PILOTING CITIZENS CLIMATE NETWORK (CCN) IN CAMBODIA

5TH MONTH REPORT

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1. Introduction

The aim of CCN is to establish a community-based network that is locally owned with direct community engagement to raise the communities' awareness about climate related issues and adaptive measure, and bring their perspectives about climate risks and actions to policy dialogues. The CNN acts as demonstration sites of sharing resources and stories in each community and to spread ideas and inspire other communities to join the network and conversations that will strengthen their adaptive capacities and the local voices on policy dialogues about climate actions in rural Cambodia. The pilots provide prototype for materials and modalities for a sustainable CCN, and share lessons learned on challenges and success factors in strengthening local networks.

The piloting activities will be carried on from June to November 2022 in Prey Veng and Pursat province, which are starkly different in climate change exposure, geographical and socio-economic characteristics, and adaptive capacities. Over the 6-month piloting period, different topics and activities related to climate hazard and practical adaptation at community and household level will be introduced to the CCN's member.

The 5th CCN piloting activities in Prey Veng province was conducted on October 27th 2022, and on October 23th 2022 in Pursat province.

2. Objective of the 5th month CCN session

The objective of the 5th month CCN activities is to raise awareness and to induce discussion about the connection between climate change, water, hygiene practices (sanitation) among the CCN members. The knowledge materials presented during this 5th session allowed the CCN member to learn about the impact of poor hygiene practices that link to malnutrition in child/adult and social welfare. Participants also learn about disadvantage of different type of trash and practice sorting them in the designated bins. The discussion also involves them to tackle their current problems related to hygiene practices of their communities.

Agend	Agenda				
N°	Time	Activities	Participants/facilitator		
1	7:30 - 8:00	Registration	Project consultant/ Local facilitator		
2	8:00 - 8:10	 Recap about the objective and outcome of CNN pilot activity Reflection of previous session Program debriefing 	Local facilitator		
3	8:10 - 8:35	Pre-survey	All participants/ Local facilitator		
4	8:40 - 10:10	 Presentation by consultant Relation between water-environment and hygiene practices, 	All participants/ Local facilitator		

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5	10:15 - 10:30	 How good hygiene practice help to protect the water sources, environment, and community health. Promote hygiene practice both at household and village level. 	All participants
3	10.13 - 10.50	Practical Activity: Led by the facilitator, the group do	All participants
6	10:30-11:30	a clean-up activity	Project consultant
7	11:30 - 13:30	Lunch break	All participants
8	13:00 - 14:30	 Group Discussion on the presentation Have your commune/ village experienced hygiene-related concerns? Which season is the worth, dry or wet season? How did it affect your livelihood? What had you and your community member done to adapt to those concerns? Do you think it is feasible to have fecal sludge management at the household level such as burry of pit sludge (after the pit emptying service or self-cleaning) and baby napkins? Would you adapt it? Why and why not? 	All participants/ Local facilitator
9	14:30 - 15:00	 Reflection on practical activities To what extent does trash sorting would improve the health and hygiene of people in the village? Concerning the fact that there is no trash collection service in the rural community, what would be the strategies to deal with this issue? To what extent does sorting infection/hazardous trash would improve the health of people in your community, especially during the rainy season? Concerning the fact that there are no trash collection services in the rural community, what would be the strategies to deal with this issue? Do you think in what way, this strategy can be scaled up to the whole village or commune? 	All participants/ Local facilitator
10	15:00 - 15:15	Coffee break	All participants
11	15:15- 16:30	 Feedback on the program: How did you find the presentation this month topic? How did you find the practical activities? Are you likely to repeat the activity in your village or tell other sin your village to do so? Why/Why not? 	Local facilitator/ Project consultant

		• How did you find the material/resources provided for the practical activities?	
		• How did you find the group discussions?	
		• What else can be done to improve the level of	
		interaction between members in the group in the session?	
		• What are some of the skills you learnt today generally, and specifically about adaptive actions?	
		• What knowledge about climate risks and adaptive action you gain today?	
		• Has today's session changed your attitude towards climate action or the environment in general?	
12	16:30-16:45	Post-survey	All participants/ Local facilitator
13	16:45-17:00	Wrap Up and announcement of the 5th month plan	Project consultant

3. Participants

There were 44 participants of which 21 (48%) are female joined the 5th CCN in Prey Veng, including 41 CCN's members, and 3 local facilitators. In Pursat, the total number of participants is 58, of which 28 are female participants (49%). This number include 53 CCN's member, 3 local facilitators, 2 local focal points. The full list of participants in both provinces are given in table 1 and 2 in Annex 1.

4. Summary of the session

4.1 Group discussions

Pre	Presentation topic "Water and Livelihood"				
	Discussion topic	Key	themes		
	_	Pursat's CCN	Prey Veng's CCN		
6	Have your commune/ village experienced hygiene-related concerns? Which season that is more serious?	 There are two concerns during flood periods. These include solid waste problem and poor water quality. Solid wastes are generally managed by burning and burying. But in wet season these options are not possible. Therefore, there are present of waste floating everywhere. Poor water quality is seen as flood 	 The 3 common hygiene-related issues that were raised by participants are : 1. No proper management of solid waste at households and community level. This led to littering around canals, waterways and side walk. 2. Inadequate in WASH access such as latrine, washing facility and pipe water supply 		

Discussion practical activities: waste separation Discussion topic Key themes			
4. What should we deal with the fecal sludge and baby napkin waste to avoid disease transmitting via animal scavengers and runoff?	 community. Common practice of the community to deal with fecal sludge and baby napkin are: Burying of fecal sludge far away from water source. Let to dry and burning baby napkin. Collect animal manure and use as fertilizer. 	According to the group opinion, because there is no trash collecting system in the community, the only option they could do is to bury the sludge for at least 2 years (as recommended) and after that they can use it as fertilizer for their farms. Same for baby napkins they will just bury them.	
3. What had you and your community member done to adapt with those concerns?	 The community members have been trying to solve this problem by practicing clean living, especially ensure safe food and safe drinking water. They also try to take prevention action such as frequent cleaning and using mosquitoes' net. There is no collective solution for the whole 	-To deal with these problems, the practical adaptation actions taken up by the participants are: 1. Building more latrines, cleaning up quite often and promote about proper trash storage.	
2. How did it affect your livelihood?	 water impacts that lead to poor hygiene practice. There is not significant hygiene related concerns raised by participants during dry season. The participants raised that poor water quality and solid waste problem during flood period negatively affect their livelihood such as causing health problem (diarhrea, fever and malaria), especially for young children, loss of household income, and time. 	 3. Unsafe method to store food. Slum, bulk of trash and flies were usually seen around the food stores in the villages. This issues cause: children to have diarrhea, which sometime lead to mortality. Consume time and money on the treatment of hygiene-related diseases. Make people become poorer Unpleasant living 	

	Pursat's CCN	Prey Veng's CCN
1. What is the benefit of trash sorting for the community?	 Trash shorting help to keep the environment clean and support livelihood by keeping healthy living; therefore, less expense for health care. Some trashes are also valuable for reuse and sell. Good action to show to younger generation. 	- Majority of the CCN members believe that when they live in the clean environment, the change to get infected is less and this will indeed improve the health and livelihood of people.
2. Regarding the current situation that there is no trash collecting system, should we choose trash sorting as the top priority for trash management system, or is there any other measure should be considered?	 The community has mentioned that good management of trash is need for their community. Waste management awareness must be promoted among all the villager to help keeping the village clean. Currently, given that there is no waste collecting system in the community, practical option such waste reduction, separation and safe technic to manage waste i.e., burry and burning must be widely introduced. So far, no waste management awareness program have been actually conducted across the community. 	 They all believed that trash sorting should be prioritized. After that is the collecting system. Some village members said that they have raised the concern to the commune leader many times, but there is still no response or measures have been taken up. They have already lost motivation to raised it up again. They said that the commune budget is usually small and put into priority areas such as road reparation, and humanitarian aid for the very poor people and during a disaster. However, there are a lot of NGOs come and do the WASH awareness raising every year in their villages. One group said that they want to have more incineration plants in their villages, especially in the schools.
3. Do you think in what way,	- According to the	- The group said to scale
this trash sorting can be scaled up to the whole village or commune? And how should we deal with	community to scale up waste shorting in the whole community, it is important to build knowledge among all the	up the trash sorting activity they will disseminate the information during the community ceremonies

the lack of trash collecting	community member first.	or when they meet with
system?	They must be aware about	their peer. When being
	the benefit of waste	asked about allocation
	separation.	of commune budget for
	- Then, adequate trash bin	public events, which
	facility must be provided	would be a more
	at public space or in	effective option, they all
	center such as school,	raised the same issue
	health center, pagoda,	about the limiting
	community center and so	budget which will only
	on. Otherwise, at	spend on the most
	households' level simple	priority areas set by the
	materials such as old paint	high management.
	container which are	
	available at home can also	
	be use as trash bin.	

4.2 Consultants' observations of the group engagement in the group discussions

This month, in Prey Veng, the local facilitators give the opening remark, facilitate the group division/discussion, and lead the group presentation. The facilitators did their job very well. The group discussion in Prey Veng was active and effective as last time. They were familiar with their tasks and could work independently. This time, we gave them less discussion topics per group, so participants have enough time to discuss on each topic. Within a good timing for each discussion, the group seems to be very active, both women and men. In addition, the consultant observed that the participants had already started to cooperate the knowledge from the previous sessions into the discussion. They are now familiar with the adaptation options and could think about many of them independently.

In Pursat, despite the relatively low number of CCN's member than expected, all the participants were active and very engaged in both discussion session and practical activities. The level of engagement between male and female participants were similar. The discussion session was done smoothly through the support of local facilitator. Given that the participants were familiar with the discussion activities and become very close to each other, they become more confident to share their idea within the group and present their group results to other groups.

4.3 Practical activity: Trash collecting and sorting

Pursat's CCN	Prey Veng's CCN
- There 3 been with different color assigned	- There were 6 groups in total and 3
for 3 types of wastes: Red for general waste	bins with different colors were
(combustible), blue for organic waste, and	provide to Kamchay Mear High
green for recyclable waste.	School, where the training was
	conducted.

- The participants were divided into 3 groups and led by local facilitator to collect waste. Group 1 was assigned to collect general waste (non-reusable plastic bag, snack packaging, cigarette bud, aluminum coated paper, film), group 2 was assigned to collect recyclable/ reusable waste (PET, Cans, Cardboard, Glass bottle, Metal), and group 3 was assigned to collect organic waste (food waste, plant littering). Given, the demonstration was conducted in the Pagoda, there were no remarkable present of	 Each facilitator leads the groups to collect trash and sort them based on different types: Group 1 and 2 and 5: general waste + green waste (leaf, food, vegetable, fruit) Group 3 and 4: recycle waste (cans, bottles, cardboard) + Hazardous waste + toxic waste The demonstration was conducted successfully.
hazardous waste to be collected.	Challenges
nazaruous waste to be conected.	Challenges:
	There were no challenges during the
Challenges:	demonstration activities.
There were no challenges during the	
demonstration activities.	

4.4 Consultants' observation of trash collecting and sorting

In Prey veng, as there was no organics waste besides falling leaves, or toxic or hazardous waste was found in the vicinity of the school, the groups were asked to collect only the recycled material and mixed waste. At first, the participants were not familiar with the waste characteristic. Later, they were able to do it correctly, when we asked them to sort the trash again before putting it in the designated bins. The demonstration went smoothly, and all participants were engaged in the demonstration.

Waste collecting and sorting in Pursat was done very quickly. The demonstration was finished in about an hour. This is because the pagoda space was just cleaned up by a group of visitors several days prior to the CCN activities. Therefore, there were not so much waste to be clean up. Based on the observation, most of the participants were very happy to conduct the activities. Most of them mentioned aside from learning about waste shorting, they were happy to clean up the pagoda as it is a good act for Buddhism. There were some participants, particularly male participants, who get confused about which trash bin is assigning for which type of wastes. But, with the support from local facilitators and the consultants, they get to know it easily.

5.5 Feedback Session

At the end of the session, in Prey Veng, the participants worked in groups and provided feedback. While in Pursat, the reflection session was conducted collectively in one big group.

Discussion topic		Key	themes
		Pursat's CCN	Prey Veng's CCN
1.	How did you find the	- The presentation topic is	The content of the lecture is
	presentation this month topic?	very useful and the	comprehensive and very

3. How did you find the group discussions?- Similar to previous month, the participants mentioned that group discussion is good. Everyone is very engaging. They have build their confident in sharing their idea and become familiar with the discussion process The group discussion at this stage is very engaging enough and the topics are always good.4. What else can be done to- No more thing to be- No more things should be	2. How did you find the practical activities? Are you likely to repeat the activity in your village or tell others in your village to do so? Why/Why not?	 presentation materials is comprehensive and easy to understand. This topic on waste separation is very new to them. They have never learnt why it is important to separate waste before. The practical activities are simple. They have never do it at home before. But, after this session, most of participants mentioned that they continue this good practice at home. In addition, they also share this knowledge with their neighbor. They will also share this knowledge to those CCN's member who were absent from the session. They found that this activity is very important for their village, especially in improving poor waste management problem during flood period. 	 useful. The information from the lecture is sufficient and also relevant to local context. The practical activity is easy to practice. Actually, some of them do this as their routine because in Cambodia we have junk collector, who go to households and buy the recycle material. People also throw the organic waste into the garden. The participants said that they would likely to repeat this sorting activity at their homes. The participants said that they will explain to their neighbor as well as others to keep their trash better. As usual, the village chefs said that they will disseminate about the benefit of trash sorting during the ceremonies.
3. How did you find the group discussions?- Similar to previous month, the participants mentioned that group discussion is good. Everyone is very engaging. They have build their confident in sharing their idea and become familiar with the discussion process The group discussion at this stage is very engaging enough and the topics are always good.4. What else can be done to- No more thing to be- No more things should be			during the ceremonies.They are now aware of different types of trash
	discussions?	month, the participants mentioned that group discussion is good. Everyone is very engaging. They have build their confident in sharing their idea and become familiar with the discussion process.	- The group discussion at this stage is very engaging enough and the topics are always good.
	4. What else can be done to improve the level of	- No more thing to be improved. But, the	 No more things should be improved, confirmed by all

5.	interaction between members in the group in the session? What are some of the skills	 participants mentioned having good group members that listens to each other is very encouraging for them to participates in the discussion. They learned about 	the participants. Each and every of them are now become close.
5.	you learnt today generally, and specifically about adaptive actions?	 Price relation and management at household level. They also learned about appropriate technic to manage fecal sludge. 	segregate the trash.
1.	What knowledge about climate risks and adaptive action you gain today?	 They learned that: They learned about the impact of poor hygiene practice on livelihood, how it link to malnutrition, and how it triggers the impact of climate change. They also aware of the importance of proper waste management on their livelihood, especially in response to climate relate risk such as flood. 	 They learned about: Relationship between WASH practice, health and the surrounding environment. How to get benefit from trash by sorting out the recycle material and sell to the collector
3.	Has today's session changed your attitude towards climate action or the environment in general?	 The session helps them to understand that the negative impact of poor hygiene, especially poor waste management, can potentially add up the impact of climate change on their livelihood. Therefore, would change their behavior toward good waste management practice. 	Yes, the participants said that the session about relationship between malnutrition and WASH practices, they would change their attitude towards their living style in general.

5.6 Facilitator's Feedback

After the session ended, the consultants conducted focus group discussion with the facilitators to get their feedback on the overall activities including training material, practical activity, their reflection on their facilitator skill and level of the participation of the CCN members. In Prey Veng, this session was conducted in group immediately after the CCN activities. The same as in Prey Veng, in Pursat, the feedback session was also conducted with the facilitator immediately after the session.

Discussion topic	Key themes				
	Pursat's CCN	Prey Veng's CCN			
Piloting Modality	 All the facilitator agreed that the content of the session was interesting and suit the condition of their commune. The practical activity is scalable through proper awareness program. Group discussion session is becoming much easier than previous month since most of the participant are ready to engage. So, it was not hard to lead the session. The facilitator themselves also acknowledged that they become more confidents in facilitating and leading the group. They agreed that good cooperation among the facilitators themselves is very helpful in mobilizing information to all CCN member. 	 All the facilitator agreed that the content of the session was interesting and suit the condition of their commune. They all think that all participants this time were very engaging both men and women. Our facilitator suggests to aid the section about how to build compost pit and how to transform organic waste into the compost. 			
Knowledge, Skills and commitment	- They have learned new knowledge about the linkage between water, hygiene, livelihood, and climate change. They also learned about practical waste separation and management for their community.	-They have learned about the trash sorting, how to treat fecal sludge safely before use it for fertilizer, and the causes of malnutrient in children /adult. Ms. Sokha raised that before she's never knew that trash sorting is part of the			

		solid waste management. She used to lead the trash collection activity initiate by an NGO, but trash sorting was not in the program.
Relationships between pilot CCN participants and facilitator	- The local facilitator has good relationship with all the participants. They usually can encourage the participant to the join the meeting. This month the number of participants were relatively low due to two reasons: (1) 12 people reported that they were busy with rice harvesting which was done collectively; so, they cannot decide for the date, and it is too expensive to rent the harvesting machine alone, and (2) there were accidents happens in the villages (two participants were absents because their relative just passed away).	- The facilitators now are confident and believe that they were doing a good job both in communication with the participants, and facilitating the event.

5.7 Pre and post survey enthusiastic

Annex 2 shows the score of participants before and after the training. Annex 3 shows the pre- and post-survey questionnaires.

In Prey Veng, the number of total participants was 41, including the commune council, but only 28 pre and post-surveyed papers were considered. The remaining are unreliable response. The table and charts below show the descriptive statistic of the pre and post-test scores.

This month, only 10 % fail the test. The survey indicates that before the lecture, the majority of the participants could pick the correct answer for question 9 and 10 which are about the infected waste and how to deal with harzadous waste. Not all the participants were aware that increasing the number of toilets would increase the number of girls attending school. The participants had less knowledge on 1, 5, and 7 which are about causes of malnutrient, type of crop that is suitable to apply

the safe fecal sludge and components of the sanitary landfill. This was improved after the lecture according to Figure 1.

Table 1 shows the mode values show that most participants scored 6 and 10 in the pre and post-test, respectively. The minimum scores were 4 and 3 and the maximum score were 9 and 10 the pre and post-test, respectively. Table 2 indicates the p-value of the pair-t test, which is lower than 0.05, revealing that we are 95% confident to say that the score or the knowledge of participants did improve after our session, with an average score change of 1.03.

Table 1: Descriptive static of participants 'score in Prey Veng

			Posttest		
Ν	Valid	28	28		
	Missing	0	0		
Mean		6.32	7.35		
Std. Deviati	on	1.49	2.18		
Range		5.00	7.00		
Mode		6.00	10.00		
Minimum		4.00	3.00		
Maximum		9.00	10.00		
Percentiles	25	5.25	6.00		
	50	6.00	7.00		
	75	7.00	9.75		

Statistics

Table 2: Result of Paired T-Test									
Paired Samples Test									
Paired Differences Significance									icance
95% Confidence									
				Interval of the					
	Std. Error Difference						One-	Two-	
Mean Deviation Mean Lower Upper						t	df	Sided p	Sided p
Pair 1 Pre and post	-1.03	1.64	.31	-1.67	39	-3.3	27	.001	.002
test									

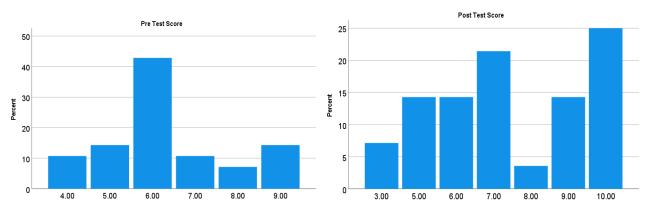


Figure 1 Score distribution in Prey Veng

In Pursat, out of 53 paired-responses, only 49 pairs were meaningful responses to be analyzed. The remaining are incomplete response. In general, participants were able to answer most of the question better during the post survey, particularly for the question 8, 9 and 10 which are about technical aspect of using sand as water purifier materials, option to manage contaminated waste, and option to manage hazardous waste, respectively. The participants seem to have more difficulties in answering the question regarding management of fecal sludge and use of fecal sludge as fertilizer both during the pre and post survey. Overall, the minimum, maximum and average score for pre and post survey were 2, 8, 5.29 and 3, 9 and 6.28, respectively. The mean differences between the pre-and post-survey score are only - 0.989. According to the paired-t-test, this difference is significant at p < 0.000. This indicates that the training does have some positive effect on improving knowledge of the local communities. Table 3 and Table 4 provide detail of the paired-t-test results. Figure 2 indicates the score distribution during pre and post survey.

		Pre-survey	Post-survey
N	Valid	49	49
	Missing	0	0
Mean		5.29	6.28
Median		5.5	6.5
Mode		5.5	6.5
Std. Deviation	I	1.49	1.67
Range		6	6
Minimum		2	3
Maximum		8	9
Percentiles	25	4.25	5.00
	50	5.5	6.5
	75	6.5	7.5

Score statistics in Pursat

Paired Samples Test										
		Paired Differences						df	Sig. (2-tailed)	
95% Confidence Interval										
			Std.	Std. Error	of the Difference					
		Mean	Deviation	Mean	Lower Upper					
Pair 1	Pre-survey -	-0.989	1.690	.241	-1.475	-0.504	-4.097	48	0.000	
	Post-survey									

Table 4: Result of Paired T-Test in Pursat

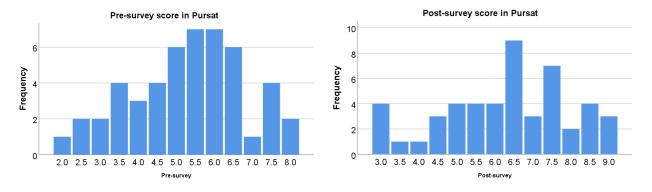


Figure 2: Score distribution in Pursat

5. Conclusion

For Prey Veng

- The 5th month pilots were successfully conducted with the total participants of 41/51 equal to 79 % of which 19 (46%) are female.
- The design CCN program material was very useful for the community. Our facilitator suggests aiding the section about how to build compost pit and how to transform organic waste into the compost.
- The practical activity was successfully conducted and engaging.
- The facilitators in CCN 5 gave the opening speech, and lead the discussion.
- Group discussions were very engaging with active participation by both men and women.

For Pursat

• The 5th month pilots were successfully conducted with the total participants of 53, where 49% were female. The number of participants is lower than expected number. Two main reasons that make many member absents during the sessions were (1) the session was conducting in

harvesting periods where many people were busy harvesting their paddy, (2) there are two funeral on the day of the event where a few members has to support.

- The topic was relevant to the need of the community and the materials were also comprehensive for the participants.
- The practical activity was successfully conducted and engaging. There were no significant challenges.
- Group discussions were very engaging. Both male and female participants were equally active.

Annex 1: Pre and Post survey questionnaire for CCN Month#5

- 1. Malnutrition/stunting is resulted from:
 - a. Lacking food to eat
 - b. Eating plenty of food with low nutrition
 - c. Having contact to bad organism originated from human feace
 - d. All above factors
- 2. The main cause of the death of children under 5 in Cambodia is:
 - a. Drowning
 - b. Diarhear
 - c. Malaria
- 3. Having more toilets will cut down the number of girls skipping classed during their period.
 - a. True b. False
- 4. What is the best place to discharge your fecal sludge after pit emptying?
 - a. Bury
 - b. Pour in the surface water
 - c. Discharge on the empty soil
- 5. Pit sludge is food fertilizer for:
 - a. Rice b. Vegetable c. fruit of tall-tree type
- 6. Batteries and lamps could be discarded with any trash.
 - a. True b. False
- 7. The landfill should be composted:
 - a. Drainage b. pipe collecting leachate c. protection barrier d. all
- 8. Sand on the sand filter can be used up to 5 years without the need for replacement.
 - a. True b. False
- 9. Which one is the infected waste?
 - a. Used syringe containing left medicine b. used face cotton c. used bandage
- 10. What is the best solution to deal with old batteries:
 - a. Burry b. burry deeply and covered with plastic bag c. left in the bush d. left in the landfill

Annex 2: Some snapshots of the 5th CCN activities in Prey Veng

1. Learning session



2. Practical activities



Practical activities



3. Group Discussion



Some snapshots of the 5th CCN activities in Pursat

Group Discussion activities



Waste collecting activity

