	70.7	29.3	100.0	90.0	10.0	100.0
Thanh Hoa	Number	188	49	237	157	49	206
	%	79.3	20.7	100.0	76.2	23.8	100.0
Nghe An	Number	149	11	160	124	3	127
	%	93.1	6.9	100.0	97.6	2.4	100.0
Total	Number	487	179	666	438	67	505
	%	73.1	26.9	100.0	86.7	13.3	100.0

(Only calculated among 21 training sessions that the trainers knew the number of teachers at the main schools and satellite schools)

The number of teachers at the main schools and satellite schools attended the training sessions according to the trainers' estimate in 21 remaining training sessions was 487 and 179 persons (73.1% and 26.9% respectively). And following to the monitoring data, the number of teachers at the main schools was 438 persons and 67 persons at the satellite schools (86.7% and 13.3%). The number of teachers at the satellite schools following to the data provided by the monitors was significantly lower than the estimated number of trainers (67/179 persons, 37.4%), which was focused in Mai Chau district (1 vs. 65) and Tan Son (7 vs. 40).

Table 9. Percentage of training sessions with trainees punctual

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
All present at start of training	25.0	20.0	70.0	50.0	48.1
1-5 trainees arrived after training had commenced	75.0	60.0	20.0	50.0	44.4
6-10 trainees arrived after training had commenced	0.0	0.0	10.0	0.0	3.7
≥11 trainees arrived after training had commenced	0.0	20.0	0.0	0.0	3.7
Number of training session	4	5	10	8	27

The result in the table above shows that all trainees were present at start of training at 13 among 17 training sessions (48.1%), 44.4% of training sessions with 1-5 trainees arrived after training had commenced, especially still 7.4% training sessions with more than 6 trainees arrived after training had commenced.

Table 10. Percentage of training sessions having trainees signed in the attendance sheet

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Attendance sheet signed by all trainees	2	50.0	4	80.0	4	40.0	5	62.5	15	55.6
Attendance sheet was completed by facilitator/ organizer	0	0.0	0	0.0	0	0.0	2	25.0	2	7.4
Had the attendance sheets but not to be signed by the trainees/facilitator/organizer	0	0.0	1	20.0	1	10.0	0	0.0	2	7.4
No attendance sheet was used	2	50.0	0	0.0	5	50.0	1	12.5	8	29.6
Total	4	100.0	5	100.0	10	100.0	8	100.0	27	100.0

19/27 monitored training sessions (accounting 70.4%) had the attendance sheets of trainees, in which two training sessions in Lam Thao district (Phu Tho province) and Hau Loc district (Thanh Hoa province) had the attendance sheets but not to be signed by the trainees, and two training sessions in Que Phong and Ky Son districts (Nghe An province) had the attendance sheets completed by the trainers. Eight training sessions which did not use the attendance sheets consist of Mai Chau, Yen Thuy districts (Hoa Binh province), Nhu Thanh, Quang Xuong, Cam Thuy, Ngoc Lac, Lang Chanh districts (Thanh Hoa province) and Nghia Dan district (Nghe An province).

Materials distributed to participants

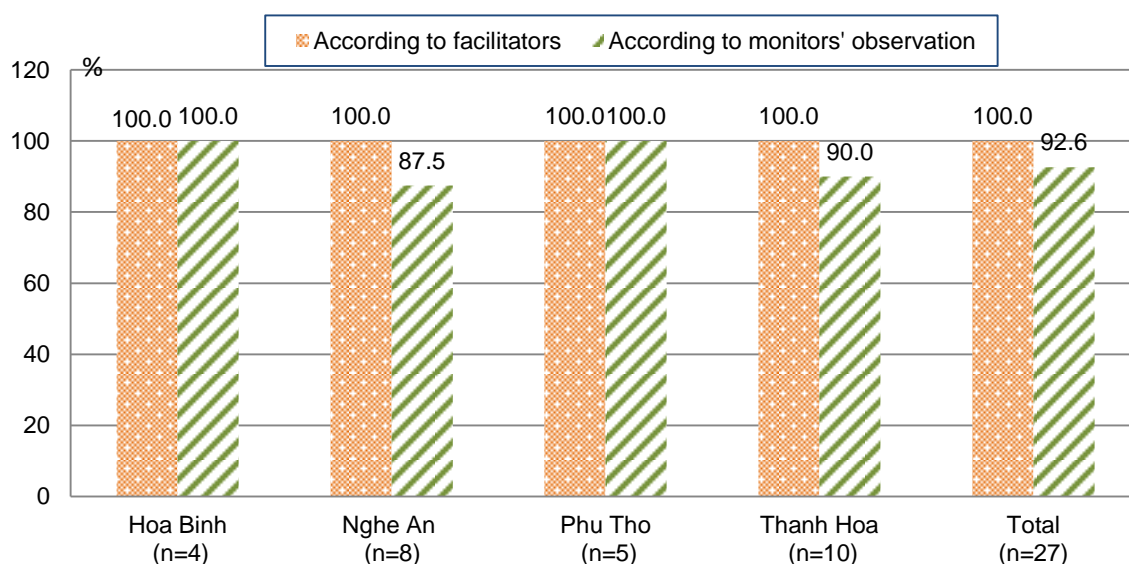


Figure 1. Percentage of training sessions with training hand-out provided to each participant

According to facilitators, training hand-out would be provided to each participant at 100% of training sessions, however, results from monitors' observation showed that trainees at 2 training sessions (7.4%) were not provided training hand-out, including Tho Xuan district (Thanh Hoa province) and Do Luong district (Nghe An province).

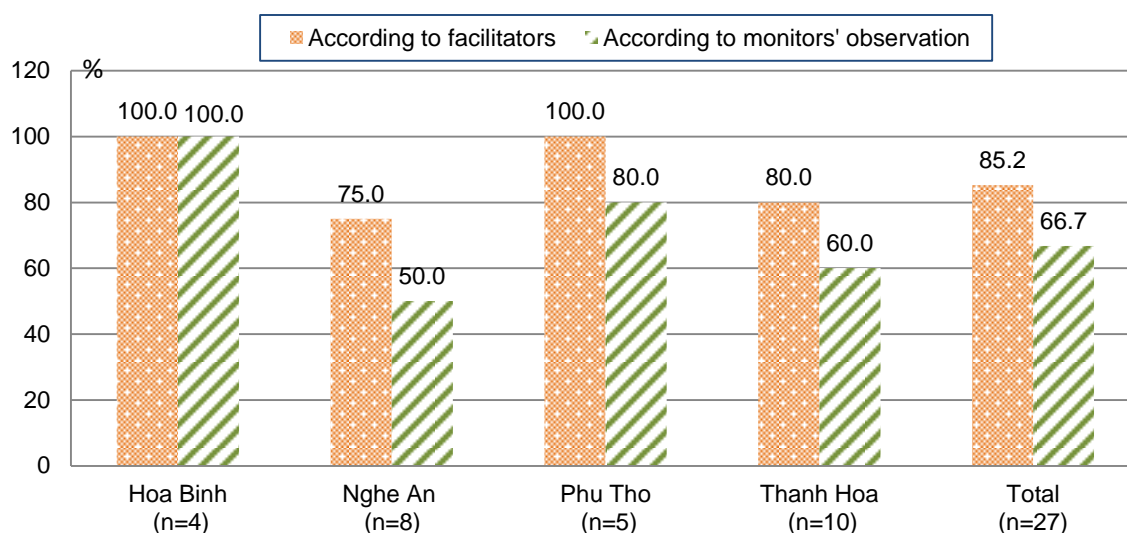


Figure 2. Percentage of training sessions with stationery provided to all participants

The percentage of training sessions with stationery provided to all participants was 66.7% according to monitors' observation, lower than answer of facilitators (85.2%). Nine training sessions did not provide stationery to all trainees, including Cam Khe (Phu Tho), Cam Thuy, Hau Loc, Lang Chanh, Tho Xuan (Thanh Hoa), Vinh city, Quynh Luu, Nghia Dan, Que Phong (Nghe An).

Table 11. Percentage of training sessions with other materials distributed to participants, apart from training hand-outs and stationery

Material	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	Estimated by trainers	Observed by monitors	Estimated by trainers	Observed by monitors	Estimated by trainers	Observed by monitors	Estimated by trainers	Observed by monitors	Estimated by trainers	Observed by monitors
No other materials will be distributed	0.0	0.0	20.0	20.0	20.0	20.0	0.0	0.0	11.1	11.1
Albendazole	75.0	100.0	40.0	40.0	50.0	50.0	100.0	75.0	66.7	63.0
Banners to be hung at schools	75.0	100.0	60.0	80.0	60.0	60.0	100.0	100.0	74.1	81.5
Scripts for loudspeaker announcements	50.0	25.0	40.0	60.0	60.0	70.0	75.0	75.0	59.3	63.0
Permission forms	75.0	100.0	40.0	80.0	70.0	60.0	87.5	100.0	70.4	81.5
Commune reporting forms	100.0	100.0	20.0	60.0	80.0	60.0	75.0	87.5	70.4	74.1
Reporting forms for severe adverse events	0.0	0.0	20.0	40.0	60.0	40.0	62.5	75.0	44.4	44.4
Total (n)	4		5		10		8		27	

Apart from training hand-outs and stationery distributed to participants, 81.5% of training sessions provided banners to be hung at schools, 81.5% of training sessions distributed permission forms, 63.0% of training sessions distributed albendazole and 63.0% of sessions

distributed scripts for loudspeaker announcements. However, only 44.4% of sessions provided reporting forms for severe adverse events and 3 among 27 (11.1%) training sessions did not distribute other materials, including Tan Son (Phu Tho), Ngoc Lac, Nhu Thanh (Thanh Hoa).

Training time

Twenty five among 27 training sessions (92.6%) were held in the morning, training session in Hau Loc (Thanh Hoa) and Ky Son (Nghe An) were conducted in the afternoon.

Table 12. Duration of training

Time	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
<1 hour	0	0.0	0	0.0	0	0.0	1	12.5	1	3.7
1 - 1.5 hours	0	0.0	1	20.0	1	10.0	0	0.0	2	7.4
1.5 - 2 hours	1	25.0	1	20.0	1	10.0	1	12.5	4	14.8
2 - 2.5 hours	2	50.0	0	0.0	3	30.0	2	25.0	7	25.9
2.5 – 3 hours	1	25.0	1	20.0	1	10.0	4	50.0	7	25.9
3 – 3.5 hours	0	0.0	0	0.0	1	10.0	0	0.0	1	3.7
3.5 – 4 hours	0	0.0	2	40.0	3	30.0	0	0.0	5	18.5
Total	4	100.0	5	100.0	10	100.0	8	100.0	27	100.0

Data in the table above shows most training sessions lasted from 2-3 hours (51.8%). However, training class in Tuong Duong was held within 1 hour (from 9.00 to 10.00 am) and 2 training classes in Thanh Thuy (Phu Tho) and Thach Thanh (Thanh Hoa) lasted from 1-1.5 hours.

How the presentation material used by the facilitator

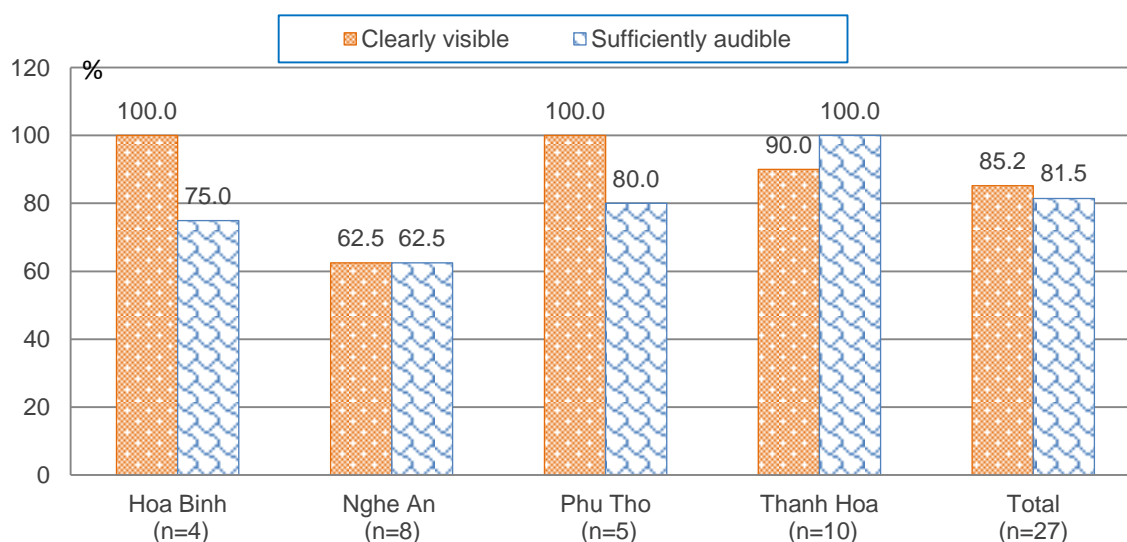


Figure 3. Percentage of training sessions with presentation material of trainers used clearly visible and sufficiently audible

According to assessment of the monitors, 85.2% of training sessions had presentation material of trainers used clearly visible, in which the lowest was found in Nghe An province (62.5%).

Following to observation of the monitors, two training sessions in Thai Hoa and Que Phong districts (Nghe An provinces) did not use projector but only by oral presentation.

Aslo following to assessment of the monitors, the percentage of training sessions with presentation material of trainers used sufficiently audible achieved 81.5%, in which the lowest was found in Nghe An province (62.5%), followed by Hoa Binh province (75.0%), Phu Tho (80.0%) and the highest in Thanh Hoa province (100.0%).

3.2.2. Topics covered during the training

Table 13. Percentage of training sessions where facilitators provided some topics related STH

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Introduce the epidemiology of STH	100.0	100.0	100.0	87.5	96.3
Introduction to each of the three types of STH	100.0	100.0	90.0	100.0	96.3
Show pictures of each of the three types of worms	100.0	80.0	100.0	87.5	92.6
Discuss the transmission cycles of STH worms	75.0	100.0	100.0	87.5	92.6
Explain that morbidity is typically associated with the intensity of infection	75.0	80.0	100.0	87.5	88.9
Long-term impacts of STH infection for children	100.0	100.0	100.0	100.0	100.0
Health impact of STH infections	100.0	100.0	100.0	100.0	100.0
Methods for preventing STH infection	100.0	80.0	100.0	87.5	92.6
Number of training session	4	5	10	8	27

The results in the table above shows that topics related to STH were introduced in most training sessions, ranging from 88.9% to 100%. The lowest rate was “explain that morbidity is typically associated with the intensity of infection” and the highest rate was “long-term impacts of STH infection for children” and “health impact of STH infections” (100%). In general, facilitators in Thanh Hoa provided these topics with higher rate than 3 remaining provinces.

Table 14. Percentage of training sessions that the facilitators mentioned long-term impacts of STH infection for children

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Impaired physical growth	0.0	0.0	0.0	0.0	0.0
Impaired intellectual development	100.0	100.0	100.0	75.0	92.6
Effects on education	100.0	100.0	90.0	25.0	74.1
Other	0.0	20.0	0.0	12.5	7.4
Number of training session	4	5	10	8	27

Following to the observation of monitors, most of training sessions (92.6%) mentioned the long-term impacts of STH infection for the children “Impaired intellectual development”. However, no training sessions that the facilitators mentioned the impact “Impaired physical growth”.

Table 15. Percentage of training sessions that the facilitators mentioned health impact of STH infections

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Abdominal discomfort	75.0	100.0	60.0	75.0	74.1
Nausea	75.0	100.0	80.0	62.5	77.8
Malnourishment	75.0	100.0	100.0	100.0	96.3
Stunting of growth	75.0	100.0	90.0	75.0	85.2
Diarrhoea	100.0	100.0	100.0	75.0	92.6
Anaemia	100.0	100.0	80.0	75.0	85.2
Other	25.0	0.0	40.0	12.5	22.2
Number of training session	4	5	10	8	27

It was found a high percentage of session trainings that the facilitators mentioned "Malnourishment" and "Diarrhea" are two health impact of STH infections (96.3% and 92.6% respectively). Other impacts such as abdominal discomfort, nausea, stunting growth, anemia ranged between 74.1%-85.2%. 100% of training sessions in Phu Tho province that the facilitators mentioned all six health impacts of STH infection.

Table 16. Percentage of training sessions that the facilitators mentioned methods for preventing STH infection

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Using latrines/not practicing open defecation	75.0	60.0	100.0	87.5	85.2
Washing hands after using toilet	75.0	80.0	100.0	87.5	88.9
Washing hands before handling food	75.0	80.0	100.0	62.5	81.5
Washing hands before eating	100.0	80.0	100.0	75.0	88.9
Use of clean, dedicated water source for drinking	75.0	60.0	100.0	75.0	81.5
Not using human waste for fertilizer	75.0	80.0	90.0	75.0	81.5
Cover food to protect from flies	75.0	60.0	90.0	50.0	70.4
Wearing sandals/shoes to protect against hookworm	75.0	60.0	80.0	62.5	70.4
Educating communities about STH	75.0	80.0	90.0	75.0	81.5
Regular deworming	100.0	80.0	90.0	75.0	85.2
Number of training session	4	5	10	8	27

The contents related to methods for preventing STH infection were mentioned by from 70.4% to 88.9% of the facilitators of training sessions. In general, the training sessions in Thanh Hoa province mentioned this issue more sufficiently than the remaining training sessions in Hoa Binh, Phu Tho and Nghe An provinces.

Table 17. Percentage of training sessions where facilitators provided some activities before the MDA

Contents	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Methods of community sensitization could be implemented in schools prior to the MDA	100.0	100.0	100.0	100.0	100.0
Methods of community sensitization could be implemented in communities prior to the MDA	100.0	100.0	100.0	100.0	100.0
Schools will be expected to display banners at schools prior to the MDA	100.0	100.0	100.0	100.0	100.0
CHC's staff will be provided with scripts which should be used for making announcements over community loudspeakers	75.0	100.0	70.0	75.0	77.8
Need to distribute permission forms to the children 2-3 days prior to the MDA	100.0	100.0	100.0	100.0	100.0
Schools need to provide the commune health centers with individual class lists in advance of deworming day	100.0	100.0	100.0	87.5	96.3
CHC's staff have to bring the class lists to the school on the morning of deworming	75.0	100.0	100.0	87.5	92.6
CHC's staff also have to bring the commune list of school-age children to the school on the day of deworming in order to record non-enrolled children who arrive at the school to be dewormed	75.0	100.0	90.0	75.0	81.5
Number of training session	4	5	10	8	27

Monitoring results showed that 4 topics were mentioned by facilitators at 100% of training sessions including methods of community sensitization could be implemented in schools and community prior to the MDA, "schools will be expected to display banners at schools prior to the MDA" and "need to distribute permission forms to the children 2-3 days prior to the MDA". On the contrary, 77.8% of training sessions where facilitators mentioned to "CHC's staff will be provided with scripts which should be used for making announcements over community loudspeakers" and 81.5% for "CHC's staff have to bring the class lists to the school on the morning of deworming".

Table 18. Percentage of training sessions that the facilitators mentioned methods of community sensitization could be implemented in schools prior to the MDA

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Hang banners at school	100.0	100.0	100.0	87.5	96.3
Loudspeaker announcements at schools	0.0	0.0	0.0	0.0	0.0
Announcements at assembly/flag-raising	100.0	40.0	90.0	75.0	77.8
Announcements to individual classes	100.0	60.0	80.0	87.5	81.5
Class discussion about worms & deworming	100.0	40.0	50.0	62.5	59.3
Official Parent/Teacher meeting	100.0	40.0	80.0	75.0	74.1
Parental outreach by teachers	100.0	60.0	50.0	37.5	55.6
Write in students' books	75.0	40.0	30.0	62.5	48.1
Other	0.0	0.0	0.0	12.5	3.7
Number of training session	4	5	10	8	27

The methods of community sensitization could be implemented in schools prior to the MDA mentioned the most by the facilitators of training sessions were "Hang banners at school" (96.3%), followed by "Announcements to individual classes" (81.5%). However, no training sessions mentioned the method "Loudspeaker announcements at schools". The other methods ranged 48.1%-77.8%.

Table 19. Percentage of training sessions that the facilitators mentioned methods of community sensitization could be implemented in communities prior to the MDA

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Loudspeaker announcements	0.0	0.0	0.0	0.0	0.0
Community outreach by commune health workers	100.0	60.0	70.0	75.0	74.1
Notices displayed inside/outside commune health centers	75.0	60.0	60.0	100.0	74.1
Notices displayed at public buildings	75.0	40.0	40.0	25.0	40.7
Other	0.0	0.0	0.0	12.5	3.7
Number of training session	4	5	10	8	27

Following to the observation of monitors, no facilitators mentioned the method "notice on the loudspeaker" could be implemented in communities prior to the MDA. Three other methods include "Community outreach by commune health workers", "Notices displayed inside/outside commune health centers" and "Notices displayed at public buildings" ranged at 40.7% to 74.1%.

Table 20. Percentage of training sessions where facilitators mentioned some contents related to deworming

Contents	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Albendazole is a very safe drug that has been given to tens of millions of people around the world	100.0	100.0	100.0	100.0	100.0
Rationale behind school-based deworming	100.0	100.0	100.0	87.5	96.3
Which children should NOT be given deworming drugs	100.0	100.0	100.0	100.0	100.0
It's safe to deworm children if they have not eaten breakfast	100.0	80.0	80.0	50.0	74.1
It's safe to deworm children if they have been dewormed recently	100.0	80.0	90.0	37.5	74.1
Deworming should happen in the morning to make it easier to observe all children for at least 2 hours afterwards in order to monitor children for side effects	100.0	100.0	90.0	75.0	88.9
What potential side effects to the deworming medication	100.0	100.0	100.0	100.0	100.0
The symptoms of side effects should pass quickly	100.0	100.0	90.0	100.0	96.3
How should mild side effects be managed	100.0	100.0	100.0	100.0	100.0
What action should be taken if a child suffers a serious side effect	100.0	100.0	100.0	100.0	100.0
Number of training session	4	5	10	8	27

About 74.1% of training sessions where facilitators explained that it's safe to deworm children if they have not eaten breakfast, the lowest rate was found in Nghe An (50.0%). Similarly, 74.1% of

training sessions where facilitators mentioned that it's safe to deworm children if they have not eaten breakfast, ranging from 37.5% in Nghe An to 100% in Hoa Binh.

Table 21. Percentage of training sessions where facilitators mentioned which children should NOT be given deworming drugs

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Children who feel unwell	100.0	80.0	100.0	100.0	96.3
Children currently taking any other medication	100.0	80.0	100.0	100.0	96.3
Children with no signed permission form	75.0	80.0	80.0	75.0	77.8
Children who previously reacted badly to deworming medication	50.0	80.0	70.0	37.5	59.3
Children who have not eaten breakfast	25.0	40.0	30.0	62.5	40.7
Children who have been dewormed recently	0.0	60.0	50.0	87.5	55.6
Other	25.0	0.0	0.0	0.0	3.7
Number of training session	4	5	10	8	27

Two groups of children should not be given deworming drugs mentioned the most by the facilitators were "Children who feel unwell" and "Children currently taking any other medication" (with 96.3%). Conversely, 40.7% of training sessions that the facilitators reported that "Children who have not eaten breakfast" should not be given deworming drugs, in which that was higher in Nghe An province (62.5%) than the remaining three provinces (25.0%- 40%).

Table 22. Percentage of training sessions where facilitators mentioned potential side effects to the deworming medication

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Abdominal pain/stomach ache	100.0	100.0	80.0	75.0	85.2
Nausea	100.0	80.0	100.0	100.0	96.3
Vomiting	100.0	100.0	80.0	87.5	88.9
Diarrhea	100.0	100.0	80.0	87.5	88.9
Fatigue	100.0	60.0	90.0	100.0	88.9
Headache	50.0	40.0	40.0	75.0	51.9
Other	0.0	0.0	10.0	0.0	3.7
The facilitator said that albendazole is very safe and doesn't cause any side effects	0.0	0.0	10.0	0.0	3.7
Number of training session	4	5	10	8	27

The potential side effects to the deworming medication mentioned by the most of facilitators were "nausea" (96.3%), the other side effects such as abdominal pain/stomach pain, vomiting, diarrhea, fatigue, headache accounted for 51.9%-88.9%. Besides, still 10.0% of training sessions in Thanh Hoa province where the facilitators "albendazole is very safe and doesn't cause any side effects".

Table 23. Percentage of training sessions where facilitators mentioned how should be managed mild side effects

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Separate the child from the rest of the class	100.0	100.0	80.0	75.0	85.2
Make the child lie down in an open and shaded area	100.0	100.0	70.0	75.0	81.5
Offer the child water	75.0	100.0	60.0	87.5	77.8
Immediately alert a medical team	75.0	60.0	50.0	62.5	59.3
Immediately alert the parents	25.0	20.0	10.0	12.5	14.8
Immediately stop all deworming activities in the school	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	10.0	0.0	3.7
Number of training session	4	5	10	8	27

According to the guideline, when a child complains of a mild side effect, it is necessary "Separate the child from the rest of the class" and "Make the child lie down in an open and shaded area". The results in the table above show that the percentage of training sessions where the facilitators mentioned these two contents was 85.2% and 81.5% respectively, in which that was in Hoa Binh and Phu Tho provinces higher than in Thanh Hoa and Nghe An provinces.

Table 24. Percentage of training sessions where facilitators mentioned what action should be taken if a child suffers a serious side effect

Topics	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Separate the child from the rest of the class	100.0	100.0	100.0	87.5	96.3
Stop deworming immediately	100.0	80.0	60.0	50.0	66.7
Reassure the child, and all other children	100.0	100.0	80.0	62.5	81.5
Alert the head of the commune health center immediately	50.0	80.0	90.0	75.0	77.8
Child should be taken to the nearest medical facility if necessary	100.0	100.0	80.0	62.5	81.5
Parents of the child should be informed	100.0	100.0	60.0	62.5	74.1
A report, using an official serious reporting form, should be completed by the head of the commune health center	100.0	100.0	50.0	25.0	59.3
Other	25.0	20.0	20.0	0.0	14.8
Number of training session	4	5	10	8	27

Just following to the guideline, if a child faces a serious reaction after using drug, one of the most appropriate response is "Stop deworming immediately" and "Alert the head of the commune health center immediately". Accordingly, 66.7% and 77.8% of training sessions where the facilitators mentioned two these contents.

Table 25. Percentage of training sessions where facilitators provided some contents need to be done in the deworming day

Contents	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
The teacher/commune health worker should explain to the children about worms and deworming prior to administering the tablets	100.0	60.0	90.0	75.0	81.5
The children should be provided with clean drinking water	100.0	100.0	100.0	100.0	100.0
Each child should be given 1 tablet of albendazole	100.0	100.0	100.0	100.0	100.0
The children should be advised to CHEW the tablet before swallowing it	100.0	100.0	100.0	87.5	96.3
The teachers and CHC's staff should ensure that children SWALLOW the tablet	100.0	100.0	100.0	87.5	96.3
A tick (✓) should be placed beside the name of each child in in the class lists after the child swallows the tablet	100.0	100.0	100.0	87.5	96.3
Non-enrolled children will be dewormed if they arrive at the school on deworming day	75.0	60.0	80.0	75.0	74.1
Children should remain on school premises for at least 2 hours after being dewormed in order to monitor children for side effects	100.0	100.0	100.0	100.0	100.0
Number of training session	4	5	10	8	27

According to the monitoring results, about 74.1% of training sessions where facilitators explained that “non-enrolled children will be dewormed if they arrive at the school on deworming day” (ranging from 60.0% in Phu Tho to 80.0% in Thanh Hoa). The content of “the teacher/commune health worker should explain to the children about worms and deworming prior to administering the tablets” was also provided at 81.5% of training sessions.

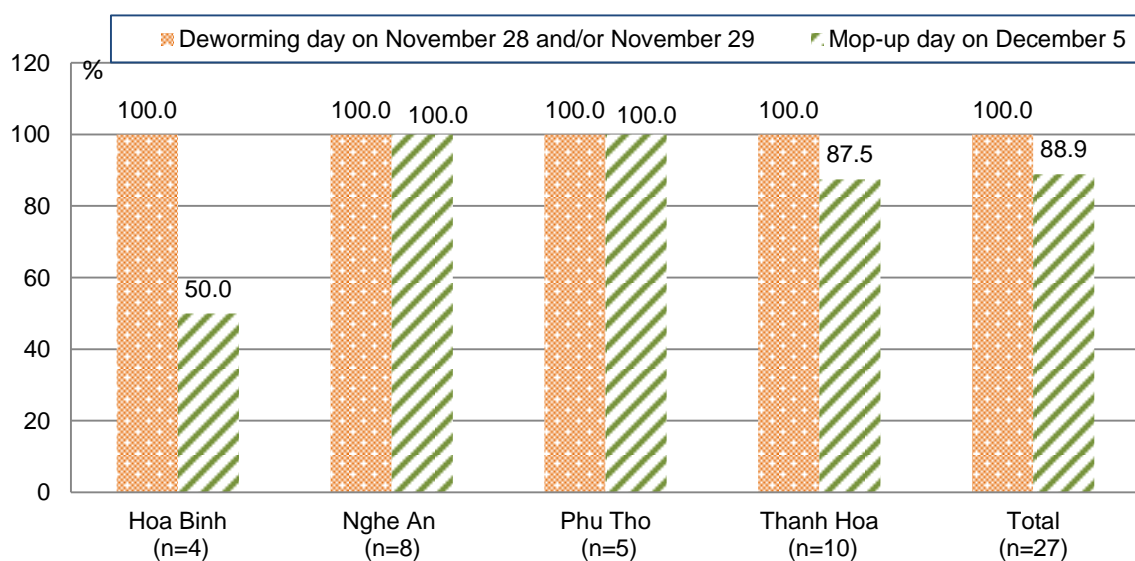


Figure 4. Percentage of training sessions where facilitators informed the participants about the dates for the principal deworming day and mop-up day

The principal deworming day on November 28 and/or 29 2016 was informed by facilitators at all training sessions (100%). However, only 88.9% training sessions where facilitators mentioned to the mop-up day December 5, 2016, in which facilitators at 2 training sessions of Kim Boi and Mai Chau (Hoa Binh) informed that the mop-up day would be conducted on December 2nd 2016. Training session in Tuong Duong (Nghe An) did not mentioned to the mop-up day.

Table 26. Percentage of training sessions where facilitators explained some contents related to reporting

Contents	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
The facilitator show the "Information Cascade"	100.0	100.0	90.0	62.5	85.2
Only serious adverse events have to be reported	100.0	100.0	80.0	87.5	88.9
Show an example of the serious adverse event reporting form	0.0	60.0	50.0	50.0	44.4
The head of the commune health center has the responsibility of completing the commune reporting form after the MDA	100.0	80.0	100.0	87.5	92.6
The deadline by which communes have to submit their commune report to the district health center on 7/12/2016	100.0	80.0	90.0	75.0	85.2
Show an example of the reporting form used for the reporting cascade	0.0	40.0	50.0	50.0	40.7
Commune health centers that they must keep copies of the class lists and the commune reporting form	75.0	40.0	90.0	87.5	77.8
The independent monitors may arrive unannounced at schools and commune health centers during deworming day and/or in the days after deworming	50.0	100.0	70.0	75.0	74.1
Number of training session	4	5	10	8	27

"Show an example of the reporting form used for the reporting cascade" was mentioned at 40.7% of training sessions, ranging from 0% in Hoa Binh to 50% in Thanh Hoa and Nghe An. Also 44.4% of training sessions where the facilitators showed an example of the serious adverse event reporting form (ranging from 0.0%-60.0%). Other contents related to reporting such as "Information Cascade", serious adverse events have to be reported, the deadline by which communes have to submit their commune report to the district health center on 7/12/2016, commune health centers must keep copies of the class lists and the commune reporting form were mentioned by facilitators at 77.8%-92.6% of training sessions.

Table 27. Three most common questions that were asked by the trainees at the end of the training session (%)

Questions	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
What children to exclude from deworming	25.0	40.0	20.0	37.5	29.6
Managing serious adverse events	0.0	20.0	10.0	37.5	18.5
The safety of albendazole	0.0	20.0	20.0	12.5	14.8
No questions were asked	50.0	20.0	70.0	25.0	44.4
Number of training session	4	5	10	8	27

No questions were asked by trainees at nearly ½ of training sessions (44.4%) (ranging from 20.0%-70.0%). Three most common questions that were asked by the trainees included “What children to exclude from deworming”, “Managing serious adverse events” and “The safety of albendazole” with rate of 29.6%, 18.5% and 14.8% respectively. The results also showed that 13/27 training sessions (accounted for 48.1%) where facilitators answered all trainees’s questions. If it was counted for 13 among 15 training sessions where questions were asked by the trainees, this rate of facilitators answered all trainees’s questions was 86.7%.



Training session in Nghia Dan, Nghe An



Training session in Thach Thanh, Thanh Hoa



Training session in Yen Thuy, Hoa Binh



Materials were distributed to participants (Banners, Scripts for loudspeaker announcements, Permission forms)

3.3. Results of observation and interviews on the deworming day

3.3.1. Observation of deworming process at main schools and satellite schools

A total of 85 schools (66 main and 19 satellite schools) were visited, however, observation of deworming process was conducted at 80 schools (66 main and 14 satellite schools). The reason is that the drug-administration at 3 satellites in Nghe An and 2 satellites in Thanh Hoa had been completed before monitors visited. Thus, the number of satellite schools visited in the table below does not correspond to the numbers listed in Table 2. All the analysis in this part is for the observation of deworming process at 66 main and 14 satellite schools.

Table 28. Time of the deworming

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Before 10am	9	90.0	12	100.0	25	100.0	19	100.0	65	98.5
After 2pm	1	10.0	0	0.0	0	0.0	0	.0	1	1.5
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0
Satellite school										
Before 10am	3	60.0	1	100.0	4	80.0	2	66.7	10	71.4
Between 10am-12pm	1	20.0	0	0.0	0	0.0	1	33.3	2	14.3
After 2pm	1	20.0	0	0.0	1	20.0	0	0.0	2	14.3
Total	5	100.0	1	100.0	5	100.0	3	100.0	14	100.0

Most of main schools implemented deworming for students before 10am (98.5%), meanwhile only 71.4% of satellite schools implemented deworming for students before 10am, 14.3% of satellite schools implemented deworming from 10.am to 12.am and 14.3% of satellite schools implemented deworming for students in the afternoon.

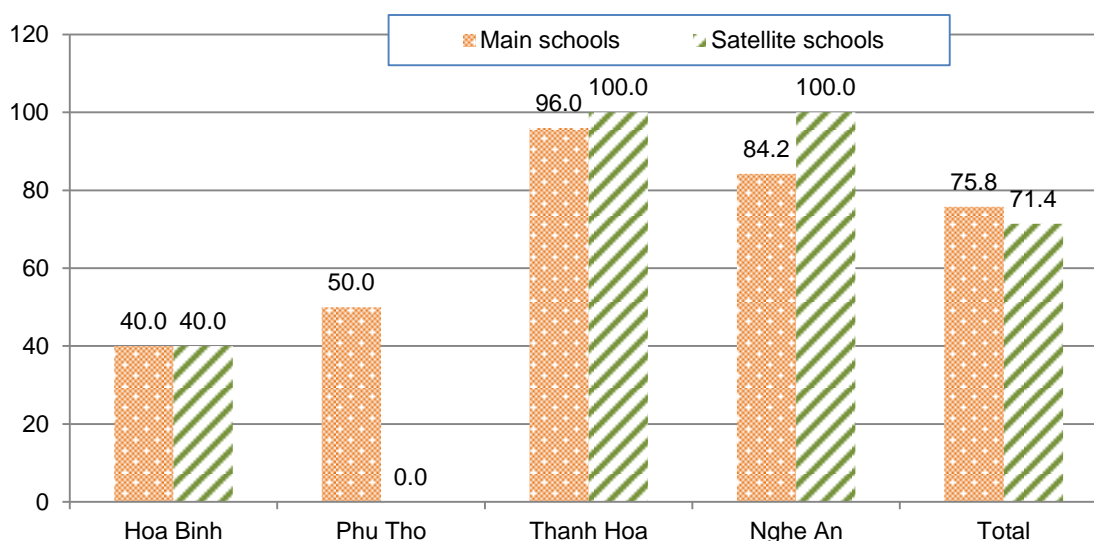


Figure 5. Percentage of all visited schools where CHC's staff/teachers explained to the children about worms and deworming before drug-administration

Explaining for the students about worms and deworming before drug-administration is an important step in the deworming at the schools, but still a lot of CHC's staff and teachers ignored this, especially only 4/10 main schools and 2/5 satellite schools in Hoa Binh provinces implemented this step. One satellite school in Phu Tho province under the monitoring did not explain to the children about worms and deworming before drug-administration.

Table 29. Percentage of all visited schools where CHC's staff/teachers explained to the children about mild side effects might occur

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Yes	4	40.0	5	41.7	20	80.0	14	73.7	43	65.2
No	6	60.0	7	58.3	5	20.0	5	26.3	23	34.8
Total number of schools visited	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Explaining about mild side effects might occur is also very important, but only less than 2/3 of the schools performed, in which the lowest was found in Hoa Binh and Phu Tho provinces, and the highest was found in Thanh Hoa province.

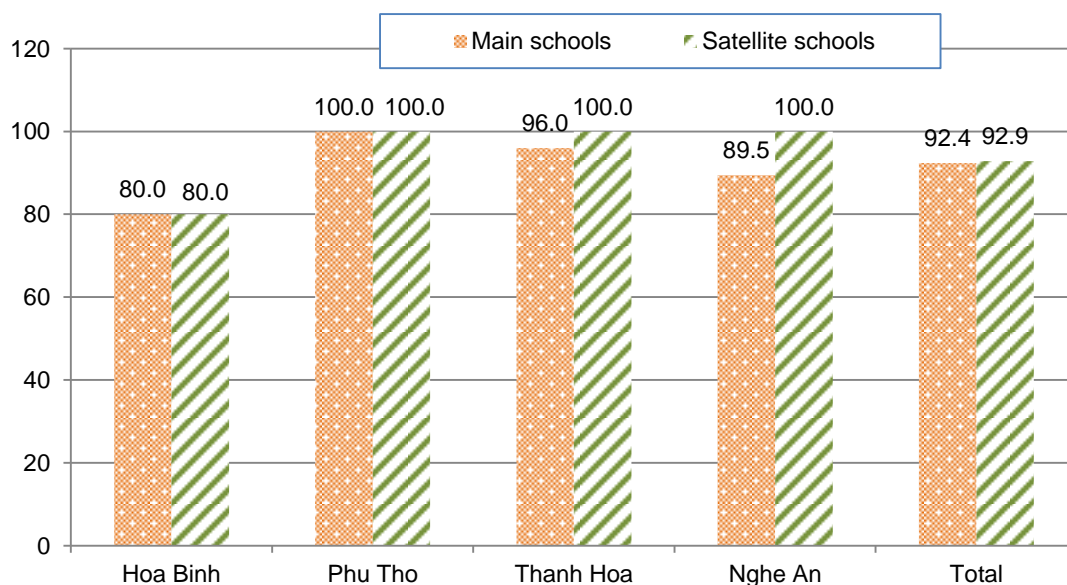


Figure 6. Percentage of all visited schools where CHC's staff/teachers asked children if they were feeling unwell before drug-administration

Asking the children if they were feeling unwell before drug-administration is a required step. These children should be advised to use albendazole after cure or refer to the advice of doctors and will be dewormed on the mop-up day. The monitoring results show that the proportion of schools where CHC's staff/teachers asked children if they were feeling unwell before drug-administration was relatively high at both of main and satellite schools (92.4% and 92.9%, respectively). The schools in Phu Tho province implemented this step relatively well.

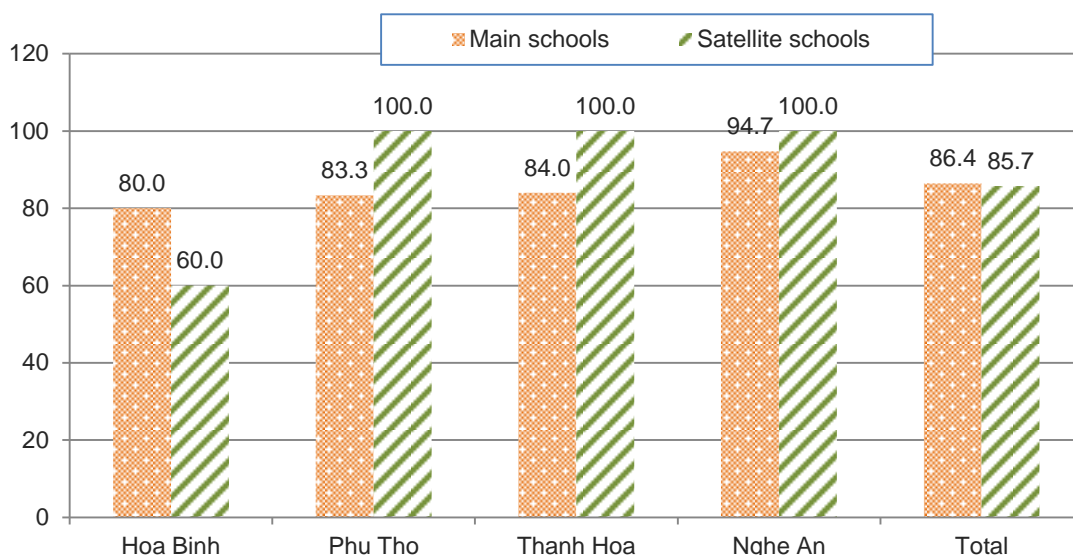


Figure 7. Percentage of all visited schools where CHC's staff/teachers asked children if they were taking any other medication before drug-administration

The proportion of CHC's staff/teachers asked children if they were taking any other medication before drug-administration was lower than the contents mentioned above, only accounting 86.4% at main schools and 85.7% at satellite schools. The schools in Nghe An province implemented very well this step (94.7% at main schools, 100% at satellite schools), meanwhile this percentage in the schools of Hoa Binh province was relatively low (80% and 60% respectively at main schools and satellite schools).

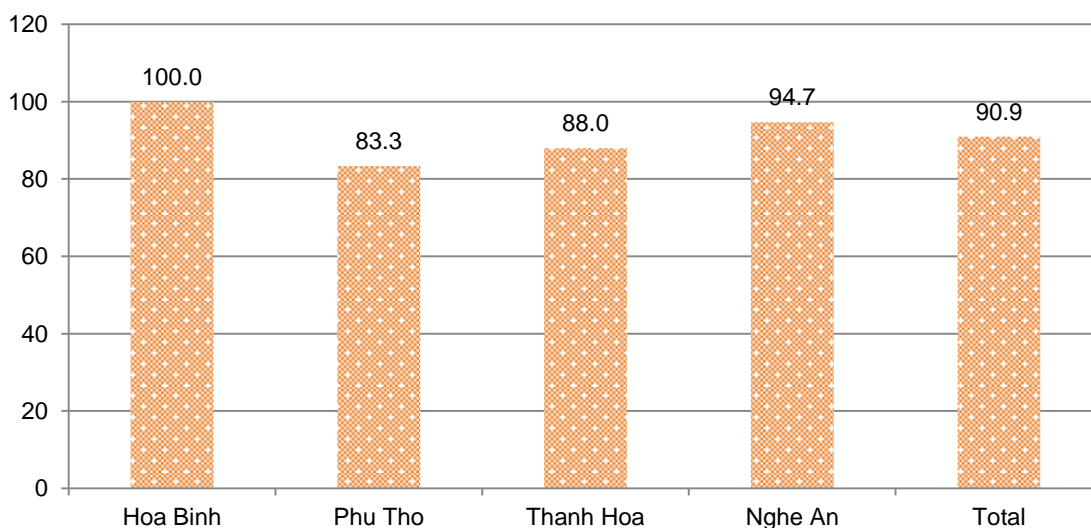


Figure 8. Percentage of main schools where CHC's staff/teachers asked children if they had eaten breakfast

The majority of CHC's staff/teachers at the main schools asked children if they had eaten breakfast (90.9%), the highest was found in Hoa Binh province and the lowest in Phu Tho province.

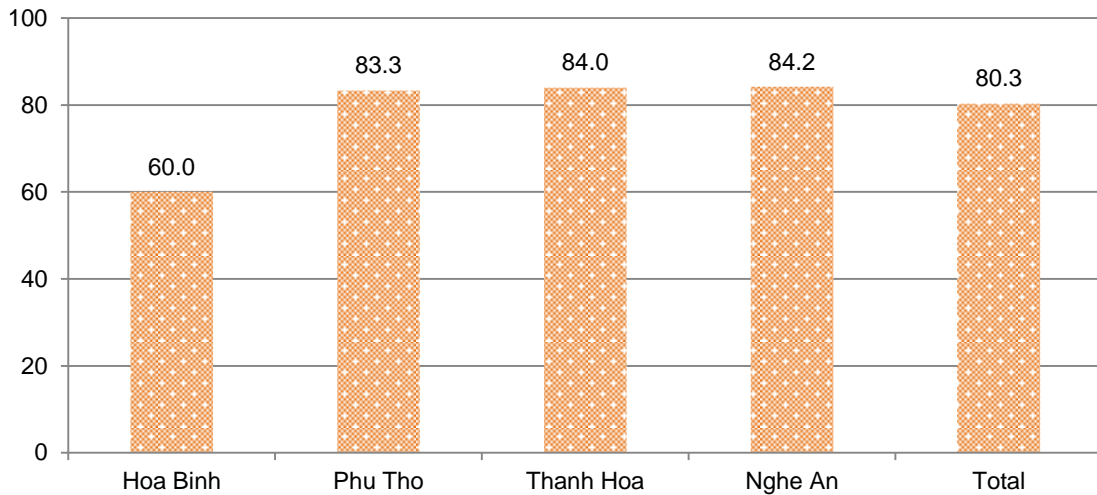


Figure 9. Percentage of main schools where CHC's staff/teachers asked children if they have taken albendazole recently

The information about the most recent deworming of children also need to be explored, but only 80% of the schools implemented this step, particularly the lowest was found in Hoa Binh province (60%).



Health workers let the children take drugs at Phu Ho 1 school, Phu Tho town, Phu Tho province



Students were required to sign in the list after taking drugs

THÔNG TIN VỀ THUỐC TÂY GIUN	PHIẾU XIN Y KIẾN CỦA CHA, MẸ HỌC SINH
<p>Hiện nay trên thị trường có nhiều loại thuốc được dùng để tẩy giun nhưng nên chọn: Mebendazole 500mg hoặc Albendazole 400mg vì:</p> <ol style="list-style-type: none"> Ưu điểm của thuốc tẩy giun: <ul style="list-style-type: none"> Thuốc có hiệu quả cao, Để sử dụng: an toàn, ít độc và ít gây ra tác dụng phụ. Có tác dụng phổ rộng, tẩy đồng thời được nhiều loại giun, Thuốc dễ mua và rẻ tiền. Cách dùng: sử dụng 01 viên duy nhất, không phải kiêng ăn uống. Những trẻ không cho uống thuốc tẩy giun: <ul style="list-style-type: none"> Trẻ đang sốt (>37°C), đau bụng, ỉa chảy hoặc đang mắc các bệnh cấp tính khác; Các trẻ bị mắc các bệnh mãn tính như: tâm thần, suy thận, suy tim, suy gan, hen phế quản, ...; Các trẻ có tiền sử dị ứng với các thành phần của thuốc; Tác dụng phụ của thuốc tẩy giun: thuốc tẩy giun sử dụng an toàn, ít có các tác dụng phụ của thuốc, nếu có chỉ ở mức độ thoáng qua như: rối loạn tiêu hóa, đau bụng, đau đầu nhẹ, buồn nôn, ... và sẽ tự hết sau vài giờ nghỉ ngơi. Nếu thấy trẻ có biểu hiện như trên thì cần làm gì, chỉ cần cho trẻ nghỉ ngơi, cho uống nước đường hoặc đưa trẻ đến trạm y tế để theo dõi. 	<p>Thực hiện kế hoạch của hoạt động tẩy giun cho học sinh tiểu học trên phạm vi toàn huyện. Đề nghị phụ huynh chú ý đọc phần mặt bên và mặt sau của phiếu xin ý kiến ghi rõ và điền đủ vào các mục thông tin sau đây:</p> <ul style="list-style-type: none"> Họ và tên cha/mẹ học sinh: <u>Hà Văn Thịnh</u> Là phụ huynh của học sinh: <u>Tây Sơn</u> Ngày, tháng, năm sinh của học sinh: <u>12/12/2009</u> Hiện cháu là học sinh lớp: <u>2A</u> Trường: <u>Phu Ho</u> huyện <u>Phu Ho</u> tỉnh <u>Phu Tho</u> Xã: <u>Phu Ho</u> huyện <u>Phu Ho</u> tỉnh <u>Phu Tho</u> <p>Ông (bà) hãy cho biết ý kiến của mình về việc có cho con của mình là cháu: <input type="checkbox"/> Đồng ý <input checked="" type="checkbox"/> Không đồng ý</p> <p>Lý do không đồng ý cho cháu uống thuốc tẩy giun: _____</p> <p>Ngày <u>25</u> tháng <u>11</u> năm 2016 (Ký, ghi rõ họ tên) <u>Thị Ngọc Bình</u></p> <p>(Ghi chú: sau khi điền đủ các thông tin vào phiếu, ông (bà) đưa phiếu cho cháu để nộp cho giáo viên chủ nhiệm)</p>

Permission form for deworming in the main deworming day at Phu Ho 1 school, Phu Tho town, Phu Tho province



Banner was hung at the school gate in the main deworming day, Dan Ha commune school, Ky Son district, Hoa Binh province

Table 30. Percentage of all visited schools where unwell children were excluded from participating in the MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Yes	6	60.0	8	66.7	19	76.0	11	57.9	44	66.7
No	3	30.0	2	16.7	1	4.0	3	15.8	9	13.6
There were no such children present	1	10.0	2	16.7	5	20.0	5	26.3	13	19.7
Satellite school										
Yes	3	60.0	1	100.0	3	60.0	1	33.3	8	57.1
No	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
There were no such children present	2	40.0	0	.0	2	40.0	2	66.7	6	42.9

The observation results show that 66.7% main schools and 57.1% satellite schools excluded unwell children from participating in the MDA in the main deworming day. Noticeably up to 9 main schools cattered in all 4 provinces did not implement this step.

Table 31. Percentage of all visited schools where children who were taking other medication were excluded from participating in the MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Yes	7	70.0	6	50.0	19	76.0	10	52.6	42	63.6
No	1	10.0	3	25.0	2	8.0	3	15.8	9	13.6
There were no such children present	2	20.0	3	25.0	4	16.0	6	31.6	15	22.7
Satellite school										
Yes	2	40.0	0	0.0	3	60.0	1	33.3	6	42.9
No	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
There were no such children present	3	60.0	1	100.0	2	40.0	2	66.7	8	57.1

The students who were taking other medication must be excluded from participating in the MDA. However, still 13.4% main schools did not comply with this procedure.

Table 32. Percentage of all visited schools where children who had not eaten breakfast and taken albendazole recently were excluded from participating in the MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Children who had not eaten breakfast										
Yes	5	50.0	7	58.3	11	44.0	5	26.3	28	42.4
No	3	30.0	2	16.7	6	24.0	6	31.6	17	25.8
There were no such children present	2	20.0	3	25.0	8	32.0	8	42.1	21	31.8
Children who had taken albendazole recently										
Yes	5	50.0	10	83.3	19	76.0	8	42.1	42	63.6
No	1	10.0	1	8.3	1	4.0	3	15.8	6	9.1
There were no such children present	4	40.0	1	8.3	5	20.0	8	42.1	18	27.3

There is no need to exclude children who have not eaten breakfast as albendazole/mebendazole is very safe and does not need to be taken after food. However, 42,4% of main schools where CHC's staff exclude the children who had not eaten breakfast, in which the highest proportion was found in Phu Tho province (58.3%) and the lowest in Nghe An province (26.3%). Specifically, 9.1% of the schools did not exclude the children who had not taken albendazole recently were excluded from participating in the MDA, the highest was found in Nghe An province (15.8%).

Table 33. Percentage of all visited schools where children who did not have a signed permission form were excluded from participating in the MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Yes	6	60.0	9	75.0	17	68.0	8	42.1	40	60.6
No	2	20.0	2	16.7	5	20.0	2	10.5	11	16.7
There were no such children present	2	20.0	1	8.3	3	12.0	9	47.4	15	22.7
Permission forms are not used	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Satellite school										
Yes	1	20.0	1	100.0	3	60.0	1	33.3	6	42.9
No	0	0.0	0	0.0	1	20.0	0	0.0	1	7.1
There were no such children present	4	80.0	0	0.0	1	20.0	2	66.7	7	50.0
Permission forms are not used	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

The permission forms for deworming were used in all monitored schools. The children who did not have permission forms with their parents' signature were not delivered medication. However, still 16.7% at main schools and 7.1% at satellite schools did not exclude these children from the MDA. This percentage was found the highest in Thanh Hoa province (20%).

Table 34. Percentage of all visited schools where the excluded children were explained that the medicine will be provided on mop-up day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Yes	6	60.0	8	66.7	19	76.0	12	63.2	45	68.2
No	3	30.0	3	25.0	4	16.0	3	15.8	13	19.7
There were no such children present	1	10.0	1	8.3	2	8.0	4	21.1	8	12.1
Have no a mop-up day	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Satellite school										
Yes	2	40.0	1	100.0	4	80.0	1	33.3	8	57.1
No	1	20.0	0	0.0	0	0.0	0	0.0	1	7.1
There were no such children present	2	40.0	0	0.0	1	20.0	2	66.7	5	35.7
Have no a mop-up day	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

The children who were not provided medication in the MDA should be explained that the medicine will be provided on mop-up day. The observation results show that 19.7% main schools and 7.1% satellite schools did not explain about this content.

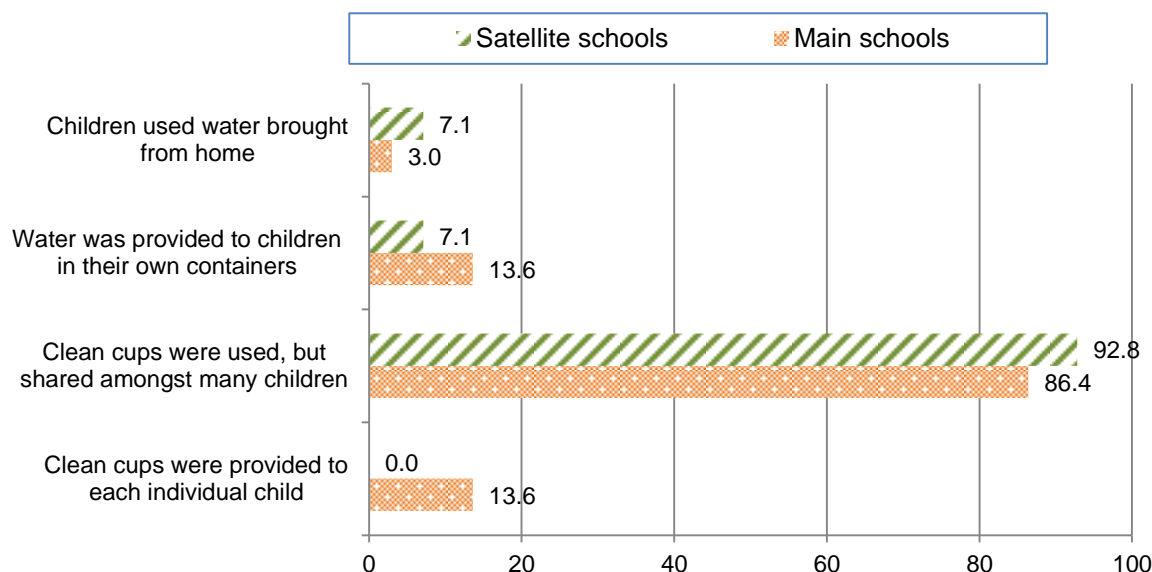


Figure 10. Percentage of all visited schools where potable water provided to children

Potable water was provided to the children at all main and satellite schools (100%). At almost schools, clean cups were used, but shared amongst many children (86.4% at main schools and 92.8% at satellites). Clean cups were provided to each individual child at some main schools only (13.6%).

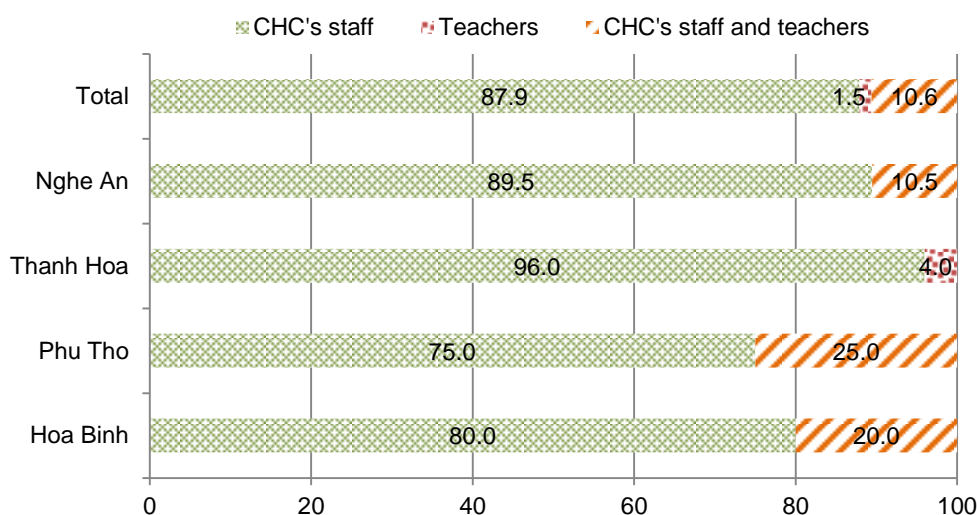


Figure 11. Persons directly administered tablets for students at main schools

Administering tablets is responsibility of the CHC's staff, however, only 87.9% of schools where CHC's staff administered tablets for students, 1.5% of schools where teachers administered tablets for students and 10.6 % of schools where CHC's staff and teachers together administered tablets. Notably, in one school in Thanh Hoa province the teachers

had to administer tablets for students, meanwhile a commune health worker was present at this school. Nghe An province implemented very well this step.

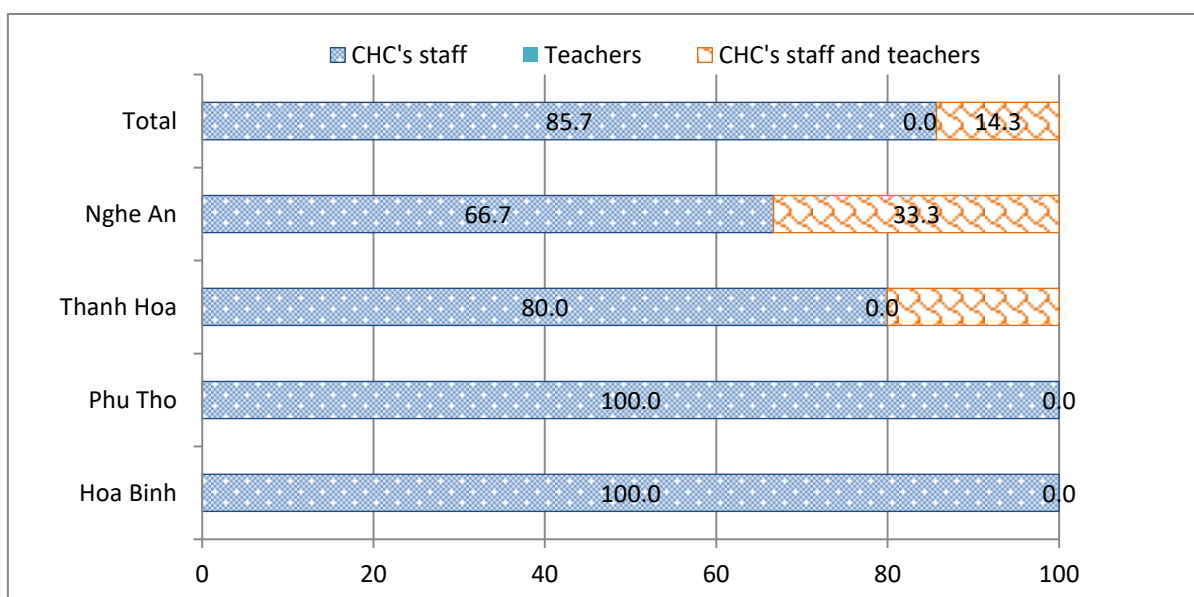


Figure 12. Persons directly administered tablets for students at satellite schools

No satellite schools that the teachers had to administer tablets for students. Most of CHC's staff administered tablets (85.7%), the rest was combination among CHC's staff and teachers (14.3%).

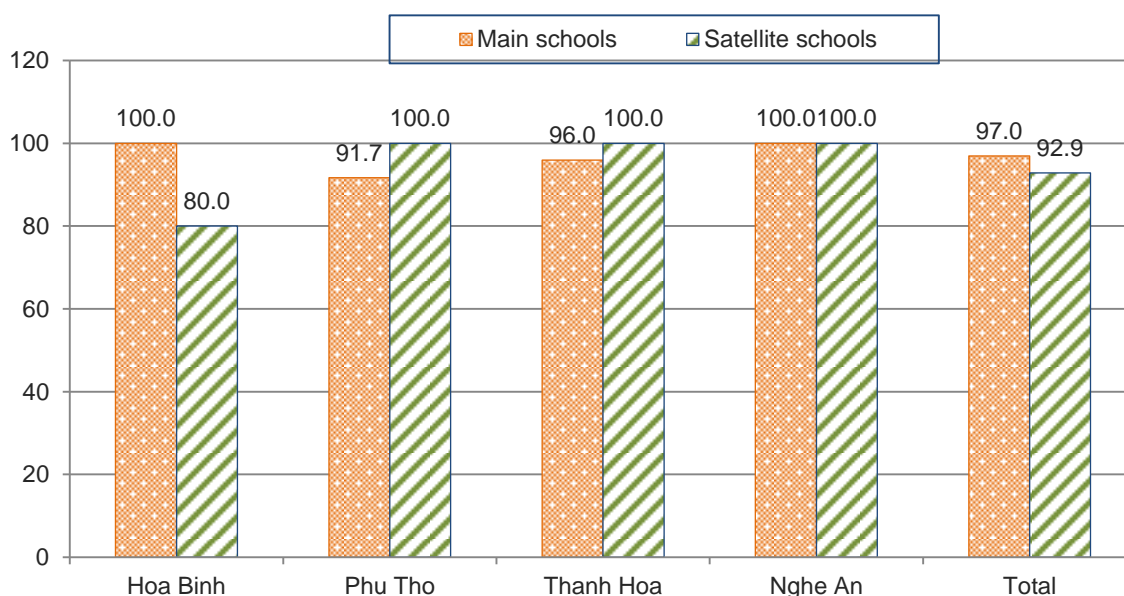


Figure 13. Percentage of all visited schools where CHC's staff/teachers instructing on how to chew tablets

In most of schools, CHC's staff/teachers instructed the children on how to chew tablets (97% at main schools and 92.9% at satellite schools). This percentage was very high in both main schools and satellite schools in Nghe An province (achieving 100%).

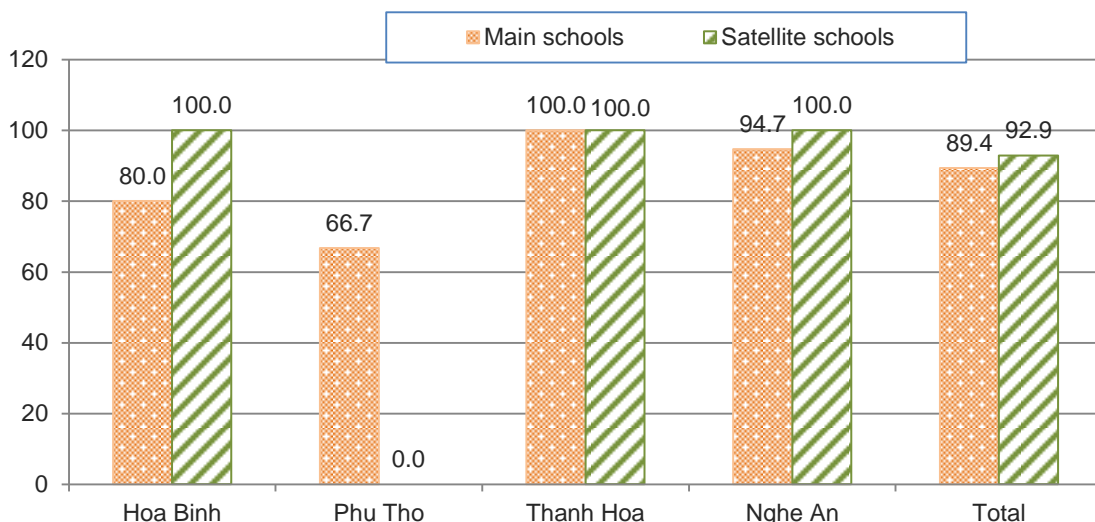


Figure 14. Percentage of all visited schools where CHC's staff/teachers ensuring that the child swallowed the tablet

The percentage of CHC's staff/teacher at the main schools in 4 provinces ensuring that the child swallowed the tablet accounted for 89.4%, in which the highest was in Thanh Hoa (100%) and the lowest was in Phu Tho (66.7%). Only one satellite school in Phu Tho did not implement this step.

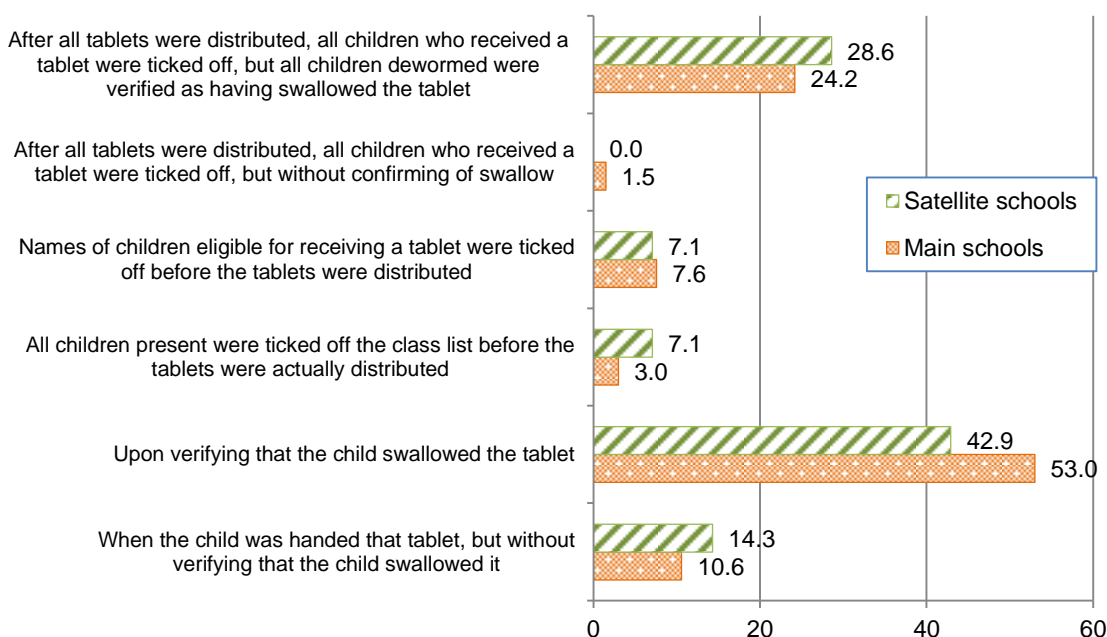


Figure 15. When was the name of the child ticked in the class list (%)

The figure above shows the time of ticking children's name in the class list. It clears that many CHC's staff did not tick the children's name as expected: 24.2% of main schools and 28.6% of satellite schools where the name of the child was ticked after all tablets were distributed in the class, all children who received a tablet were ticked off the class list, but all children dewormed were verified as having swallowed the tablet; 10.6% of main schools

and 14.3% of satellite schools where the name of the child was ticked when the child was handed that tablet, but without verifying that the child swallowed it. More than a half of main schools (53%) and about 42% of satellite schools where the name of the child was ticked upon verifying that the child swallowed the tablet.

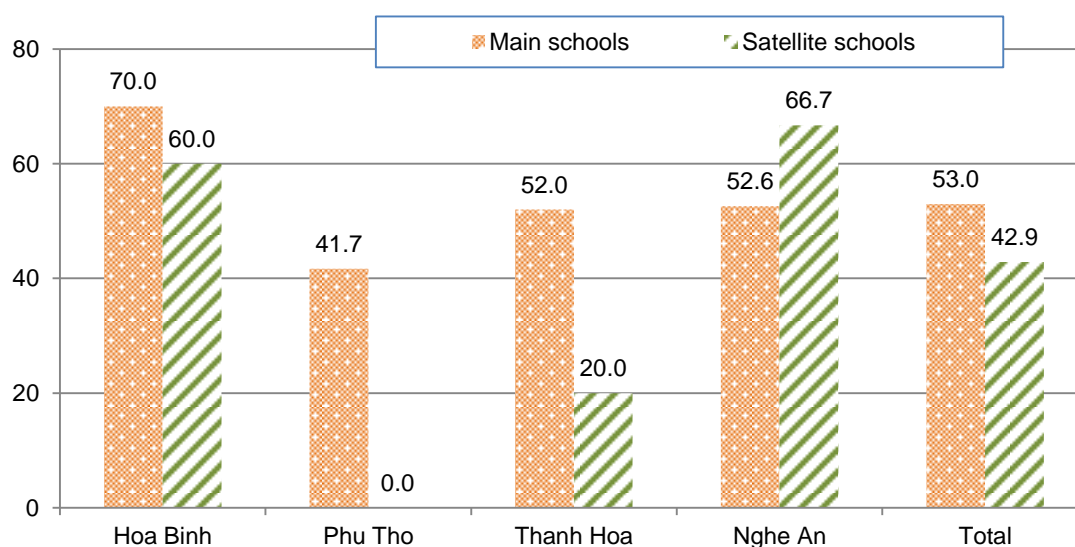


Figure 16. Percentage of all visited schools where the name of the child was ticked upon verifying that the child swallowed the tablet, by provinces

After ensuring that the child swallowed the tablet, the CHC's staff/teachers should tick (✓) on the next to the name of each student in the class list. Following to the monitors' observation, 53% of main schools and 42.9% of satellite schools where the name of the child was ticked upon verifying that the child swallowed the tablet. This percentage was very low in Phu Tho. Thus, still about half of schools where CHC's staff/teachers did not comply with the procedures that they have been trained. It indicates that the continuous training for CHC staff and teachers on how to mark the children's names to the class list is very essential.

Table 35. Management of CHC's/teachers when children spat out the tablet

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Offered the child another tablet	2	20.0	3	25.0	6	24.0	6	31.6	17	25.8
Did not observe this	8	80.0	9	75.0	19	76.0	13	68.4	49	74.2
Satellite school										
Offered the child another tablet	1	20.0	0	0.0	2	40.0	1	33.3	4	28.6
Did not observe this	4	80.0	1	100.0	3	60.0	2	66.7	10	71.4

Among the schools with observation of children spat out the tablet, all the CHC's staff/teachers at main schools and satellite schools also gave another tablet to the children.

Table 36. Percentage of visited schools where teachers assisted the commune health workers during the process of deworming (%)

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Teacher had identified the children to exclude prior to the CHC's staff entering the class	46.7	61.5	73.3	50.0	60.0					
Teacher helped by explaining about worms and deworming	13.3	15.4	20.0	45.5	25.0					
Teacher helped with handing out the tablets to children	20.0	15.4	23.3	27.3	22.5					
Teacher helped to ensure that children chewed the tablets	46.7	38.5	53.3	86.4	58.8					
Teacher helped to ensure that children swallowed the tablets	40.0	23.1	50.0	81.8	52.5					
Teacher helped with providing water to the children	20.0	46.2	36.7	63.6	42.5					
Teacher helped with the process of recording the children	20.0	30.8	16.7	54.5	30.0					
Teacher helped with the process of managing children with adverse events	53.3	76.9	70.0	86.4	72.5					
Other	6.7	7.7	3.3	0.0	3.8					
Teacher play no active role in assisting the commune health worker	0.0	0.0	0.0	0.0	0.0					
Total number of schools visited (n)	15	13	30	22	80					

Teachers play an important role in the process of deworming. The observations certified the key role of teachers in "Helped the process of managing children with adverse events" (72.5%), followed by "Teacher had identified the children to exclude" (60%), "Helped to ensure that children chewed the tablets" (58.8%), "Helped to ensure that children swallowed the tablets" (52.5%), "Helped with providing water to the children" (42.5%), etc.

Table 37. Side effects occurred in the observed class at schools on the main deworming day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Didn't observe any	14	93.3	12	92.3	25	83.3	19	86.4	70	87.5
Child complained of feeling nauseated	1	6.7	0	0.0	2	6.7	1	4.5	4	5.0
Abdominal pain/stomach ache	0	0.0	0	0.0	1	3.3	1	4.5	2	2.5
Child vomited	0	0.0	1	7.7	2	6.7	0	0.0	3	3.8
Child complained of headache	0	0.0	0	0.0	2	6.7	0	0.0	2	2.5
Child complained of feeling dizzy/weak	0	0.0	0	0.0	1	3.3	1	4.5	2	2.5
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total number of schools visited	15		13		30		22		80	

These side effects did not occur in the majority of 80 visited schools (87.5%). No side effects occurred in the satellite schools. A few cases had mild side effects, such as child complained of feeling nauseated, abdominal pain/stomach ache, child vomited, child complained of headache, child complained of feeling dizzy/weak, etc (below 5.0%).

Table 38. Dealing with children feeling unwell of the health staff/teachers (% , calculated on the number of visited schools where the children felt unwell)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Child was reassured and told not to worry	100.0	100.0	100.0	100.0	100.0
Child was separated from the other children	100.0	100.0	40.0	0.0	40.0
Child was provided with water	0.0	100.0	80.0	33.3	60.0
Child was allowed to lie down	100.0	0.0	20.0	0.0	20.0
Child was taken to a cool, shaded area	0.0	0.0	20.0	0.0	10.0
No action was taken	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	20.0	0.0	10.0
Total (n)	1	1	5	3	10

There were 10 main schools where the children reported feeling unwell during the monitoring visit. In which, all these 10 schools (100.0%) where children were reassured and told not to worry; 6 schools (60.0%) where children were provided with water, 4 schools (40.0%) where children were separated from the other children, 2 schools (20.0%) where children were allowed to lie down, and 1 school (10.0%) where children were taken to a cool and shaded area.

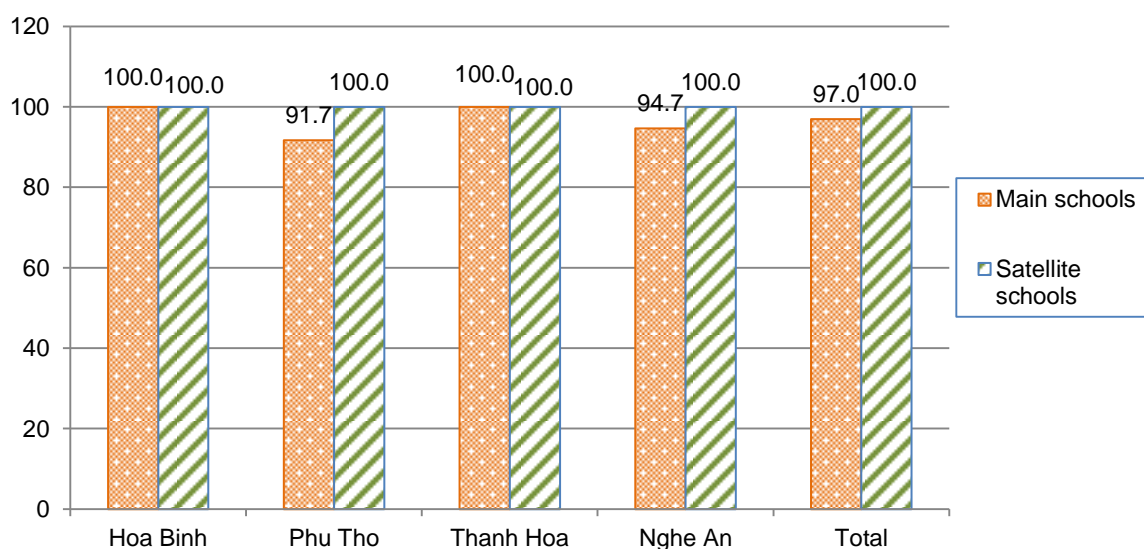


Figure 17. Percentage of all visited schools keeping students on the school premises for at least 2 hours after taking albendazole to follow side effects

Most of main schools and satellite schools kept students on the school premises for at least 2 hours after taking albendazole to follow side effects. Only one main school in Nghe An and one in Phu Tho did not implement well this content.

The observation results show that one main school in Nghe An, one satellite school in Hoa Binh and one satellite school in Thanh Hoa had children from community to the schools to

ask for medication. After receiving medication, the CHC's staff also noted in the class list and noted separately on the other paper.

Table 39. Organization of deworming at the schools

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
CHC's staff went class-to-class	6	60.0	9	75.0	13	52.0	17	89.5	45	68.2
CHC's staff set-up a centralized area at the school, and teachers brought students class-by-class to be dewormed	4	40.0	3	25.0	12	48.0	2	10.5	21	31.8
Satellite school										
CHC's staff went class-to-class	4	80.0	0	0.0	2	40.0	3	100.0	9	64.3
CHC's staff set-up a centralized area at the school, and teachers brought students class-by-class to be dewormed	1	20.0	1	100.0	3	60.0	0	0.0	5	35.7

The observation results about the organization of deworming at the schools show that about 2/3 of the schools had CHC's staff to visit each class to administer tablets (68.2% at the main schools, 64.3% at the satellite schools), in which the highest rate was found in Nghe An and the lowest was found in Thanh Hoa.

Table 40. Organization of deworming at the observed classes

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
CHC's staff/teacher walked around the classroom handing tablets to each student	0	0.0	2	22.2	9	69.2	12	70.6	23	51.1
CHC's staff/teacher called students one-by-one to the top of the classroom where they were provided with a tablet	6	100.0	7	77.8	4	30.8	5	29.4	22	48.9
Satellite school										
CHC's staff/teacher walked around the classroom handing tablets to each student	1	25.0	0	0.0	1	50.0	1	33.3	3	33.3
CHC's staff/teacher called students one-by-one to the top of the classroom where they were provided with a tablet	3	75.0	0	0.0	1	50.0	2	66.7	6	66.7

About a half of classes in the main schools administered tablets for the children by the way "CHC's staff/teacher walked around the classroom handing tablets to each student". Meanwhile, this percentage of satellite schools only accounted for 33.3%. In the majority of satellite schools, CHC's staff called students one-by-one to the top of the classroom where they were provided with a tablet.

3.3.2. Some results from interviews on the deworming day

3.3.2.1. Training

Table 41. Advance notice given to schools about the MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
1-2 days before	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3-7 days before	5	50.0	5	41.7	14	56.0	10	52.6	34	51.5
8-14 days before	5	50.0	3	25.0	9	36.0	8	42.1	25	37.9
>2 weeks before	0	0.0	4	33.3	2	8.0	1	5.3	7	10.6
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

The results of interviews with head teachers of 66 monitored schools on the deworming day showed that, most of schools were informed the dates for deworming day from 3 to 14 days. No school was informed 1-2 days ago.

Table 42. Number of representatives from the schools attending the official training for deworming

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
0 representative	0	0.0	0	0.0	0	0.0	1	5.3	1	1.5
1 representative	4	40.0	4	33.3	3	12.0	3	15.8	14	21.2
2 representatives	3	30.0	8	66.7	20	80.0	14	73.7	45	68.2
More than 2 representatives	3	30.0	0	.0	2	8.0	1	5.3	6	9.1
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0
Satellite school										
0 representative	1	20.0	1	100.0	2	28.6	2	33.3	6	31.6
1 representative	3	60.0	0	0.0	3	42.9	1	16.7	7	36.8
2 representatives	1	20.0	0	0.0	1	14.3	2	33.3	4	21.1
More than 2 representatives	0	0.0	0	0.0	1	14.3	1	16.7	2	10.5
Total	5	100.0	1	100.0	7	100.0	6	100.0	19	100.0

Primary schools were requested to send 2 members of staff to attend the official training for deworming. Results from interviews with 66 head teachers at main schools showed that most schools sent 2 representatives to the training (68.2%), the highest rate in Thanh Hoa (80%) and the lowest rate in Hoa Binh (30%). About 21.2% of head teachers reported that their school sent one representative to the training. A few schools have more than 2 representatives (9.1%). One head teacher in Nghe An said that no representative from their school attended the training because the Dispatch came too late. Compared to the interviews with class teachers, one teacher in Hoa Binh said that no representative from their school attended the training, meanwhile all head teachers interviewed in Hoa Binh did not report that.

Satellite schools were requested to send one member of staff. This is important information as we are advocating strongly that satellite schools are fully engaged in the program. The rate of teachers from satellite schools attending the training was much lower than that from main schools. A total of 19 teachers from satellite schools were interviewed, nearly 1/3 of them said that their satellite had no representative to the training (31.6%). The reasons were that head teacher would not allow staff to attend (2 satellites), satellite school has too few teachers and couldn't allow teacher to be absent (4 satellites) and other reason (1 satellite). The rate of satellite schools sending one representative to the training was 36.8%.

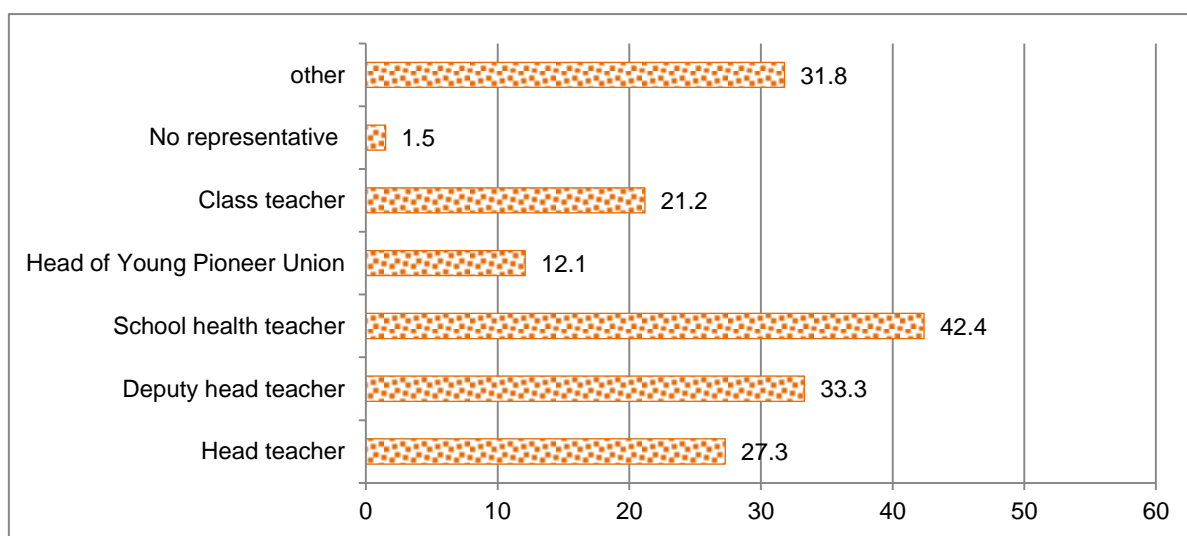


Figure 18. Representative from the school attended the training

Many schools sent school health teachers to the training (42.4%). About 1/3 of visited schools sent deputy head teachers (33.3%) and more than 1/4 of schools sent head teachers to the training. Some schools sent class teacher (21.2%) and head of Young Pioneer Union (12.1%).

Table 43. Percentage of trained teachers training for other teachers at from interviewing head teachers

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Yes – all teachers were trained	9	90.0	10	83.3	22	88.0	16	84.2	57	86.4
Yes – some teachers were trained	1	10.0	1	8.3	2	8.0	1	5.3	5	7.6
No	0	0.0	1	8.3	1	4.0	1	5.3	3	4.5
Not applicable – no teachers attended the official deworming training	0	0.0	0	0.0	0	0.0	1	5.3	1	1.5
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Conveying contents of training train colleagues at school is very important to make sure all the teachers of school implement deworming for students under a same process. Results of interviews with head teachers, deputy head teachers showed that all teachers of the school were trained by the trained teacher (86.4%), 7.6% of head teachers said that some teachers were trained. Percentage of trained teachers training for all teachers was the highest at

schools in Hoa Binh province (90%) and lowest in Phu Tho (83.3%). About 4.5% of head teachers reported that trained staff did not train for colleagues of the school.

Table 44. Percentage of class teachers at main schools and satellite schools who did not attend the training receiving information from colleges who attended the training

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main school										
Yes	6	66.7	11	100.0	18	85.7	12	92.3	47	87.0
No	3	33.3	0	0.0	3	14.3	1	7.7	7	13.0
Total	9	100.0	11	100.0	21	100.0	13	100.0	54	100.0
Satellite school										
Yes	3	75.0	0	0.0	3	60.0	2	50.0	8	57.1
No	1	25.0	0	0.0	1	20.0	1	25.0	3	21.4
A teacher from the main school provided information	0	0.0	1	100.0	1	20.0	1	25.0	3	21.4
Total	4	100.0	1	100.0	5	100.0	4	100.0	14	100.0

Sixty eight among 85 interviewed class teachers (54/66 teachers at main schools and 14/19 teachers at satellite schools) did not attend the training. Results showed that 87% of teachers at main schools who did not attend the training received information from colleges who attended the training. This rate for satellites was 57.1%. Three teachers at satellites did not attend the training said that a teacher from the main school provided information.

3.3.2.2. IEC materials

Table 45. IEC materials were distributed at the main and satellite schools in advance of deworming day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Main schools										
Posters	1	10.0	1	8.3	3	12.0	7	36.8	12	18.2
Banners	9	90.0	12	100.0	25	100.0	18	94.7	64	97.0
Leaflets	0	0.0	3	25.0	10	40.0	8	42.1	21	31.8
Permission forms	9	90.0	12	100.0	23	92.0	17	89.5	61	92.4
Other	0	0.0	0	.0	3	12.0	4	21.1	7	10.6
No IEC materials	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Satellite schools										
Posters	0	0.0	0	0.0	1	14.3	3	50.0	4	21.1
Banners	4	80.0	1	100.0	4	57.1	4	66.7	13	68.4
Leaflets	0	0.0	0	0.0	1	14.3	1	16.7	2	10.5
Permission forms	4	80.0	1	100.0	7	100.0	5	83.3	17	89.5
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
No IEC materials	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Via interviews with head teachers and teachers, most of IEC materials distributed at main and satellite schools were banners and permission forms, in which rate of main schools distributed banners was much higher than that of satellite schools (97% vs. 68.4%). Leaflets and posters were distributed at few schools. Some others at main schools in Thanh Hoa and Nghe An included speeches on worms and deworming, communication tapes, booklets.

Table 46. How were the IEC materials distributed to the main and satellite schools (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Main schools					
CHC's staff brought them to the school	40.0	25.0	72.0	42.1	50.0
Teachers who attended the training brought them back to the school	60.0	75.0	28.0	57.9	50.0
Satellite schools					
CHC's staff brought them to the school	20.0	0.0	85.7	33.3	47.4
Teachers collected them from the commune health center	0.0	0.0	0.0	16.7	5.3
Teachers who attended the training brought them back to the school	40.0	0.0	0.0	33.3	21.1
Teachers from the main school brought them to the satellite schools	20.0	100.0	0.0	16.7	15.8
Teachers collected them from the main school	0.0	0.0	14.3	0.0	5.3

At main schools, IEC materials were distributed via two ways: CHC's staff brought IEC materials to the school and teachers who attended the training brought IEC materials back to the school (50%). At some satellite schools, teachers from the main school brought IEC materials to the satellite schools (15.8%), or teachers collected from the CHC or from main school (5.3%).

Table 47. IEC materials were used at the main and satellite schools in advance of deworming day via monitors' observation

	Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
		n	%	n	%	n	%	n	%	n	%
Main schools	Posters	0	0.0	1	8.3	3	12.0	6	31.6	10	15.2
	Banners	8	80.0	12	100.0	25	100.0	18	94.7	63	95.5
	Leaflets	0	0.0	0	0.0	2	8.0	4	21.1	6	9.1
	Others	1	10.0	0	0.0	1	4.0	1	5.3	3	4.5
	No IEC materials displayed	1	10.0	0	0.0	0	0.0	1	5.3	2	3.0
	Total		10	100.0	12	100.0	25	100.0	19	100.0	66
Satellite schools	Posters	0	0.0	0	0.0	1	14.3	2	33.3	3	15.8
	Banners	4	80.0	1	100.0	4	57.1	4	66.7	13	68.4
	Leaflets	0	0.0	0	0.0	0	0.0	1	16.7	1	5.3
	Others	0	0.0	0	0.0	0	0.0	1	16.7	1	5.3
	No IEC materials displayed	1	20.0	0	0.0	3	42.9	1	16.7	5	26.3
	Total		5	100.0	1	100.0	7	100.0	6	100.0	19

When asked what IEC materials had been used in the school in advance of deworming day and mop-up day, most answers of respondents at main schools were: banners were hung in school premises (95.5%); this rate at satellite schools was much lower than that (68.4%). Results from observation at visited schools showed the similar figures: 95% of main schools and 68.4% of

satellite schools hung banners in school premises. However, no IEC materials displayed at still 3% of main schools and up to 26.3% of satellites. Some information about deworming drug was printed on one side of the permission forms. When the permission forms were distributed to families of students, their parents could read and understand more about deworming drugs used for children and it also helped parents to identify cases contraindicated albendazole.

Table 48. Forms that children/parents at the main schools received information on the deworming activity

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Only the IEC materials provided were used	0.0		8.3		4.0		5.3		4.5	
Individual teachers explained to their respective classes	20.0		58.3		56.0		68.4		54.5	
School-wide announcement(s) were made	40.0		25.0		48.0		57.9		45.5	
Parent meetings were conducted	20.0		0.0		0.0		0.0		3.0	
Leaflets/letters were sent home with each student	10.0		16.7		20.0		21.1		18.2	
Loudspeaker announcements were made in the commune	0.0		25.0		36.0		63.2		36.4	
Permission forms were sent home with children for parents to sign	90.0		75.0		100.0		94.7		92.4	
Teachers wrote a note for parents in each student's book	10.0		0.0		4.0		0.0		3.0	
Other	10.0		16.7		24.0		10.5		16.7	
Total (n)	10		12		25		19		66	

The table above also shows that most students/parents received information on the deworming via the permission forms (92.4%), the highest in Thanh Hoa (100%) and the lowest in Phu Tho (75%). About more than 1/2 of head teachers said individual teachers explained to their respective classes (54.5%) and school-wide announcement(s) were made at 45.5% of schools. It is clear that, sending permission forms home with children for parents to sign is a useful way to both provided information to students/parents and helped CHC's staff/teachers have grounds to determine the children contraindicated albendazole.

Table 49. Forms that class teachers inform the children or parents about deworming in the days leading up to deworming

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
	Explained to children about deworming day	5	50.0	9	75.0	15	60.0	19	100.0	48
Provided permission forms to children	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0
Spoke to individual parents about deworming	1	10.0	2	16.7	3	12.0	3	15.8	9	13.6
Communicated to parents by writing in the students' books	2	20.0	1	8.3	1	4.0	3	15.8	7	10.6
A parent-teacher meeting was convened at the school	0	0.0	0	0.0	1	4.0	0	0.0	1	1.5
Didn't do inform children or parents – communication was not my responsibility	0	0.0	0	0.0	1	4.0	0	0.0	1	1.5
Other	1	10.0	2	16.7	5	20.0	2	10.5	10	15.2
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Results from interviews with class teachers at main schools showed that all class teachers provided permission forms to children, 72.7% of them explained to children about deworming day in the days leading up to deworming, 13.6% of teachers spoke to individual parents about deworming, 10.6% of teachers communicated to parents by writing in the students' books. About 15.2% of teachers informed children's parents by messages via mobile phone.

Table 50. The permission forms were distributed to each child in advance of deworming day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Distributed the day before deworming day	1	10.0	0	0.0	2	8.0	0	0.0	3	4.5
Distributed ≥ 2 days before deworming day	9	90.0	12	100.0	23	92.0	19	100.0	63	95.5
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Almost of head teachers said that permission forms were distributed to each child ≥ 2 days before deworming day. Three schools only distributed the day before deworming day.

3.3.2.3. Knowledge and practice of commune health workers and teachers about deworming for children

Total 77 commune health workers (66 ones at main schools and 11 ones at satellite schools) and 85 class teachers (66 ones at main schools and 19 ones at satellite schools) were interviewed in the deworming day. Eight communal health workers at satellite schools were the same persons who conducted deworming at the main school, thus they were excluded in the sample size at satellite schools.

Table 51. Percentage of communal health workers and class teachers attending the training

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Commune health workers										
Yes	10	71.4	9	75.0	26	86.7	18	85.7	63	81.8
No	4	28.6	3	25.0	4	13.3	3	14.3	14	18.2
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0
Teachers										
Yes	2	13.3	1	7.7	6	18.8	8	32.0	17	20.0
No	13	86.7	12	92.3	26	81.3	17	68.0	68	80.0
Total	15	100.0	13	100.0	32	100.0	25	100.0	85	100.0

Results showed that 81.8% of the commune health workers who were interviewed attended the training on deworming, 18.2% of interviewees did not attend the training. For class teachers, 80% of the the teachers who were interviewed did not attend training. It means only 20% of interviewees attended the training.

Table 52. Number of representatives from the commune health center attended the official training for deworming

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
0 representatives	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1 representatives	0	0.0	5	41.7	3	10.0	5	23.8	13	16.9
2 representatives	14	100.0	7	58.3	26	86.7	15	71.4	62	80.5
>2 representatives	0	0.0	0	0.0	1	3.3	1	4.8	2	2.6
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0

All visited CHCs sent representatives to training; 80.5% of commune health workers who were interviewed said that 2 representatives from their commune health centers attended the official training for deworming, the highest rate in Hoa Binh (100%) and the lowest rate in Phu Tho (58.3%), some commune health workers reported their CHCs sent 1 representatives to training (16.9%).

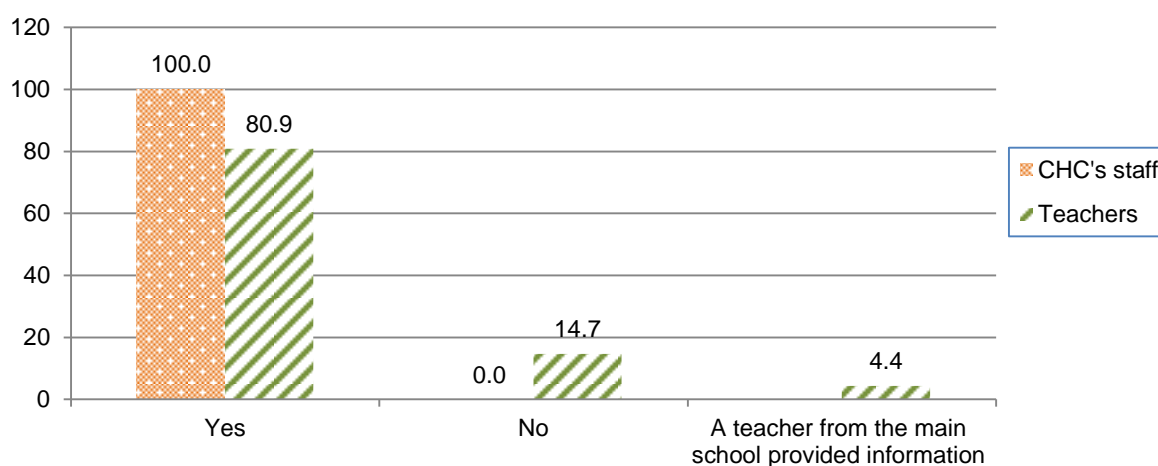


Figure 19. Percentage of communal health workers and class teachers who did not attend the training received information from their colleague who attended the training

Among CHC's staff who did not attend the training, all of them received information from their colleagues who did attend the training. This rate among teachers is 80.9%. About 4.4% of teachers said that a teacher from the main school provided information to the staff at the satellite school. Thus, still 14.7% of interviewed teachers did not receive any information from the training.

Table 53. Types of assistance the teachers said that they gave to the CHWs during the drug administration (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Prepared a class list	86.7	100.0	75.0	72.0	80.0
Identified children who should not be dewormed	53.3	76.9	56.3	64.0	61.2
Collected permission forms	73.3	84.6	81.3	76.0	78.8
Provided water/cups to all the children	46.7	38.5	53.1	76.0	56.5
Explained to the children about worms and deworming	26.7	30.8	43.8	64.0	44.7
Explained to the children about possible side effects	26.7	15.4	25.0	64.0	35.3
Assisted with handing out the tablets to the children	26.7	30.8	25.0	48.0	32.9
Encouraged children to chew the tablets	33.3	30.8	53.1	80.0	54.1
Ensured that children swallowed the tablets	26.7	30.8	43.8	64.0	44.7
Helped with the process of recording children	26.7	23.1	15.6	56.0	30.6
Monitored children for side effects	33.3	53.8	43.8	56.0	47.1
Other	0.0	7.7	0.0	0.0	1.2
Didn't play any role	0.0	0.0	0.0	4.0	1.2
Total (n)	15	13	32	25	85

Most of class teachers said that they prepared a class list (80%), collected permission forms (78.8%), identified children who should not be dewormed (61.2%). Only one class teachers thought they didn't play any role (1.2%).

Table 54. Percentage % of commune health workers and class teachers knowing possible side effects when children use albendazole

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	CHW	CT	CHW	CT	CHW	CT	CHW	CT	CHW	CT
None – albendazole is very safe	14.3	13.3	0.0	0.0	10.0	6.3	0.0	4.0	6.5	5.9
Abdominal pain/stomach ache	35.7	33.3	41.7	7.7	70.0	43.8	71.4	60.0	59.7	41.2
Nausea	78.6	66.7	75.0	92.3	90.0	81.3	100.0	96.0	88.3	84.7
Vomiting	57.1	20.0	41.7	53.8	36.7	31.3	85.7	56.0	54.5	40.0
Diarrhea	35.7	13.3	8.3	7.7	20.0	12.5	47.6	32.0	28.6	17.6
Fatigue	21.4	26.7	50.0	46.2	50.0	46.9	76.2	52.0	51.9	44.7
Headache	35.7	20.0	66.7	38.5	56.7	40.6	66.7	64.0	57.1	43.5
Don't know/remember	7.1	13.3	0.0	0.0	0.0	3.1	0.0	0.0	1.3	3.5
Other	0.0	6.7	8.3	15.4	3.3	3.1	0.0	0.0	2.6	4.7
Total (n)	14	15	12	13	30	32	21	25	77	85

CHW: commune health worker, CT: class teacher

Overall, the knowledge of CHC's staff and teachers about possible side effects when children use albendazole was quite good. Only 1.3% of commune health workers and 3.5% of teachers could point out the side effects. About 6.5% of CHC's staff and 5.9% of teachers said that albendazole was very safe and doesn't cause any adverse events.

Table 55. Percentage % of commune health workers and class teachers managing if children complain of mild abdominal pain and/or nausea

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	CHW	CT	CHW	CT	CHW	CT	CHW	CT	CHW	CT
Separate the child from the rest of the class	42.9	20.0	41.7	38.5	46.7	34.4	76.2	44.0	53.2	35.3
Make the child lie down in an open and shaded area	42.9	20.0	33.3	46.2	50.0	28.1	57.1	44.0	48.1	34.1
Offer the child water	57.1	26.7	41.7	23.1	70.0	53.1	66.7	56.0	62.3	44.7
Reassure the child and tell them not to worry	42.9	20.0	33.3	38.5	50.0	28.1	71.4	60.0	51.9	37.6
Immediately alert a medical team	42.9	46.7	33.3	38.5	16.7	37.5	33.3	56.0	28.6	44.7
Immediately alert the parents	0.0	0.0	8.3	23.1	13.3	15.6	9.5	12.0	9.1	12.9
Immediately stop all deworming activities in the school	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	1.2
Call an emergency helpline	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	1.2
Take the child to the nearest medical facility	14.3	40.0	41.7	23.1	16.7	34.4	28.6	24.0	23.4	30.6
Immediately report the situation to the head of the CHC	7.1	20.0	25.0	38.5	6.7	15.6	14.3	28.0	11.7	23.5
Other	14.3	20.0	8.3	0.0	10.0	6.3	4.8	4.0	9.1	7.1
Total (n)	14	15	12	13	30	32	21	25	77	85

CHW: commune health worker, CT: class teacher

Clearly, the management of commune health workers and teachers in the case of children complain of mild abdominal pain and/or nausea are was also quite different. Meanwhile the majority of commune health workers offered the child water (62.3%), most of teachers said they would immediately alert a medical team (44.7%) and also offer the child water (44.7%). This reflects the expertise and responsibilities of the medical and educational institutions in the coordination of deworming for students.

Table 56. Percentage % of commune health workers and class teachers managing if a child has a SERIOUS side effect

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	CHW	CT	CHW	CT	CHW	CT	CHW	CT	CHW	CT
Separate the child from the rest of the class	28.6	6.7	50.0	30.8	53.3	34.4	71.4	56.0	53.2	35.3
Make the child lie down in an open and shaded area	28.6	0.0	25.0	15.4	46.7	21.9	47.6	36.0	40.3	21.2
Offer the child water	21.4	6.7	16.7	15.4	43.3	25.0	33.3	28.0	32.5	21.2
Reassure the child and tell them not to worry	21.4	13.3	33.3	15.4	26.7	21.9	33.3	32.0	28.6	22.4
Immediately alert a medical team	14.3	33.3	33.3	61.5	26.7	37.5	66.7	64.0	36.4	48.2
Immediately alert the parents	14.3	13.3	33.3	30.8	23.3	31.3	38.1	44.0	27.3	31.8
Immediately stop all deworming activities in the school	14.3	6.7	33.3	0.0	16.7	9.4	33.3	8.0	23.4	7.1
Call an emergency helpline	42.9	33.3	16.7	7.7	16.7	12.5	38.1	24.0	27.3	18.8
Take the child to the nearest medical facility	57.1	66.7	83.3	69.2	66.7	50.0	81.0	76.0	71.4	63.5
Immediately report the situation to the head of the CHC	42.9	46.7	41.7	46.2	36.7	56.3	66.7	68.0	46.8	56.5
Other	7.1	6.7	16.7	0.0	6.7	3.1	4.8	0.0	7.8	2.4
Total (n)	14	15	12	13	30	32	21	25	77	85

CHW: commune health worker, CT: class teacher

In general, knowledge amongst commune health workers and class teachers about how to manage serious side effects was quite good. Almost of them said that they would take the child to the nearest medical facility if a child has a serious side effect (71.4% for commune health workers and 63.5% for class teachers), and then they would immediately report the situation to the head of the CHC (46.8% for commune health workers and 56.5% for class teachers)

Table 57. Percentage % of CHC's staff and class teachers knowing children who should NOT be given a tablet

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	CHW	CT	CHW	CT	CHW	CT	CHW	CT	CHW	CT
NO children should be excluded - ALL children should be given a tablet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Children who do not provide a signed permission form	57.1	46.7	50.0	61.5	70.0	50.0	66.7	68.0	63.6	56.5
Children who are feeling unwell	85.7	86.7	91.7	92.3	86.7	87.5	95.2	88.0	89.6	88.2
Children who are taking other medication	57.1	60.0	66.7	61.5	83.3	59.4	81.0	80.0	75.3	65.9
Children who previously suffered serious side effects to albendazole	35.7	13.3	33.3	23.1	46.7	31.3	57.1	48.0	45.5	31.8
Children who have been dewormed recently	50.0	46.7	83.3	92.3	83.3	71.9	85.7	80.0	77.9	72.9
Children who have not eaten breakfast	42.9	46.7	41.7	69.2	43.3	31.3	28.6	44.0	39.0	43.5
Don't know/don't remember	7.1	6.7	0.0	0.0	3.3	0.0	4.8	0.0	3.9	1.2
Other	21.4	0.0	0.0	7.7	16.7	0.0	9.5	0.0	13.0	1.2
Total (n)	14	15	12	13	30	32	21	25	77	85

Knowledge of CHC's staff and teachers about these contraindicated cases with albendazole was quite good and there was no obvious difference. The majority of the respondents believed that the children who are feeling unwell, taking other medication, have been dewormed recently should not be given a tablet (ranging from 72.9% to 89.6%). Children who do not provide a signed permission form were mentioned more than a half of the respondents (63.6% among CHC's staff and 56.5% among teachers). A few respondents mentioned cases should not take albendazole such as children who have not eaten breakfast, children who suffered adverse events previously to albendazole...

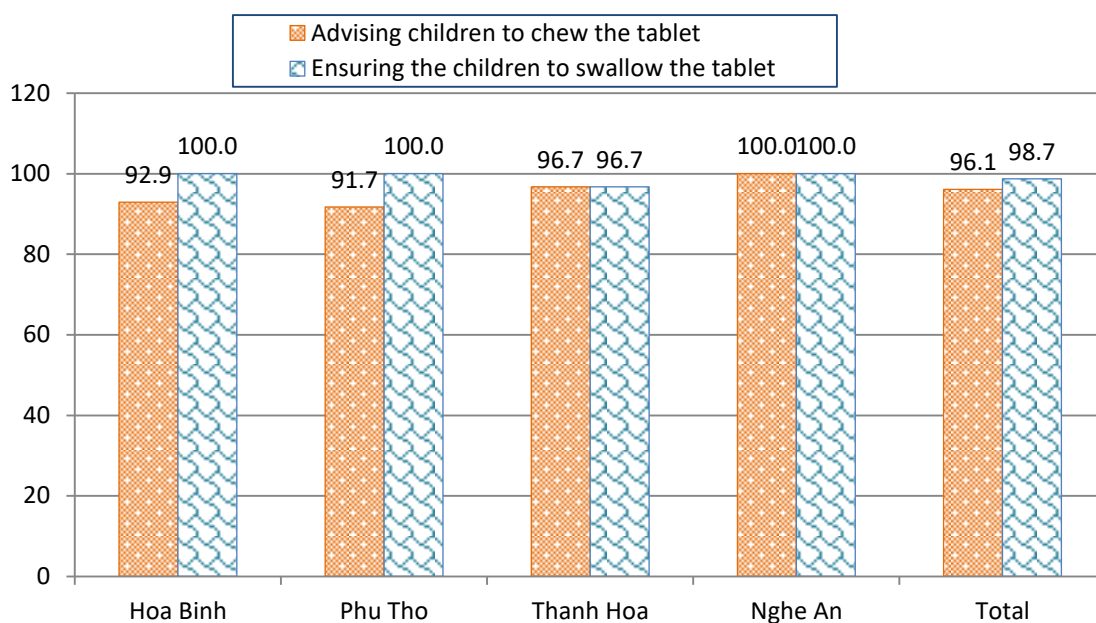


Figure 20. Percentage of CHC's staff advising children to chew the tablet and ensuring the children to swallow the tablet

Interview results also showed that 96.1% of CHC's staff advised the children to chew the tablet and 98.7% of CHC's staff ensured children had swallowed the tablet.

Table 58. Allocation of albendazole to commune health center (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Commune staff who attended the training brought it back	64.3	25.0	20.0	38.1	33.8
Commune staff traveled to the district health center to collect it	35.7	75.0	80.0	57.1	64.9
Commune staff collected it during a regularly-scheduled visit to the DHC	0.0	0.0	0.0	4.8	1.3
District health center delivered it directly to the commune	0.0	0.0	0.0	0.0	0.0
Total (n)	14	12	30	21	77

When asked "how did the commune health center receive its allocation of albendazole?" the answers from CHC's staff focused on commune staff traveling to district health center to collect it (64.9%), the highest proportion in Thanh Hoa (80%); 33.8% of respondents said that they received albendazole at the training class. Only one commune health worker reported that the CHC received albendazole at a periodical meeting (1.3%).

Table 59. Date of expiry of drug

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Drugs past their expiry date	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Drugs within their expiry date	14	100.0	12	100.0	29	96.7	21	100.0	76	98.7
No date listed – drugs not in original package	0	0.0	0	0.0	1	3.3	0	0.0	1	1.3
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0

When monitors asked the commune health worker to show the containers of albendazole, observation result showed that 98.7% of schools where drugs was within their expiry date (before 2020), only one school in Thanh Hoa where drugs was not in original package.

Table 60. Brands of drug

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Albendazole	4	40.0	1	8.3	2	8.0	0	.0	7	10.6
Janssen	1	10.0	3	25.0	6	24.0	8	42.1	18	27.3
Mebendazole	4	40.0	3	25.0	14	56.0	7	36.8	28	42.4
Vermox	1	10.0	5	41.7	3	12.0	4	21.1	13	19.7
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Most of brands of drug were Mebendazole (42.4%), followed by Janssen (27.3%), Vermox (19.7%) and Albendazole (10.6%).

Table 61. Percentage of all schools having sufficient and insufficient tablets

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Sufficient	14	100	9	75.0	30	100.0	21	100.0	74	96.1
Insufficient	0	0	3	25.0	0	0.0	0	0.0	3	3.9
Total	14	100	12	100.0	30	100.0	21	100.0	77	100.0

Most information from interviews with commune health workers (96.1%) also showed that the quantity of tablets brought to schools was sufficient for the total number of children at the school. There was a lack of tablets at 3 main schools in Phu Tho.

Table 62. Time of ticking off the names of children from the class list

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Names of all children present are ticked off before tablets are distributed	0	0.0	0	0.0	3	10.0	0	0.0	3	3.9
Names of children eligible for receiving a tablet (after ineligible children are excluded) are ticked off before the tablets are distributed	1	7.1	1	8.3	4	13.3	1	4.8	7	9.1
Names are ticked off as the tablets are distributed to children, but without verifying that the child swallows the tablet	0	0.0	1	8.3	1	3.3	0	0.0	2	2.6
Names are ticked off only when children are observed to have swallowed the tablet	10	71.4	8	66.7	14	46.7	17	81.0	49	63.6
All children who received a tablet are ticked off the class list after all tablets are distributed in the class, but all children dewormed were verified as having swallowed the tablet	3	21.4	2	16.7	8	26.7	3	14.3	16	20.8
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0

CHC's staff should tick on the next to the name of each student in the class list after the child had already swallowed the tablet. Interview results showed that only 63.6% of respondents answered correctly, 20.8% of respondents said their names were ticked off as all children had received and already swallowed the tablet. Still a few commune health workers thought all children's name were ticked off before tablets are distributed (3.9%).

Table 63. Plan for mop-up day (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
On December 5	25.6	62.2	51.7	55.4	50.0
Other day this week	41.0	10.8	6.9	15.4	15.8
Next week	5.1	8.1	3.4	1.5	3.9
Mop-up day will happen at the school if necessary	15.4	13.5	4.6	13.8	10.5
Mop-up day will happen at the commune health center	5.1	0.0	18.4	12.3	11.4
Mop-up day will happen at the local village communal houses	2.6	0.0	0.0	0.0	0.4
Mop-up day will be arranged by health workers going door-to-door	0.0	0.0	1.1	0.0	0.4
There is no mop-up day	2.6	2.7	6.9	0.0	3.5
Not aware how mop-up day is arranged	2.6	2.7	6.9	1.5	3.9
Total (n)	39	37	87	65	228

A total of 228 respondents (66 head teachers, 66 teachers, 66 CHC's staff at main schools, 19 teachers and 11 CHC's staff at satellite schools) were interviewed on the plan for conducting the mop-up day. The results showed that 1/2 of respondents reported the mop-up day would be conducted on December 12 as planned, 15.8% of respondents said the mop-up day would be conducted on other day this week.

Table 64. Using class list after MDA

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Take them back to the CHC	11	78.6	10	83.3	24	80.0	16	76.2	61	79.2
Send them all to the DHC	4	28.6	2	16.7	7	23.3	4	19.0	17	22.1
Give them to the school principal to keep	0	0.0	0	0.0	1	3.3	1	4.8	2	2.6
Don't know	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0

After the MDA is completed at the school, most of CHC's staff took the individual class lists back to the CHC (79.2%). Some CHC's staff said that the individual class lists would be sent to the DHC (22.1%) or given to the school principal to keep (2.6%).

About 93.5% of CHC's staff said there was a specify date for submitting the commune summary form to the district. In which, 51.4% commune health workers said that the deadline for submitting the commune summary form to the district was on 7th December 2016, about 30.6% said the deadline was before 7th December, and 18.1% of them said after 7th December.

Table 65. The ways that CHCs received the reporting forms (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
At the training	64.3	33.3	40.0	71.4	51.9
Commune staff traveled to DHC to collect a hard copy	21.4	33.3	16.7	9.5	18.2
DHC delivered a hard copy directly to CHC	7.1	0.0	13.3	4.8	7.8
DHC e-mailed a soft copy to the CHC	7.1	33.3	36.7	14.3	24.7
Don't know	14.3	0.0	3.3	0.0	3.9
Total (n)	14	12	30	21	77

More than a half of commune staff said the CHCs received the reporting forms at the training (51.9%), followed by DHC e-mailed a soft copy to the CHC (24.7%), commune staff traveled to district health center to collect a hard copy (18.2%). Some commune staff mentioned DHC delivered a hard copy directly to CHC (7.8%).

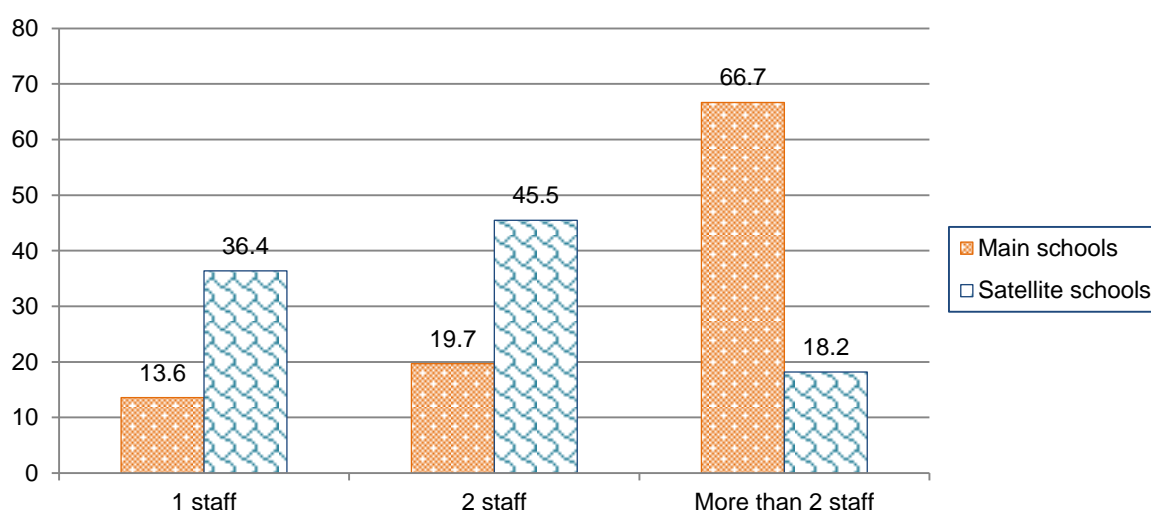
**Figure 21.** Number of CHC's staff coming to the main and satellite schools to distribute tablets, by school

Figure above shows that more than 2 CHC's staff was present at most main schools on the deworming day (66.7%), this rate at satellite schools was 18.2%. Most satellite schools had from one to two staff.

Table 66. Number of CHC's staff coming to schools to distribute tablets, by province

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
1 staff	3	21.4	1	8.3	4	13.3	5	23.8	13	16.9
2 staff	3	21.4	4	33.3	6	20.0	5	23.8	18	23.4
More than 2 staff	8	57.1	7	58.3	20	66.7	11	52.4	46	59.7
Total	14	100.0	12	100.0	30	100.0	21	100.0	77	100.0

By province, more than a half of schools were present at schools to distribute tablets, the highest rate in Thanh Hoa (66.7%) and the lowest rate in Nghe An (52.4%).

Table 67. Non-enrolled children from the community come to school for deworming

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Yes	4	40.0	3	25.0	8	32.0	3	15.8	18	27.3
No	3	30.0	5	41.7	10	40.0	10	52.6	28	42.4
Don't know the process for dealing with non-enrolled children	0	0.0	0	0.0	2	8.0	0	0.0	2	3.0
Other	3	30.0	4	33.3	5	20.0	6	31.6	18	27.3
Total	10	100.0	12	100.0	25	100.0	19	100.0	66	100.0

Data from interviews with head teachers, 27.3% of interviewees said if non-enrolled children from the community come to school for deworming, they would be dewormed at this school, 42.4% of head teachers said no deworming for non-enrolled children at their schools.

Table 68. The process for deworming non-enrolled children (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
They are encouraged to come to the school on deworming day	7.1	8.3	30.0	4.8	15.6
They are encouraged to come to the school on mop-up day	14.3	0.0	6.7	0.0	5.2
They are dewormed at the commune health center	28.6	41.7	33.3	66.7	42.9
They are dewormed at the village communal house	0.0	0.0	6.7	0.0	2.6
They are dewormed by health workers going door-to-door	0.0	0.0	0.0	14.3	3.9
There is no process in place for deworming non-enrolled children	7.1	25.0	10.0	4.8	10.4
Non-enrollment is not an issue in this commune	35.7	16.7	3.3	4.8	11.7
Other	7.1	8.3	10.0	4.8	7.8
Total (n)	14	12	30	21	77

Most of commune health workers said that non-enrolled children would be dewormed at the commune health center (42.9%). Only 15.6% of commune health workers said non-enrolled children are encouraged to come to the school on deworming day.

3.3.2.4. Students

At each monitored schools, one student in the observed class was randomly selected to interview on the deworming day. A total of 66 students at main schools and 19 ones at satellite schools were interviewed. Nearly 70% of children were interviewed privately, the highest in Thanh Hoa (75%) and the lowest in Hoa Binh (69%).

Table 69. Percentage of students knowing why tablets are being given out on the main deworming day and mop-up day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
To treat worms	11	73.3	10	76.9	32	100.0	24	96.0	77	90.6
To treat anything else	0	0.0	1	7.7	0	0.0	0	0.0	1	1.2
Don't know/don't remember	4	26.7	2	15.4	0	0.0	1	4.0	7	8.2
Total	15	100.0	13	100.0	32	100.0	25	100.0	85	100.0

Results showed that most of the students knew they were given tablets for treating worms (90.6%), the highest rate in Thanh Hoa (100%). Only a few students did not know what tablets given out to treat for (8.2%).

Table 70. Percentage of students knowing tablets would be given

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
The teacher told us this morning	1	6.7	0	0.0	5	15.6	2	8.0	8	9.4
The teacher told us in the past few days	13	86.7	12	92.3	28	87.5	21	84.0	74	87.1
There were announcements made during school assembly	1	6.7	3	23.1	6	18.8	6	24.0	16	18.8
Posters/banners were hung in the schools	3	20.0	5	38.5	10	31.3	10	40.0	28	32.9
My parents told me	2	13.3	2	15.4	4	12.5	6	24.0	14	16.5
There were announcements made on the loudspeaker in the village	0	0.0	1	7.7	4	12.5	10	40.0	15	17.6
Total number of students interviewed¹²	15	100.0	13	100.0	32	100.0	25	100.0	85	100.0

Most of the students said that their teacher told them tablets would be given in the past few days (87.1%).

Before tablets were given out in the class, 90.6% of students were explained that the tablets were for treat worms, 4.7% of students were not told what the tablets were for.

The results of interviews also showed that 100% of students received 1 tablet, 97.6% of students said that the tablet is white. Also 97.6% of students felt fine BEFORE taking the tablet. About 96.5% of the children who receives medicine said that they felt well AFTER taking tablets, 1 child got abdominal pain/stomach ache (1.2%), 2 children were nausea (2.4%). The results from interviews showed that up to 98.8% of children had eaten before coming to school.

Table 71. Implementation of deworming at satellite schools

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
November 28	4	50.0	2	50.0	12	48.0	12	75.0	30	56.6
November 29	4	50.0	2	50.0	13	52.0	2	12.5	21	39.6
November 30	0	0.0	0	0.0	0	0.0	1	6.3	1	1.9
Commune health staff will not visit this school	0	0.0	0	0.0	0	0.0	1	6.2	1	1.9
Total	8	100.0	4	100.0	25	100.0	16	100.0	53	100.0

The 66 main schools that were visited have a total of 53 satellite schools. Interviews with the commune health workers during the visits to the main schools reveal that deworming was conducted on November 28 at 56.6% of the associated satellite schools, and on November 29 at

¹² Some students provided more than one response, thus total of percentage is more than 100%

39.6%. According to these interviews, only 1 out of these 53 satellite schools (Huoi Tong satellite of Keng Du 2 school, Ky Son district, Nghe An) would not be visited by commune health staff. The reason is that tablets was sent to village health workers, and they distributed the tablets to the children.

3.4. Coverage validation

3.4.1. Assessment of deworming activities at CHC

Assessment of deworming has conducted at 67 main schools and 65 satellite schools. The monitoring results show that there are 9 communes that included more than 1 school to be visited as part of the coverage validation including: center school and Ba Buong (Thanh Nong commune, Lac Thuy, Hoa Binh); Xom Muon và Xom Not (Kim Son commune, Kim Boi, Hoa Binh); Tien Kien and Tien Kien satellite school (Tien Kien commune, Lam Thao, Phu Tho); Te Le and B area (Te Le commune, Tam Nong, Phu Tho); Van Am 2 and Dong Van (Van Am commune, Ngoc Lac, Thanh Hoa); Bac Son and Unit 4 (Bac Son commune, Bim Son, Thanh Hoa); Tay Tien and Muong I (Muong Ly, Muong Lat, Thanh Hoa); Pho Moi and Coc 2 (Nam Tien commune, Quan Hoa, Thanh Hoa); Tay Hieu and Hung Cong (Tay Hieu, Thai Hoa, Nghe An). Hence, assessment of deworming activities has conducted at 123 communes distributed across 71 of the 72 districts in all 4 provinces targeted by the program.

Table 72. The date of the main deworming day taking place

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
28 November 2016	11	61.1	17	77.3	25	54.3	23	62.2	76	61.8
29 November 2016	7	38.9	4	18.2	16	34.8	7	18.9	34	27.6
28&29 November 2016	0	0.0	1	4.5	5	10.9	7	18.9	13	10.6
Total	18	100.0	22	100.0	46	100.0	37	100.0	123	100.0

The table above presents that all supervised schools in Hoa Binh, Nghe An and Phu Tho conducted deworming for students as province's plan (28-29/11/2016), in which 76/123 communes (61,8%) implemented deworming for students on 28/11/2016, 34/123 communes (27,6%) implemented deworming activities on 29/11/2016 and 13/123 communes (10,6%) conducted this activity during 2 days (28 and 29/11/2016).

Table 73. The plan for conducting a mop-up day

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
5 December 2016	5	27.8	16	72.7	27	58.7	17	45.9	65	52.8
Other date	5	27.8	3	13.6	5	10.9	5	13.5	18	14.6
No mop-up day	8	44.4	3	13.6	14	30.4	15	40.5	40	32.5
Total	18	100.0	22	100.0	46	100.0	37	100.0	123	100.0

Interviewing CHC's leader illustrate that there is 67.4% in 123 supervised communes has a mop-up beside a main day; there is; in which 52.8% a mop-up day has conducted as plan (on 5/12/2016), 14,6% has organized in other day. As CHC's leader, mop-up activities have mainly implemented at schools (56/83 communes, accounting for 67,5%), the rest one (32,5%) has conducted at CHCs. There is 27 communes implemented a mop-up day at CHCs, there is 74.1% communes has required children to go to CHCs for deworming and 25.9% communes arranged children as one group.

At supervised time, there is 120/123 communes (accounting for 97.6%) has a deworming report at commune. 3 rest communes including Dao Xa (Thanh Thuy, Phu Tho), Da Loc commune (Hau Loc, Thanh Hoa) and Hanh Dich (Que Phong, Ngha An) have not got a report during supervised time, in which 2 communes Da Loc and Hanh Dich did not do a report; and Dao Xa had sent a report to DHC without copy version at CHC.

Table 74. Percentage % CHCs completed the reporting form

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
Completed	1	5.6	3	13.6	5	12.8	2	5.4	11	8.9
Incomplete	0	0.0	1	4.5	2	5.1	1	2.7	4	3.3
In the process of being completed	0	0.0	0	0.0	0	0.0	5	13.5	5	4.1
Already sent to district health center	17	94.4	18	81.8	39	100.0	29	78.4	103	83.7
Total	18	100.0	22	100.0	46	100.0	37	100.0	123	100.0

The percentage of CHCs which had sent a deworming report to DHCs until supervised time achieves 83.7%; 8.9% communes had completed but did not send and 7.4% rest communes had not completed/were doing. With 103 schools had sent a report, 97.1% sent it in right time or before deadline 7/12/2016, Truong Think commune (Phu Tho town) sent a report on 9/12/2016, Yen Thang commune (Lang Chanh, Thanh Hoa) and Thanh Long commune (Thach Thanh, Thanh Hoa) sent a report on 8/12/2016.

The main reason why 20 communes have not sent a report to DHCs is that they said the deadline was another date (8/123 communes, accounting for 6.5%), beside that there are some other reasons such as: do not know the deadline day of the report (3/123 communes, accounting for 2.4%), they have not got time to complete data as deadline time (2/123 communes, accounting for 1.6%), deworming activities have not completed as schedule (4/123 communes, accounting for 3.3%), a report form was not sent to CHC (1/123 communes, accounting for 0.8%), report form was wrong so it was needed to do again (1/123 communes, accounting for 0.8%) and waiting for deworming results at kindergartens to send a report (1/123 communes, accounting for 0.8%).

Table 75. Deadline of sending a report to DHC from CHC's head information

Information	Hoa Binh		Phu Tho		Thanh Hoa		Nghe An		Total	
	n	%	n	%	n	%	n	%	n	%
7 December 2016	7	38.9	9	40.9	33	71.7	21	56.8	70	56.9
Other date	10	55.6	12	54.5	10	21.7	14	37.8	46	37.4
Don't know	1	5.6	1	4.5	3	6.5	2	5.4	7	5.7
Total	18	100.0	22	100.0	46	100.0	37	100.0	123	100.0

As project's regulations, CHC's staff will complete a report and send it to DHCs on 7/12/2016. This information is delivered in contents of the training course for CHC's staff and teachers. However, only 56.9% leader of CHCs know the day to submit a report following regulation, in contrast there is 37.4% CHCs told that deadline day is after 7/12/2016 (9-10/12/2016 depend on each communes) and 5.7% do not know what day is deadline to submit a report. As observation of supervisors, one of the reasons that lead to CHC's staff do not know the day to submit a report is that DHC's archives is not clear "After finishing deworming (CHC's staff does not know that is main day or mop-up day) 05 days CHCs have to submit a deworming report to Public Health Department..." – extracted from a DHC's archive which was sent to CHCs. CHC's staff do not know exactly the deadline day can be main reason that leads to they have not completely sent a report to DHCs.

Table 76. How the commune reporting form was completed (%)

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Only used the class lists to count the number of children dewormed in each class (1)	77.8	68.2	71.7	62.2	69.1
Only counted the number of permission forms collected (2)	0.0	13.6	8.7	13.5	9.8
Only requested the head teacher to provide us with the number of children in-attendance on the day of deworming (3)	0.0	0.0	8.7	2.7	4.1
Combined form (1) and form (2)	16.7	18.2	8.7	13.5	13.0
Combined form (1), form (2) and form (3)	5.6	0.0	0.0	5.4	2.4
Not done yet	0.0	0.0	2.2	2.7	1.6
Total of CHCs	18	22	46	37	123

Following to the opinion of CHC's leaders, most of CHCs (69.1%) only used all the class lists to count the number of children dewormed in each class. In addition, still 12/123 communes (9.8%) only used counted the number of permission forms collected. 5/123 communes (4.1%) only used requesting the head teacher to provide us with the number of children in-attendance on the day of deworming including Trung Thuong, Trung Tien communes (Quan Son district, Thanh Hoa province), Bac Son commune (Bim Son district, Thanh Hoa province), Yen Thang commune (Lang Chanh district, Thanh Hoa province) and Yen Thang commune (Tuong Duong district, Nghe An province).

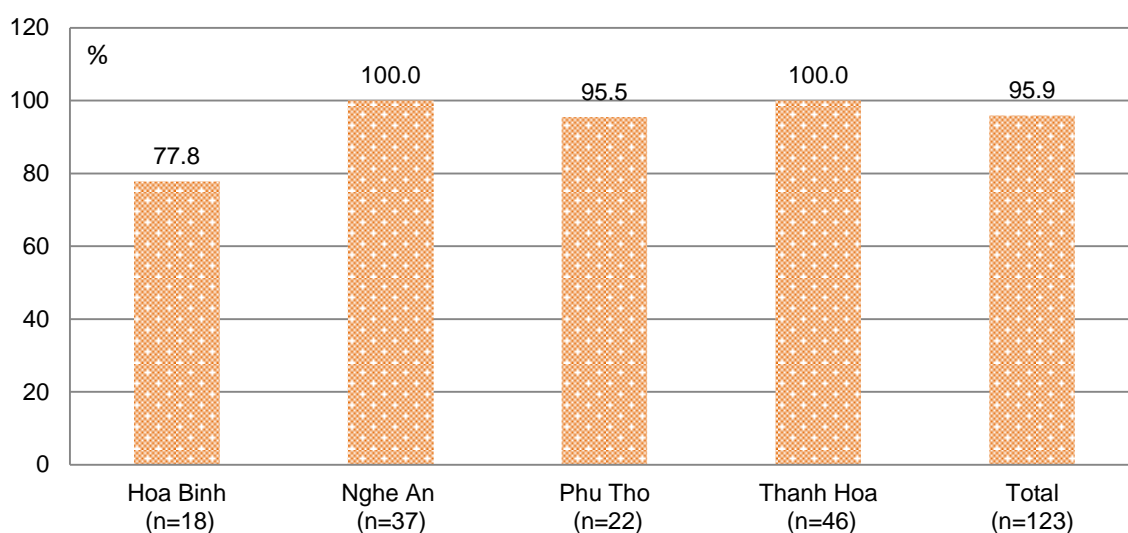


Figure 22. Percentage of CHCs having available list of children for deworming

Among 123 monitored communes, 95.9% had available list of each class used in the deworming day at CHC. Five remaining communes (4.1%) where had lists stored at the schools includes 4 communes in Hoa Binh province (Noong Luong, Tan Mai-Mai Chau, Hop Thinh-Ky Son, Thai Binh – Hoa Binh city) and 1 commune in Phu Tho province (Tien Kien, Lam Thao).

Table 77. The percentage of children were dewormed under CHC's reports

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Total number of enrolled students in communes included in monitoring sample	5,028	11,854	19,239	17,867	53,988
% enrolled students dewormed in communes included in monitoring sample	95.4	95.2	98.1	98.0	97.2
Total number of non-enrolled school-aged children in communes included in monitoring sample	5	9	157	67	238
% non-enrolled school-aged children dewormed in communes included in monitoring sample	100.0	44.4	88.5	70.1	81.9
Total number of school-age children (enrolled plus non-enrolled) in communes included in monitoring sample	5,033	11,863	19,396	17,934	54,406
% school-age children (enrolled plus non-enrolled) dewormed in communes included in monitoring sample	95.4	95.2	98.0	97.9	97.1
Total of CHCs	18	21	45	36	120 (*)

(*) – Did not count 3 CHCs which had no report at the monitoring time

As report from 120/123 communes, the percentage of students dewormed achieves 97.2% with reluctant proportion from 95.2% to 98.1% depending on each province. The percentage of children who are not student were dewormed achieves 81.9% (reluctance from 44.4% to 100.0%). In general, the percentage of children were dewormed achieves 97.1%, in which lowest proportion in Phu Tho (95.2%) and highest in Thanh Hoa (98.0%).

Table 78. Average number of children who were enrolled in the commune, according to the commune reporting form

Information	Hoa Binh	Nghe An	Phu Tho	Thanh Hoa	Total
Boys (±SD)	140,8±66,9	256,8±86,7	287,3±160,9	213,2±143,3	226,5±129,2
Girls (±SD)	135,6±67,7	241,0±85,6	245,9±119,9	208,6±116,8	212,4±107,8
Average total number of children (±SD)	276,3±131,9	487,8±171,7	537,7±312,6	422,5±246,4	440,4±237,9
The least number of children	93	202	88	98	88
The most number of children	547	915	1227	1477	1477

Note: Only accounting for 114 schools which have deworming data to be divided by sex

According to data from CHCs, in average each commune has 440 children were dewormed, in which highest place in Phu Tho (538 children) and lowest place in Hoa Binh (276 children). In general, the number of boy children were dewormed is higher the number of girl children (226/212).

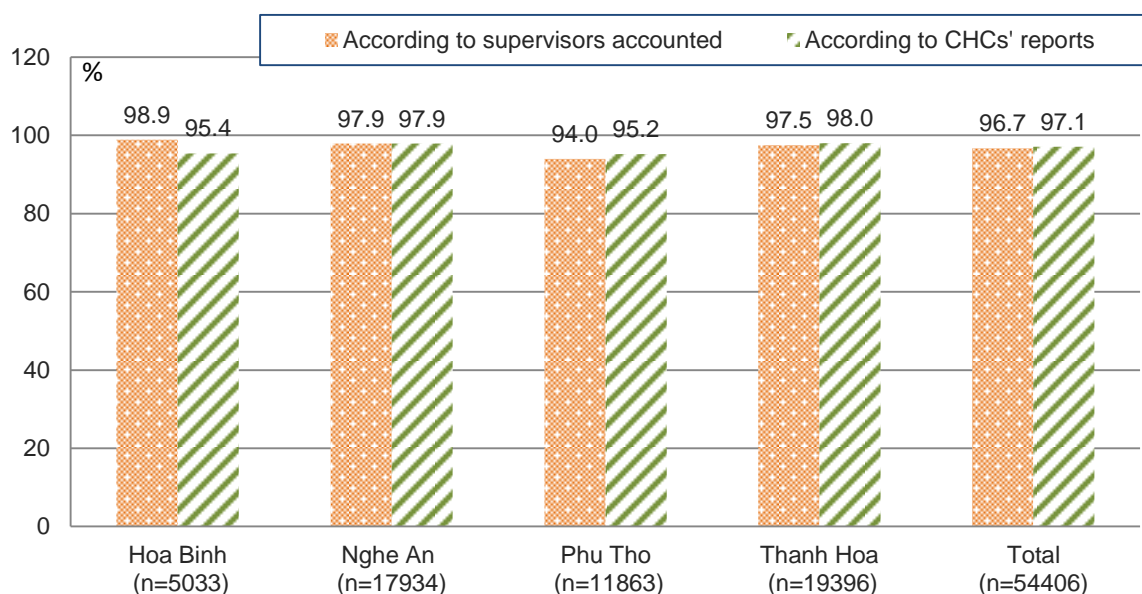


Figure 23. Comparison between the percentage (%) of children were dewormed following CHC's report and accounting by supervisors of the class lists

Note: Does not count 3 schools which have not a report at supervised time

The figure above presents that the percentage of children were dewormed in 4 whole provinces following supervisors' observation achieved 96.7%, a little bit lower compared to data from CHCs (97.1%).

Table 79. Total number of students whose names were ticked in the class list and total number of students reported in the commune reporting form

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting
			Dewormed in commune		Dewormed in commune		Dewormed in the commune		
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	
Hoa Binh									
1	Tan Lac	Quyet Chien	77	80	58	59	135	139	Higher
2	Tan Lac	Trung Hoa	82	81	107	111	189	192	Higher
3	Luong Son	Long Son	197	197	165	165	362	362	Equal
4	Luong Son	Thanh Luong	186	186	137	137	323	323	Equal
5	Lac Thuy	Thanh Nong(*)	241	241	238	238	479	479	Equal
6	Lac Son	Binh Hem	150	150	121	121	271	271	Equal
7	Lac Son	Van Son	194	194	183	183	377	377	Equal
8	Ky Son	Doc Lap	59	59	45	45	104	104	Equal
9	Ky Son	Hop Thinh	173	173	199	199	372	372	Equal
10	Da Bac	Dong Chum	168	168	171	171	339	339	Equal
11	Da Bac	Hao Ly	66	66	70	70	136	136	Equal
12	Hoa Binh city	Thai Binh	136	136	112	112	248	248	Equal
13	Mai Chau	Noong Luong	81	81	68	68	149	149	Equal
14	Mai Chau	Tan Mai	46	43	57	50	103	93	Lower
15	Kim Boi	Kim Son(*)	173	173	134	134	307	307	Equal
16	Cao Phong	Thung Nai	75	75	89	89	164	164	Equal
17	Cao Phong	Nam Phong	157	157	215	215	372	372	Equal
18	Yen Thuy	Bao Hieu	273	274	274	273	547	547	Equal

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting
			Dewormed in commune		Dewormed in commune		Dewormed in the commune		
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	
Phu Tho									
19	Ha Hoa	Yen Luat	158	158	117	117	275	275	Equal
20	Thanh Son	Vo Mieu	547	547	505	505	1052	1052	Equal
21	Thanh Son	Cu Dong	147	147	178	178	325	325	Equal
22	Phu Ninh	Tien Du	234	234	200	200	434	434	Equal
23	Phu Ninh	Phu Nham	169	169	154	154	323	323	Equal
24	Tan Son	Thu Ngac	272	272	260	260	532	532	Equal
25	Tan Son	Long Coc	148	148	156	156	304	304	Equal
26	Lam Thao	Tien Kien(*)	330	330	290	290	620	620	Equal
27	Thanh Ba	Khai Xuan	338	338	325	325	663	663	Equal
28	Thanh Ba	Ninh Dan	369	369	357	357	726	726	Equal
29	Tam Nong	Te Le(*)	193	193	154	154	347	347	Equal
30	Yen Lap	Trung Son	242	242	213	213	455	455	Equal
31	Yen Lap	Nga Hoang	45	45	43	43	88	88	Equal
32	Cam Khe	Ta Xa 1	281	322	263	266	544	588	Higher
33	Cam Khe	Phuong Vi	368	404	305	327	673	731	Higher
34	Thanh Thuy	Doan Ha	-	-	-	-	285	285	Equal
35	Thanh Thuy	Dao Xa	200	-	178	-	378	-	-
36	Viet Tri	Van Co	452	452	385	385	837	837	Equal
37	Viet Tri	Van Phu	676	676	389	389	1065	1065	Equal
38	Phu Tho city	Truong Thinh	100	-	91	-	191	191	Equal
39	Phu Tho city	Phu Ho	-	-	-	-	1180	1227	Higher
40	Doan Hung	Que Lam	126	126	108	108	234	234	Equal

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting
			Dewormed in commune		Dewormed in commune		Dewormed in the commune		
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	
Thanh Hoa									
41	Sam Son	Truong Son	83	83	96	96	179	179	Equal
42	Sam Son	Quang Chau	367	367	288	288	655	655	Equal
43	Cam Thuy	Cam Son	159	159	141	141	300	300	Equal
44	Cam Thuy	Cam Yen	112	112	116	116	228	228	Equal
45	Ha Trung	Ha Toai	52	52	46	46	98	98	Equal
46	Ha Trung	Ha Binh	182	182	154	154	336	336	Equal
47	Nong Cong	Cong Binh	158	158	119	119	277	277	Equal
48	Nong Cong	Cong Chinh	233	233	221	221	454	454	Equal
49	Quan Hoa	Nam Tien(*)	108	108	137	137	245	245	Equal
50	Quan Hoa	Trung Son	152	152	143	143	295	295	Equal
51	Ngoc Lac	Van Am(*)	-	-	-	-	456	456	Equal
52	Vinh Loc	Vinh Tan	101	101	64	64	165	165	Equal
53	Vinh Loc	Vinh Hung	250	250	167	167	417	417	Equal
54	Hau Loc	Da Loc	63	-	68	-	131	-	-
55	Hau Loc	Tuy Loc	169	169	123	123	292	292	Equal
56	Dong Son	Dong Xuan	78	78	71	71	149	149	Equal
57	Trieu Son	Minh Chau	180	180	179	179	359	359	Equal
58	Hoang Hoa	Hoang Tan	159	159	156	156	315	315	Equal
59	Quan Son	Trung Tien	130	128	160	162	290	290	Equal
60	Quan Son	Trung Thuong	100	103	104	101	204	204	Equal
61	Quan Son	Son Ha	93	83	112	122	205	205	Equal
62	Lang Chanh	Yen Thang	284	284	278	278	562	562	Equal

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting
			Dewormed in commune		Dewormed in commune		Dewormed in the commune		
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	
63	Lang Chanh	Quang Hien	135	135	137	137	272	272	Equal
64	Tho Xuan	Quang Phu	323	323	309	309	632	632	Equal
65	Tho Xuan	Xuan Phong	144	144	113	113	257	257	Equal
66	Ba Thuoc	Luong Trung	153	153	240	240	393	393	Equal
67	Ba Thuoc	Ha Trung	106	106	166	166	272	272	Equal
68	Quang Xuong	Quang Nham	783	786	690	691	1473	1477	Higher
69	Nga Son	Nga Phu	229	229	232	232	461	461	Equal
70	Nga Son	Nga Lien	323	418	280	382	603	800	Higher
71	Thuong Xuan	Luan Khe	240	0	265	402	505	402	Lower
72	Thuong Xuan	Yen Nhan	197	197	230	230	427	427	Equal
73	Thuong Xuan	Luong Son	390	394	360	356	750	750	Equal
74	Thach Thanh	Thanh Long	270	266	261	274	531	540	Higher
75	Thach Thanh	Van Du	140	140	139	139	279	279	Equal
76	Muong Lat	Muong Ly(*)	360	360	240	240	600	600	Equal
77	Tinh Gia	Ninh Hai	208	208	239	239	447	447	Equal
78	Tinh Gia	Tan Truong	-	359	-	340	699	699	Equal
79	Yen Dinh	Yen Lac	153	153	139	139	292	292	Equal
80	Yen Dinh	Yen Lam	278	278	246	246	524	524	Equal
81	Bim Son	Bac Son(*)	292	292	256	256	548	548	Equal
82	Nhu Xuan	Thanh Phong	134	134	182	182	316	316	Equal
83	Nhu Xuan	Xuan Binh	223	223	262	262	485	485	Equal
84	Nhu Thanh	Phuong Nghi	190	190	163	163	353	353	Equal
85	Nhu Thanh	Xuan Thai	160	160	161	161	321	321	Equal

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting	
			Dewormed in commune		Dewormed in commune		Dewormed in the commune			
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form		
86	Thanh Hoa city	Quang Thanh	592	592	394	394	986	986	Equal	
Nghe An										
87	Vinh city	Nghi Kim	376	376	290	290	666	666	Equal	
88	Cua Lo town	Nghi Tan	361	361	401	401	762	762	Equal	
89	Hung Nguyen	Hung Yen Bac	270	270	230	230	500	500	Equal	
90	Hung Nguyen	Hung Trung	347	347	328	328	675	675	Equal	
91	Nam Dan	Nam Thanh	334	334	299	299	633	633	Equal	
92	Nam Dan	Hung Tien	309	309	247	247	556	556	Equal	
93	Nghi Loc	Nghi Kieu	442	442	473	473	915	915	Equal	
94	Nghi Loc	Nghi Yen	276	276	309	309	585	585	Equal	
95	Dien Chau	Dien Hoang	212	212	196	196	408	408	Equal	
96	Quynh Luu	Tan Thang	171	171	184	184	355	355	Equal	
97	Quynh Luu	Quynh Nghia	341	341	338	338	679	679	Equal	
98	Yen Thanh	Lang Thanh	288	288	256	256	544	544	Equal	
99	Yen Thanh	Nam Thanh	261	261	235	235	496	496	Equal	
100	Do Luong	Xuan Son	250	250	226	226	476	476	Equal	
101	Do Luong	Nam Son	185	185	150	150	335	335	Equal	
102	Thanh Chuong	Thanh Van	178	178	180	180	358	358	Equal	
103	Thanh Chuong	Ngoc Lam	267	267	238	238	505	505	Equal	
104	Anh Son	Tuong Son	381	381	352	352	733	733	Equal	
105	Anh Son	Duc Son	257	257	237	237	494	494	Equal	

No.	District	Commune	Total # Boys		Total # of Girls		TOTAL # of children		Reporting/ counting
			Dewormed in commune		Dewormed in commune		Dewormed in the commune		
			Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	Number obtained from counting of the class lists	Number reported in commune reporting form	
106	Nghia Dan	Nghia Phu	125	127	119	124	244	251	Higher
107	Nghia Dan	Nghia Minh	114	114	110	110	224	224	Equal
108	Quy Hop	Chau Ky	298	298	258	258	556	556	Equal
109	Quy Hop	Van Loi	183	183	165	165	348	348	Equal
110	Quy Chau	Chau Hoan	110	110	108	108	218	218	Equal
111	Quy Chau	Chau Hoi	254	254	283	283	537	537	Equal
112	Que Phong	Nam Nhoong	95	92	112	110	207	202	Lower
113	Que Phong	Hanh Dich	146	-	151	-	297	-	-
114	Tuong Duong	Yen Thang	-	-	-	-	266	266	Equal
115	Tuong Duong	Huu Khuong	-	-	-	-	320	320	Equal
116	Tuong Duong	Yen Tinh	189	189	183	183	372	372	Equal
117	Ky Son	Muong Ai	148	148	142	142	290	290	Equal
118	Ky Son	My Ly	284	290	292	295	576	585	Higher
119	Ky Son	Keng Du	259	259	293	293	552	552	Equal
120	Thai Hoa town	Tay Hieu(*)	310	310	284	284	594	594	Equal
121	Hoang Mai town	Quynh Lien	345	345	318	318	663	663	Equal
122	Tan Ky	Tan Hop	199	199	173	173	372	372	Equal
123	Con Cuong	Thach Ngan	306	306	231	231	537	537	Equal

(*) The communes have both 2 main schools and satellite schools

According to supervisors' observation, there is 10/120 communes (accounting for 8.3%) have higher number of children were dewormed (this data belongs to CHC's report) comparing to total number of children were marked from class lists and 3/120 communes (accounting for 2.5%) have lower number of children were dewormed (this data belongs to CHC's report) comparing to total number of children were marked from class lists. This result shows that, the quality of CHC's deworming reports need to be pay attention during coming time, through training in a report form (only 40.7% training courses were illustrated a report form by trainers) and to unify blank table in class lists of each class to make advantages in accounting data.

TT	Họ và tên	Ghi chú
1	Hoàng Nhật Anh	✓
2	Nguyễn Kim Anh	✓
3	Bùi Ngọc Anh	✓
4	Đỗ Nguyễn Hải Đăng	✓
5	Chu Việt Dũng	✓
6	Nguyễn Quang Hà	✓
7	Hà Thị Ngọc Hải	✓
8	Nguyễn Nam Hải	✓
9	Phạm Xuân Hiếu	✓
10	Nguyễn Tô Văn Hoàng	✓
11	Phạm Bích Hồng	✓
12	Dương Phú Hưng	✓
13	Nguyễn Thu Hương	✓
14	Nguyễn Khánh Huy	✓
15	Nguyễn Tô Văn Huy	✓
16	Trần Bích Loan	✓
17	Tạ Ngọc Hoàng Long	✓
18	Nguyễn Trần Lâm	✓
19	Lê Dũng Mạnh	✓
20	Lê Ngọc Nam	✓
21	Lê Phương Nam	✓
22	Nguyễn Hoàng Nam	✓
23	Nguyễn Duy Quang	✓
24	Lê Tuấn Sơn	✓

Children lists without sex information that show children drink pills to deworm

Họ và tên	Tuổi		Địa chỉ	Ghi chú
	Nam	Nữ		
Nguyễn Thị Dung		6	Nhà trường - Ng. M. Thuận	
Hoàng Nhật Anh		6	"	
Nguyễn Kim Anh		6	"	
Bùi Ngọc Anh		6	"	
Đỗ Nguyễn Hải Đăng		6	"	
Chu Việt Dũng		6	"	
Nguyễn Quang Hà		6	"	
Hà Thị Ngọc Hải		6	"	
Nguyễn Nam Hải		6	"	
Phạm Xuân Hiếu		6	"	
Nguyễn Tô Văn Hoàng		6	"	
Phạm Bích Hồng		6	"	
Dương Phú Hưng		6	"	
Nguyễn Thu Hương		6	"	
Nguyễn Khánh Huy		6	"	
Nguyễn Tô Văn Huy		6	"	
Trần Bích Loan		6	"	
Tạ Ngọc Hoàng Long		6	"	
Nguyễn Trần Lâm		6	"	
Lê Dũng Mạnh		6	"	
Lê Ngọc Nam		6	"	
Lê Phương Nam		6	"	
Nguyễn Hoàng Nam		6	"	
Nguyễn Duy Quang		6	"	
Lê Tuấn Sơn		6	"	

Children lists with sex information that show children drink pills to deworm

3.4.2. Results of interviews with students

The selection of students for interviews was implemented following to two steps: (i) Randomly select two class lists corresponding to two classes according to the EMW's procedure (If the satellite school has only 1-2 classes, select all class lists); (ii) Randomly select THREE children according to the EMW's procedure for interviews.

Total 792 students belong to 132 primary schools (67 main schools and 65 satellite schools) in 4 project's provinces were interviewed during coverage validation time. 100% of students who attended in interviews without attendance of their teachers during the interview.

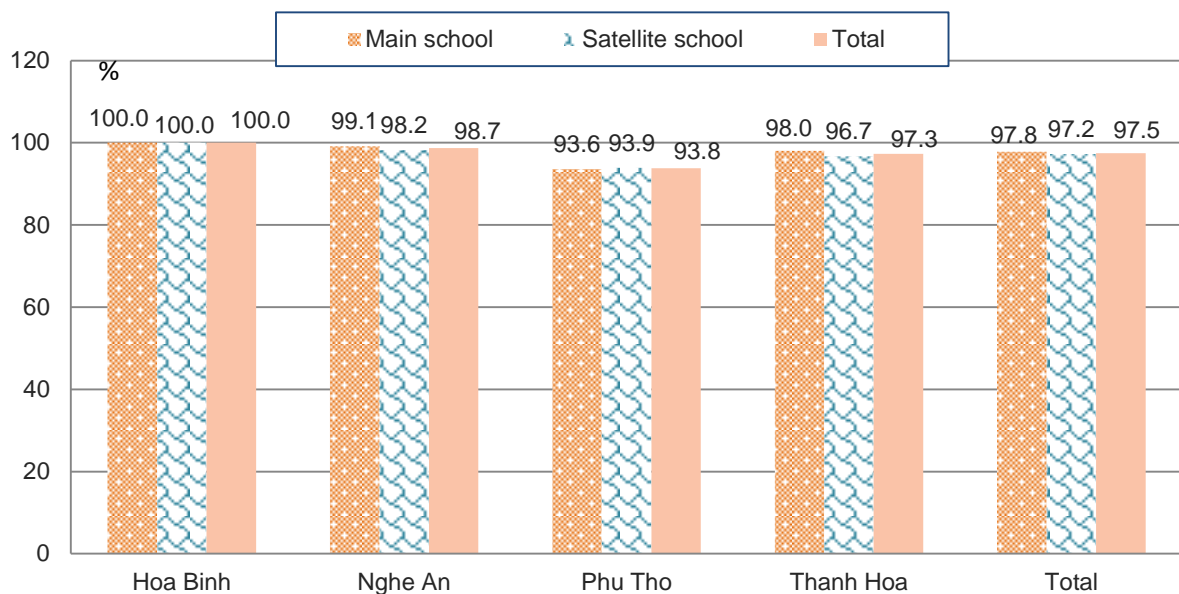


Figure 24. The % of students who reported receiving medicine at schools in the previous week

The results from interviewing student show that 97.5% of students told that they had received pills at schools in previous week (around from 93.8% in Phu Tho province to 100% in Hoa Binh province). There was no disparity in the percentage of students receiving pills at the main and satellite schools (97.8% and 97.2% respectively).

Of the 792 students interviewed, 772 reported having received medicine the previous week. All 772 of these students answered that they received 1 pill, 98.7% told that they received a white pill and 95.7% students know this pill is used for deworming.

Total 20 students did not receive pill in phase 2 of deworming, there is 9 students in Phu Tho, 8 students in Thanh Hoa and 3 students in Nghe An. The main reason these students did not receive pills is that they have just nearly dewormed (9/792, accounting for 1.1%), in which 6 students were dewormed in the last month, 2 students were dewormed in the last 1-5 months and 1 student did not remember the time of dewormed. In addition, 5/792 students (0.6%) were dewormed because their parents did not sign in an agreement form, 3/792 students (0.4%) used other medicine, they did not eat breakfast (1 student at Huong Tien school, Ngoc Lam commune, Thanh Chuong, Nghe An), dit not bring an agreement form to school (1 student at Muong Dan school, Hach Dich commune, Que Phong, Nghe An) and forget to ask parents signing in an agreement form (1 student at Nghi Kieu 1 school, Nghi Kieu 1 commune, Nghi Loc, Nghe An).

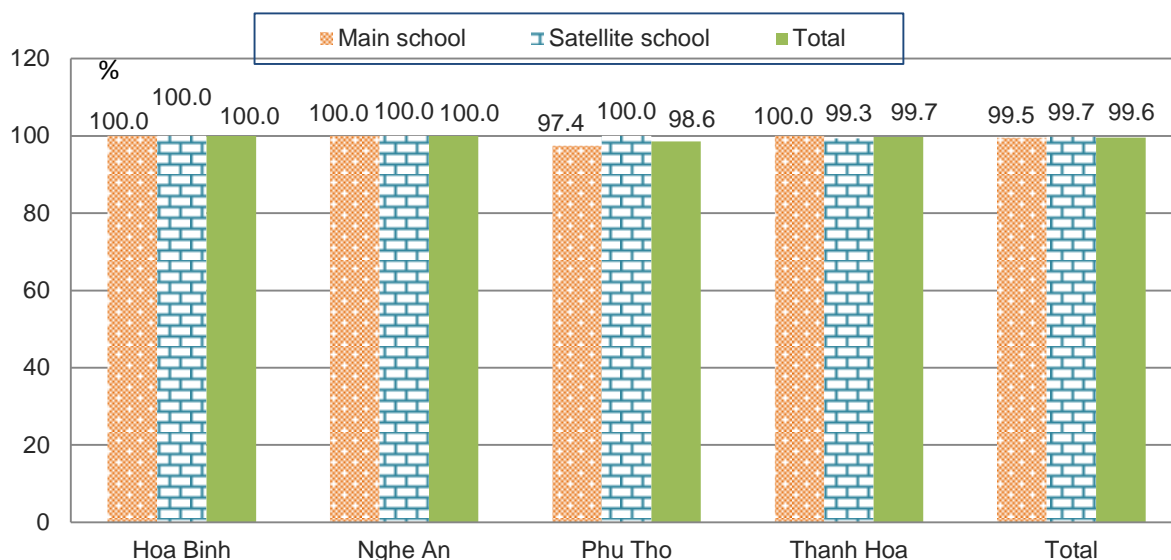


Figure 25. Percentage of student's answers corresponding with note in class lists

The figure above illustrates that 789/792 (accounting for 99.6%) of student's answers corresponding with note in class lists. There was no disparity in the percentage of student's answers corresponding with note in class lists at the main and satellite schools (99.5% and 99.7%). There is 3 student's answers that differ with note in class lists including 2 cases in Khai Xuan school, Khai Xuan commune, Thanh Ba, Phu Tho (main school) and 1 case in Thanh Mai school, Quang Thanh commune, Thanh Hoa city (satellite school). All these three cases told that they did not received pills but class lists mark their name.

Table 80. Percentage of students share information about who delivered pills for them

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Main school	n=60	n=73	n=147	n=113	n=393
CHC's staff	85.0	100.0	88.4	96.5	92.4
Teacher	15.0	0.0	9.5	3.5	6.9
Don't know/Don't remember	0.0	0.0	2.0	0.0	0.7
Satellite school	n=60	n=62	n=145	n=112	n=379
CHC's staff	76.7	88.7	68.3	88.4	78.9
Teacher	20.0	11.3	31.7	8.0	19.5
Don't know/Don't remember	3.3	0.0	0.0	3.6	1.6
Total	n=120	n=135	n=292	n=225	n=772
CHC's staff	80.8	94.8	78.4	92.4	85.8
Teacher	17.5	5.2	20.5	5.8	13.1
Don't know/Don't remember	1.7	0.0	1.0	1.8	1.1

According to students' answers, 85.8% students were delivered pills from CHC's staff (around from 78.4% in Thanh Hoa province to 94.8% in Phu Tho province. The percentage of students who were delivered pills at the main schools was higher than that at the satellite schools (92.4% and 78.9%).

The results in the table above also show that, still 13.1% students were delivered pills from teachers with fluctuating rate from 5.2% in Phu Tho to 20.5% in Thanh Hoa. There is 1.1% students do not remember who delivered pills for them in previous week (interview time).

Table 81. Percentage of students told that during deworming time CHC's staff were there while teachers delivered pills

Information	Hoa Binh	Phu Tho	Thanh Hoa	Nghe An	Total
Main school	n=9	n=0	n=14	n=4	n=27
Having CHC's staff	100.0	0.0	14.3	75.0	51.9
No CHC's staff	0.0	0.0	85.7	0.0	44.4
Don't know/Don't remember	0.0	0.0	0.0	25.0	3.7
Satellite school	n=12	n=7	n=46	n=9	n=74
Having CHC's staff	58.3	14.3	54.3	55.6	51.4
No CHC's staff	25.0	71.4	43.5	22.2	40.5
Don't know/Don't remember	16.7	14.3	2.2	22.2	8.1
Total	n=21	n=7	n=60	n=13	n=101
Having CHC's staff	76.2	14.3	45.0	61.5	51.5
No CHC's staff	14.3	71.4	53.3	15.4	41.6
Don't know/Don't remember	9.5	14.3	1.7	23.1	6.9

The table above shows that 51.5% students among total 101 students received pills from teachers reported that when they received pills from teachers while CHC's staff were available there. However, still 41.6% those received while CHC's staff were unavailable there, in which the higher were found in Phu Tho (71.4%) and Thanh Hoa (53.3%) compared to two remaining provinces (14.3% and 15.4%). According to observation of supervisors at some schools told that, "Because satellite schools are too far from CHC and main schools so teachers of satellite schools were trained in a training course in district center and directly received pills to deliver pills for students, there is no involvement of CHC's staff and a school's health staff" – Khu Vin school, Yen Thang commune, Lang Chanh, Thanh Hoa; "During main deworming day, health staff go to satellite school (Unit 4) delivers pills to teachers then teachers delivers pills to students and let them drink the pill. Health staff did not directly involve, they sat in a waiting room of the school to supervise complications if it happens. At main school (Bac Son), teachers also directly received pills and delivered pills to students. According to school's comments, CHC's staff did monitoring task, however 6 students were supervised through interview while CHC's staff were not there"- Bac Son

commune, Bim Son, Thanh Hoa; "Main deworming day at main school is on 5/12 (mop-up day of main school) and there were not attendance of health staff as well as school's health staff. 1 of 2 teachers of main school (Phu Ho 2) took pills to bring for students at home" – Phu Cuong school, Phu Ho commune, Phu Tho town, Phu Tho.



Picture was captured at Doc Lap secondary and high school, Ky Son, Hoa Binh



Ke Tat satellite school, Thạch Ngan commune, Con Cuong, Nghe An

4. Conclusion and recommendation

4.1. Conclusion

Monitoring of training of front line workers

Forty one facilitators who are staff of DHCs trained for 27 training sessions. The percentage of facilitators attending the training session in the Provincial capital was 68.3%. The percentage of facilitators receiving information from a representative who attended the training in the Provincial capital was 84.6%.

According to data from the monitors' counting, 1248 trainees attended the training sessions excluding 11 staff of Que Phong DHC), lower than data expected of the facilitators (1465 trainees). Percentage of trainees who are CHC's staff and teachers according to the monitors' counting was 50.9% and 49.1% respectively.

According to the monitors' observation, training hand-out was provided to each participant at 92.6% of training sessions, the percentage of training sessions with stationery provided to all participants was 66.7%, 88.9% of training sessions provided other materials such as banners to be hung at schools (81.5%), permission forms (81.5%), albendazole (63.0%), scripts for loudspeaker announcements (63.0%), reporting forms for severe adverse events (44.4%).

92.6% of training sessions were held in the morning and most training sessions lasted from 2-3 hours (51.8%).

Most training sessions where facilitators provided information on STH, preparation before MDA, activities related to deworming and activities during MDA (more than 90-100%). However, some important topics were not mentioned by the facilitators with high rate, especially contents related to reporting data such as "CHC's staff also have to bring the commune list of school-age children to the school on the day of deworming in order to record non-enrolled children who arrive at the school to be dewormed" (81.5%); "It's safe to deworm children if they have not eaten breakfast" (74.1%); "it's safe to deworm children if they have been dewormed recently" (74.1%); "non-enrolled children will be dewormed if they arrive at the school on deworming day" (74.1%); "the teacher/commune health worker should explain to the children about worms and deworming prior to administering the tablets" (81.5%); show an example of the serious adverse event reporting form (44.4%); "show an example of the reporting form used for the reporting cascade" (40.7%); and "commune health centers that they must keep copies of the class lists and the commune reporting form" (77.8%).

Monitoring of the deworming day

Most of main schools implemented deworming for students before 10am (98.5%), this rate at satellite schools was 71.4%.

The percentage of schools where CHC's staff/teachers asked children if they were feeling unwell before drug-administration was relatively high at both of main and satellite schools (92.4% and 92.9%, respectively). The proportion of CHC's staff/teachers asked children if they were taking any other medication before drug-administration was lower than the contents mentioned above, only accounting 86.4% at main schools and 85.7% at satellite schools. The majority of CHC's staff/teachers at the main schools asked children if they had eaten breakfast (90.9%). 66.7% main schools and 57.1% satellite schools excluded unwell children from participating in the MDA in the main deworming day. 9.1% of the schools did not exclude the children who had not taken albendazole recently were excluded from participating in the MDA, the highest was found in Nghe An province (15.8%). Still 16.7% at main schools and 7.1% at satellite schools did not exclude the children who had no permission forms from the MDA.

87.9% of main schools where CHC's staff administered tablets for students, 1.5% of schools where teachers administered tablets for students and 10.6 % of schools where CHC's staff and teachers together administered tablets. No satellite schools that the teachers had to administer tablets for students. In most of schools, CHC's staff/teachers instructed the children on how to chew tablets (97% at main schools and 92.9% at satellite schools).

53% of main schools and 42.9% of satellite schools where CHC's staff/teachers ticking off the name of the child in the class list upon swallowing the tablet.

The observation results about the organization of deworming at the schools show that about 2/3 of the schools had CHC's staff to visit each class to administer tablets (68.2% at the main schools, 64.3% at the satellite schools), in which the highest rate was found in Nghe An and the lowest was found in Thanh Hoa.

Most main schools sent 2 representatives to the training (62.9%), this rate at satellite was 36.8%. 81.8% of CHC's staff and 20% of teachers participated in the training on deworming.

Overall, the knowledge of CHC's staff and teachers about possible side effects when children use albendazole was quite good.

Most information from interviews with commune health workers (96.1%) also showed that the quantity of tablets brought to schools was sufficient for the total number of children at the school.

Coverage validation

All supervised schools in 4 provinces conducted deworming for students as province's plan (Nov 28 and/or 29, 2016). 67.5% supervised communes conducted a mop-up day, in which most was conducted at schools (67.5%) and at CHCs (32.5%).

The percentage of CHCs which had sent a deworming report to DHCs until supervised time achieves 83.7%; 97.1% sent it in right time or before deadline Dec 7, 2016.

As report from communes, 97.1% of students were dewormed (ranging from 95.2%-98.0%). This rate was slightly higher than data from monitors' counting (96.7%). There was a difference between report from communes and data from class lists at 10/120 communes (8.3%).

97.5% of students told they had received medicine at schools in previous week, in which 100% of them received 1 tablet, 98.7% said that tablet is white and 95.7% of students knew tablet is for deworming.

99.6% of student's answers corresponded with note in class lists. Three remaining cases told that they did not received pills but class lists marked their names.

85.8% students were delivered tablets from CHC's staff, in which that at the main school was higher than at the satellite schools (92.4% and 78.9%). However, 13.1% students were delivered tablets from teachers (ranging from 5.2%-20.5%), in which 41.6% students reported that when they received pills from teachers while CHC's staff were unavailable there.

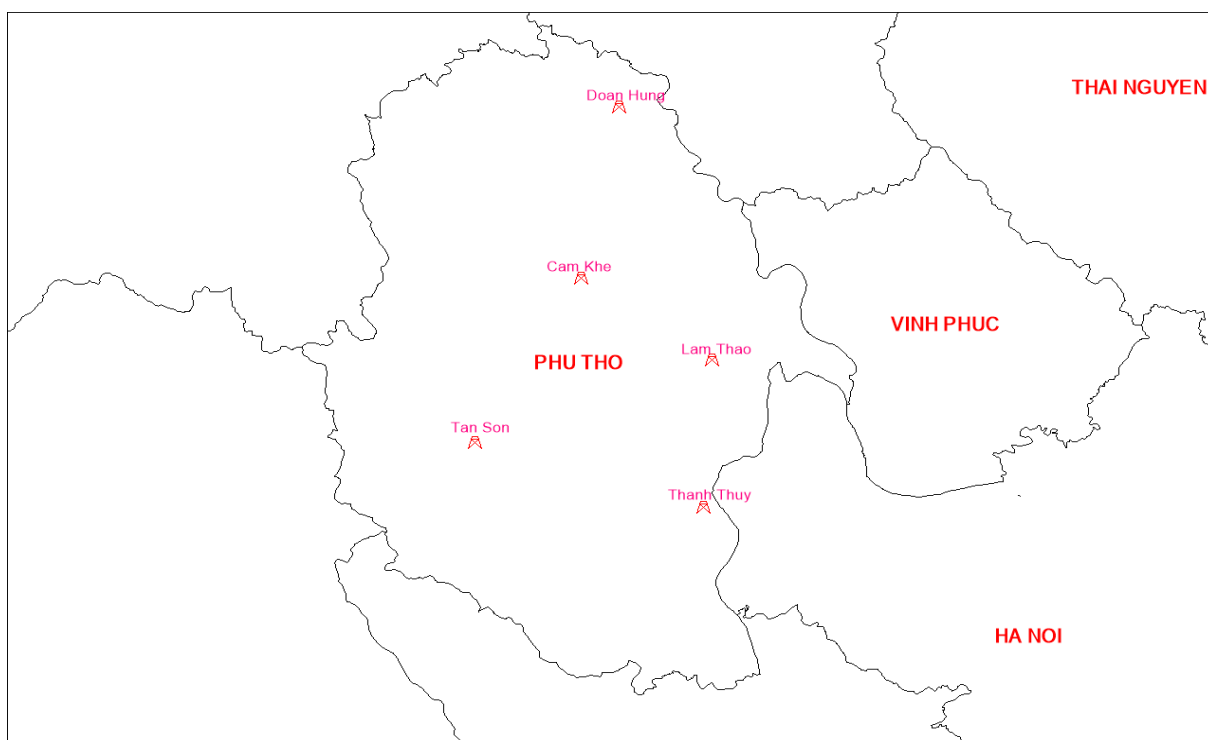
4.2. Recommendation

In general, the monitoring showed quite good results on performing the mass drug administration campaign in 4 provinces. Most of commune health workers and teachers followed the expected processes. Some recommendations are drawn as follows:

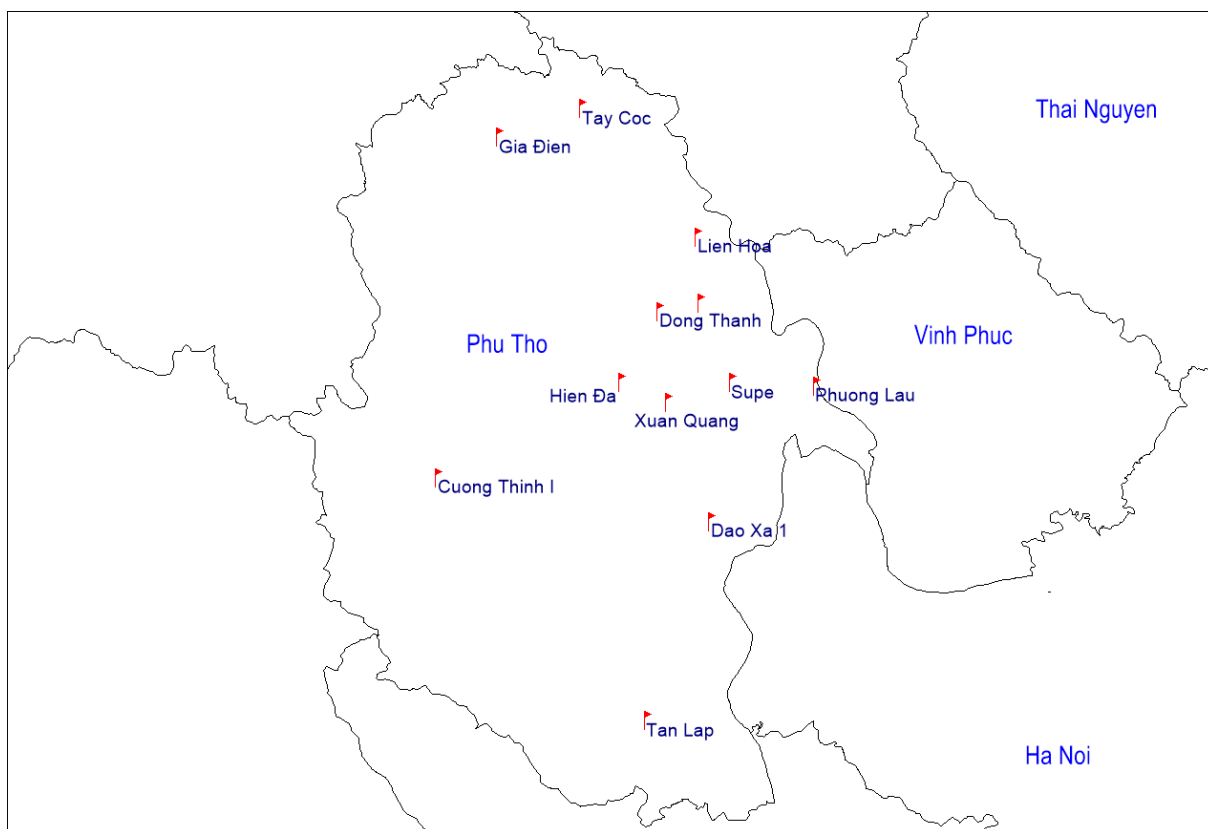
- Continue to support localities in implementation of school-based mass drug administration campaigns;
- It is necessary to monitor from provincial and district level to ensure the expected process followed by commune health workers and teachers during the school-based deworming campaign, especially at satellite schools;
- Before school-based mass drug administration campaigns, it is necessary to train for commune health workers and teachers on deworming process, focusing on bringing the class lists and how to mark the student's name during deworming and report basing on the form;

- The project should agree on the information in the class list, it should have information about the student's gender as a basis for counting the number of male / female students dewormed;
- it should add information about the number of students, the male/female non-enrolled students;
- Local authorities should strengthen communication activities for parents, students on worms and deworming, ensuring coverage of deworming for children reaches to 100%.

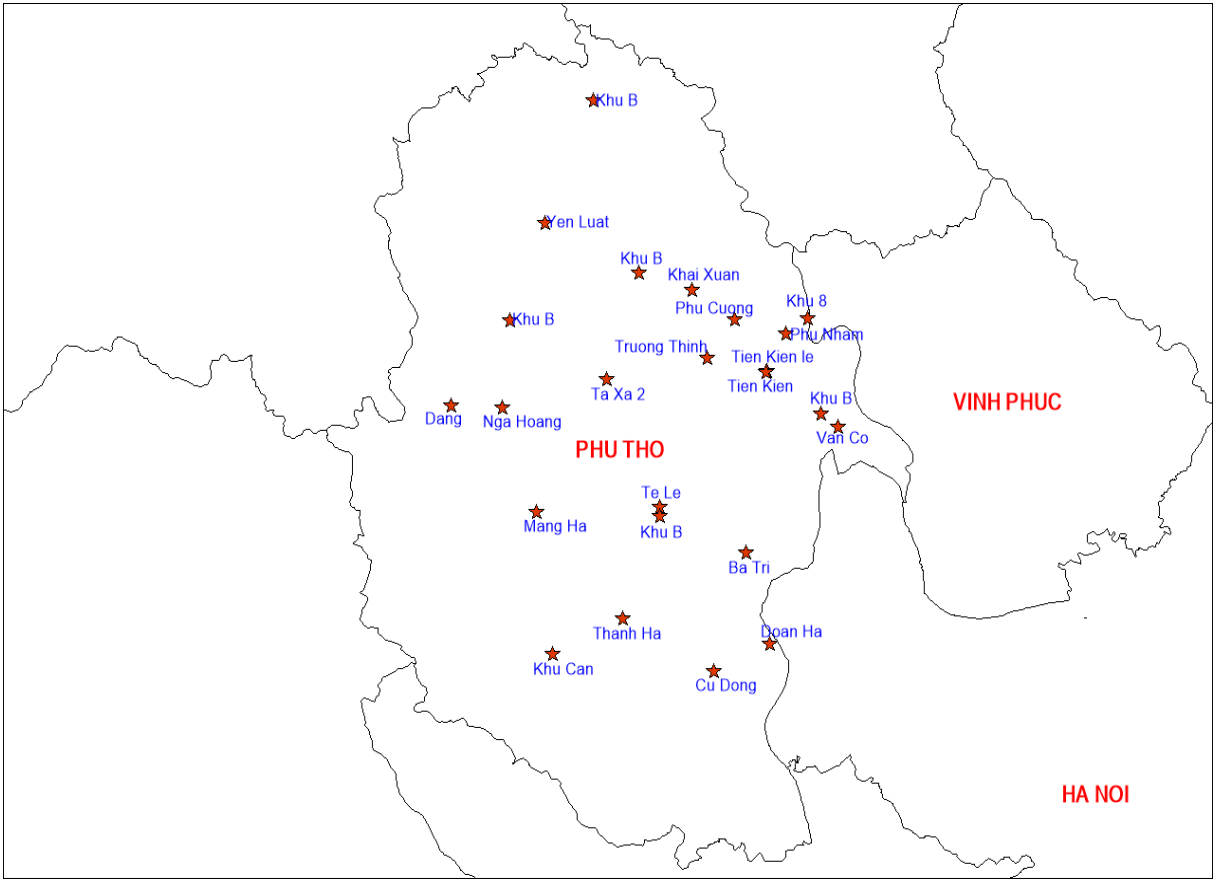
Annex. Maps of district/main/satellite points of primary schools and CHCs



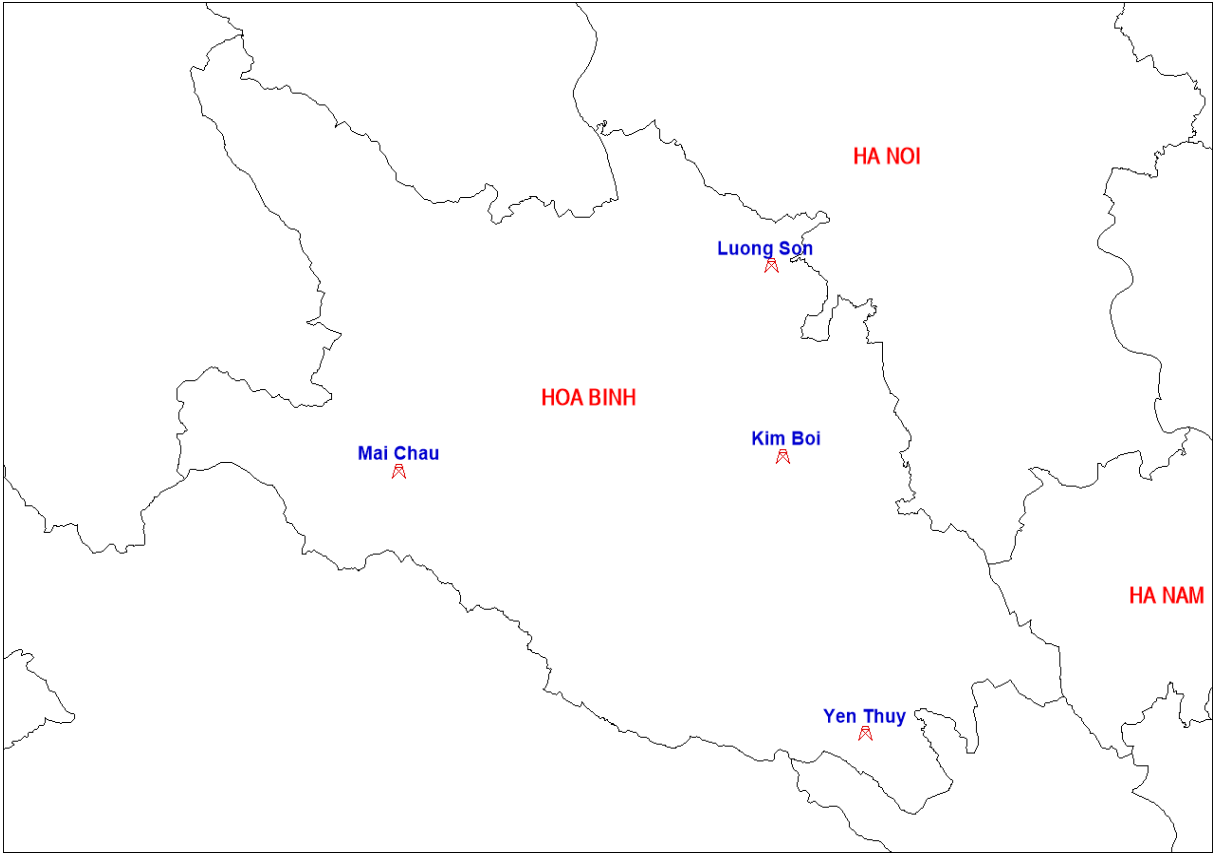
Map 1. Position of district for the monitoring on **training session** in Phu Tho province



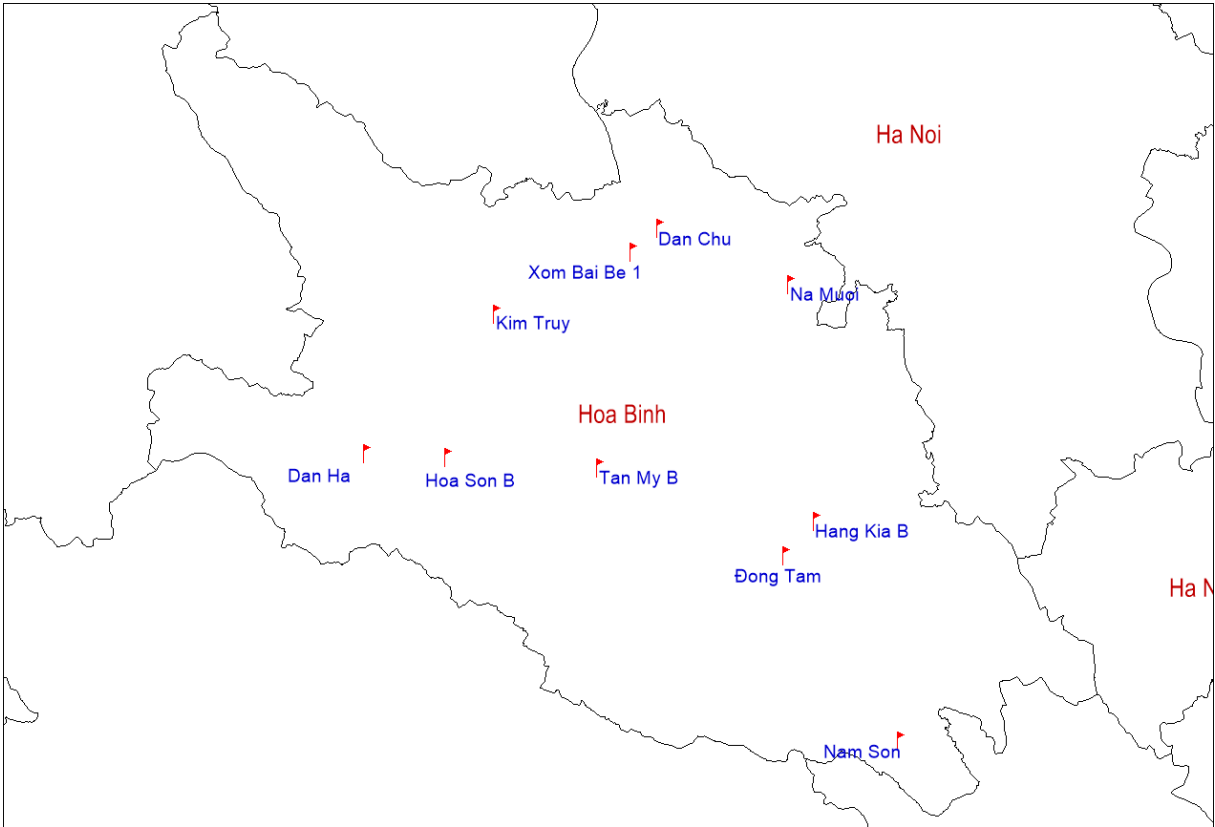
Map 2. Position of primary schools for the monitoring on **main deworming day** in Phu Tho province



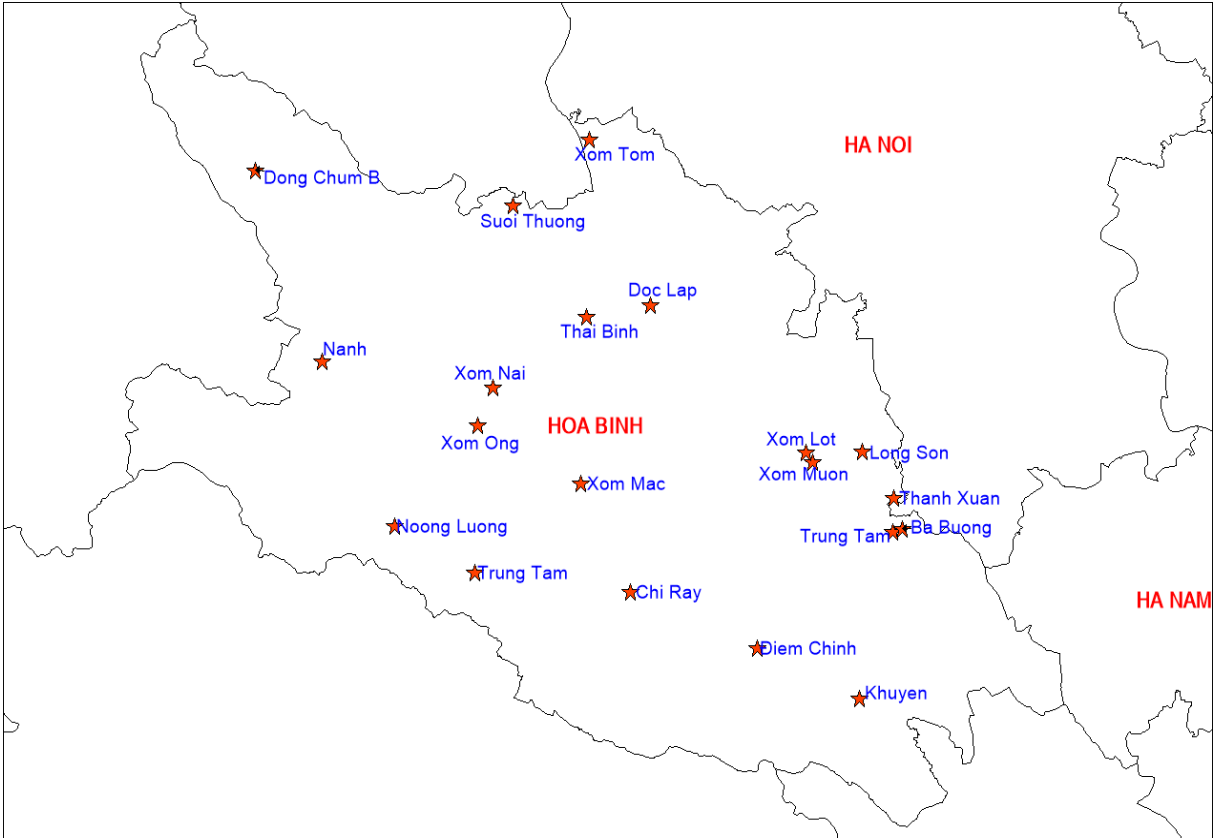
Map 3. Position of primary schools for **coverage validation** in Phu Tho province



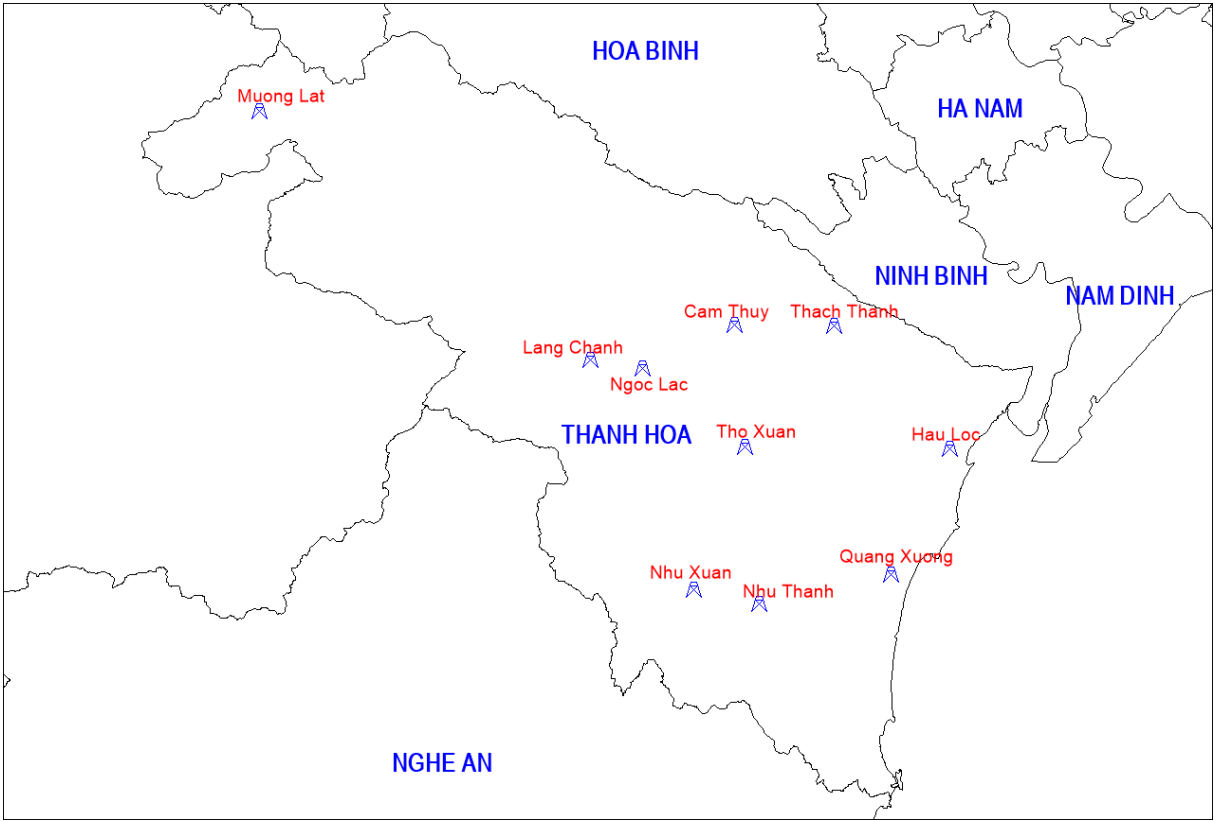
Map 4. Position of district for the monitoring on **training session** in Hoa Binh province



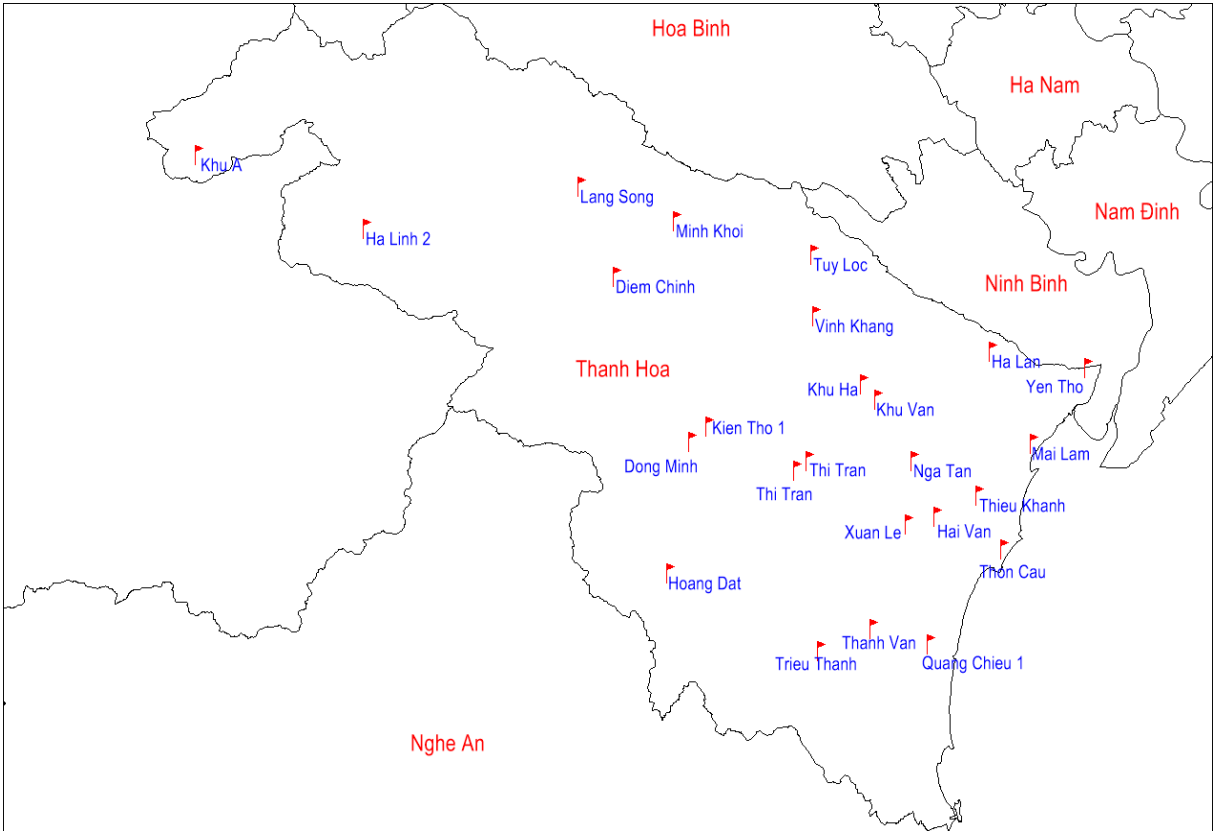
Map 5. Position of primary schools for the monitoring on **main deworming day** in Hoa Binh province



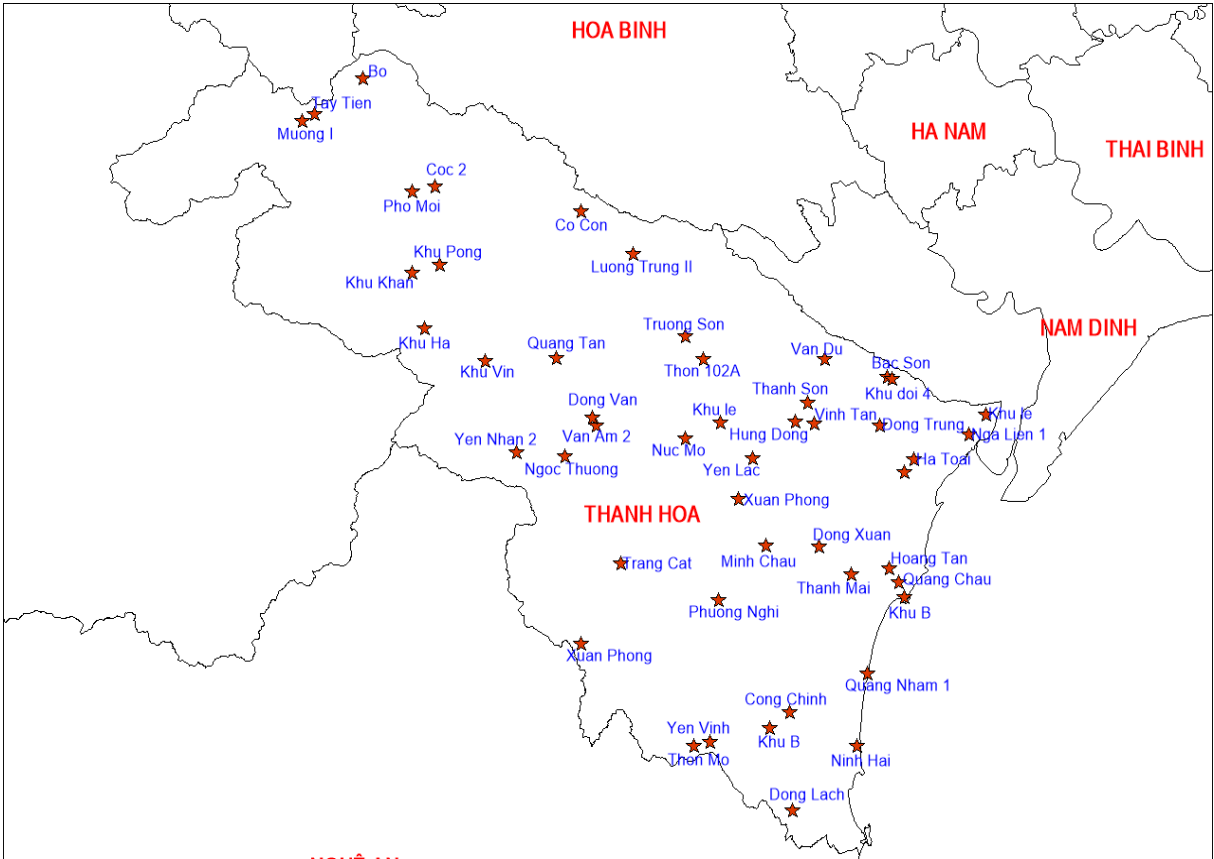
Map 6. Position of primary schools for **coverage validation** in Hoa Binh province



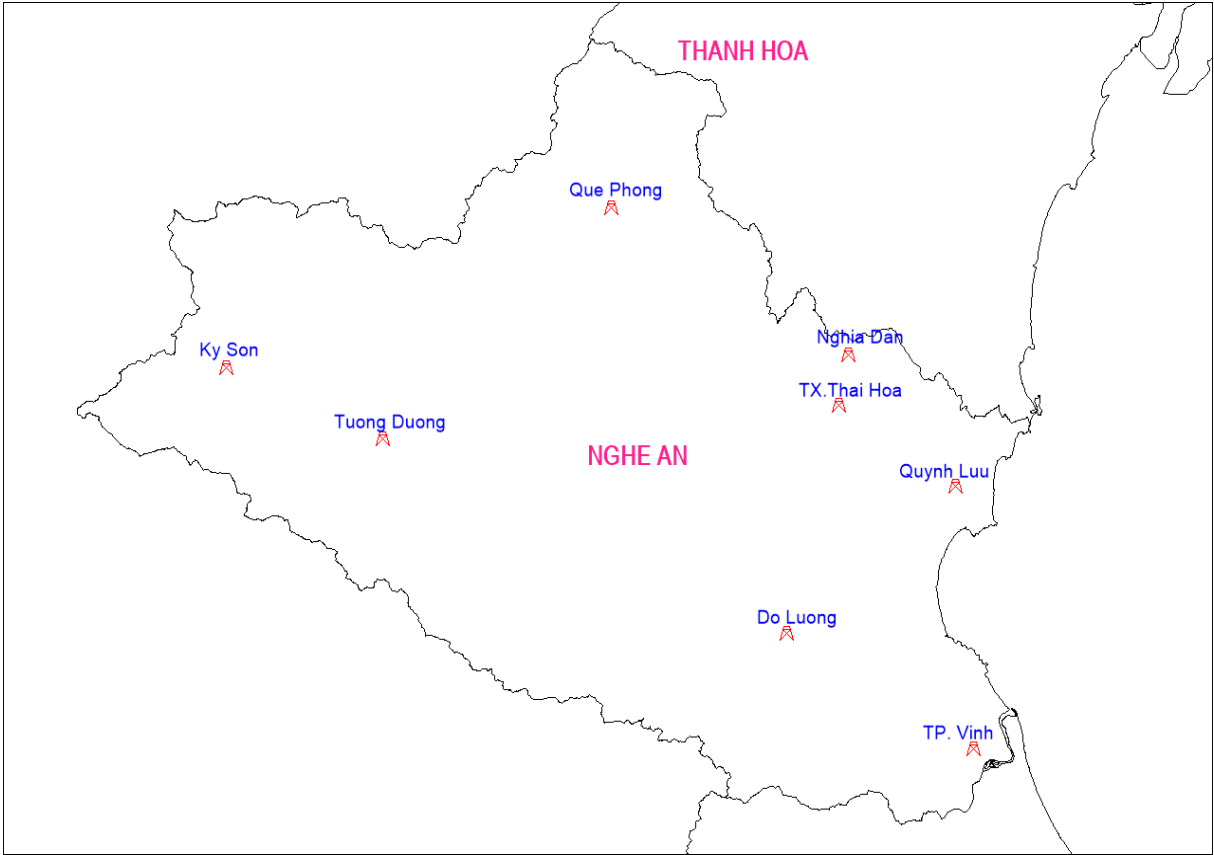
Map 7. Position of district for the monitoring on **training session** in Thanh Hoa province



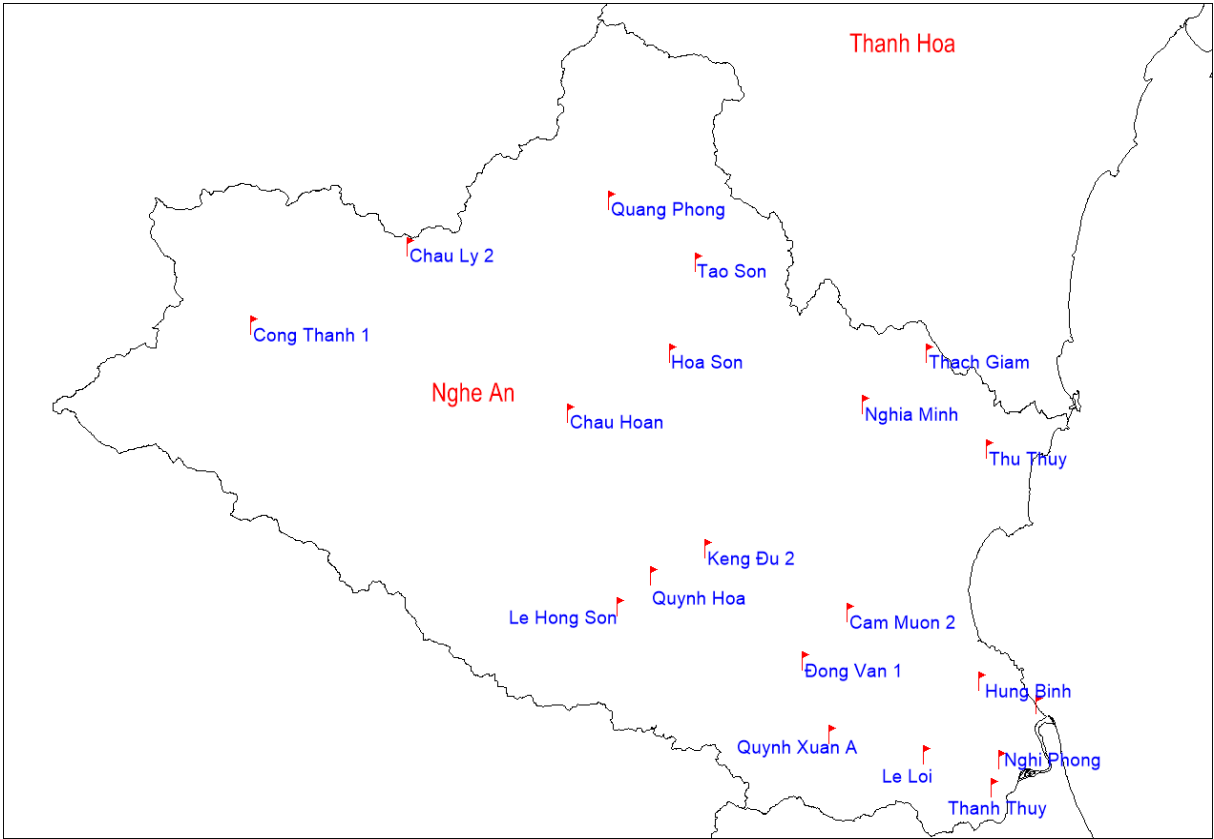
Map 8. Position of primary schools for the monitoring on **main deworming day** in Thanh Hoa province



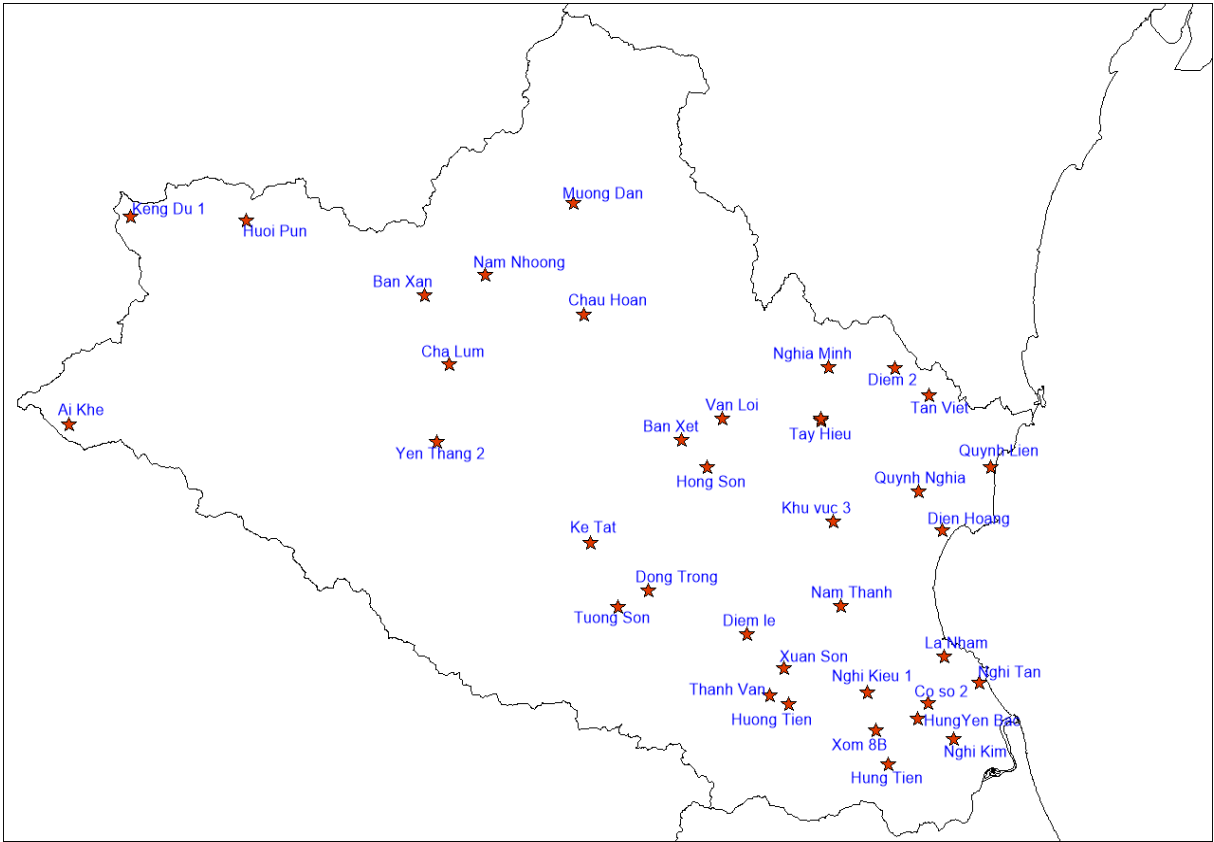
Map 9. Position of primary schools for **coverage validation** in Thanh Hoa province



Map 10. Position of district for the monitoring on **training session** in Nghe An province



Map 11. Position of primary schools for the monitoring on **main deworming day** in Nghe An province



Map 12. Position of primary schools for **coverage validation** in Nghe An province