

Slum areas in Battambang and Climate Resilience¹

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Abstract

As the second most populous province in Cambodia, urban poor areas in the province are increasing. This research focuses on economic situation of slum areas in Battambang and how those people in slum areas are affected by climate change. This research report describes socio economics of people living in slum areas in 4 villages in Battambang city, why people move to slum areas, access to water, access to sanitation, access to electricity, transport and delivery, access to health care, access to education, security of tenure, cost of living in slum, literacy, access to finance. We also explore policy of public sector toward climate change in Cambodia.

Key words: slum, climate change, climate resilience, poverty

1. Introduction

Battambang is a rice bowl of Cambodia. Total rice production in the province accounted for 8.5% of the total rice production of 9.3 million tons in 2013. Battambang province is composed of 13 districts with 1.2 million people, making it the second largest province in terms of population.

Battambang City, with around 140,000 inhabitants, is the largest secondary city in Cambodia. Its name comes from the legend of Bat Dambong, the “Disappearing Stick”. The city is situated on the Sangker River. People have lived in wooden houses along its banks for centuries. In 2014, the province got 1st place in clean city competition organized by Ministry of Tourism. When the province was associated with the Siamese (1795 to 1907), Battambang City had about 2,500 residents. With the speedy increase in urbanization, some slum areas in the province have been observed in areas along old railways and Sangke river. Most of the people living in these areas cannot go to school, are vulnerable to drug use, live with poor health. According to IDPoor of Ministry of Planning which measure poverty in Battambang province in 2013, the percentage of the poor level 1 and level 2 in Battambang city was 23.6% compared to Battambang province poverty rate of 32%.

The World is becoming more and more urban. In 2030 the world’s urban population will represent 60.2% of the overall population of our planet (United Nation Population Division, 2002). With the increase in urbanization, the number of slum dwellers also increased. According to UN-HABITAT (2003), 32% of the world’s total urban population lives in slums; some 43% of the urban population of all developing

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regions combined live in slums (Jean-Claude Bolay 2006). A slum constitutes in general term a densely populated area exhibiting substandard housing and standard of living (Andrew K. 2016).

Jean (2006), without finding appropriate solutions to the housing problems of a majority of urban dwellers, public and private decision makers will not be able to meet the challenges of sustainable development.

Cities are both a 'paradise and a jungle' and there are 'slums of hope' and 'slum of despair'. Some people consider life in a slum as an opportunity to transition to middle class groups; others describe it as a poverty trap.

There is a concentrated disadvantage characteristic of many urban slums in terms of overcrowding and lack of suitable drinking water and sanitation, as well as non-durable construction of housing (Andres K 2016). In a panel analysis, infant and under-five mortality rates are positively associated with urban slum prevalence. Blessing U et al (2016), in their comparative analysis, found that in all countries, except India, slum children has much poorer health outcome than children in all other residential domains, including those in rural areas although treatment seeking was better among slum children as compared with those in rural areas. Mortality and morbidity indicators were worse in slums than elsewhere. However, indicators of access to care and health service coverage were found to be better in slums than in rural communities. In addition to these health related issues, those living in slums are often the most at risk from events like floods, landslides and strong winds, which are likely to become increasingly frequent and severe because of climate change (Bicknell et al.,2009).

As climate change increases the frequency and severity of extreme weather events and hence possible disasters, it is becoming increasingly necessary to take steps to reduce the potential impacts of these events by focusing on actions that allow the affected population to move beyond merely coping to adapting to them Resilience is generally defined as the ability of a system to absorb disturbances, maintain structure and ways of functioning and adapt to stress and change. In the context of urban systems, urban resilience has been defined as "the ability of a city or urban system to absorb disturbance while retaining identity, structure and key process". Partnership between low-income communities and other urban stakeholders, including local government, and innovative financial mechanisms managed by communities, can lead to scaled-up action to address development and adaptation deficits (Diane A.2016).

This research project aims at identifying vulnerability of people in slum areas, system of addressing vulnerability and institutions who are responsible for addressing that vulnerability. The city is threatened with increasing slum areas that could pose larger burden for the future generation if there is not well functioning systems in place from now to make the city a slum-free city.

There has been a strong connection between the socioeconomic conditions of the slums in Battambang, climate change and vulnerability. According to a recent World Bank's report, climate change hits the poorest people the hardest, those living in vulnerable areas with the fewest resources to help them adapt or recover quickly from shocks. As the effects of climate change worsen, escaping poverty becomes more difficult. In Battambang, climate change can affect the poor in a number of ways. First, climate change will cause food price to increase as Cambodia's food production rely hugely on weather. The increase in food price will push them to live below poverty line. When people in slum areas become poorer, they will

be vulnerable to drug use, beggar activities in the provinces, or human trafficking. Some poor people in Battambang are living on the bank of Sangke River which has a problem of land slide. Some parts of the roads along the river are disconnected by land slide and some houses were already gone. Some poor living along old abandoned railroads have no clean water in dry season, but get flooded in rainy season. Those poor communities tend to have more limited adaptive capacities as climate change affects human settlement. The poor cannot afford adaptive technologies, such as improved building materials. Second, their ability to relocate to a less stressed environment is often limited by political/cultural constraints and resources. Finally, they are more dependent on local water and food supplies, with less ability to tap other markets when these local sources become less productive. The following will describe research methodology, slum households' characteristics, income and employment of people in slum areas, issues of climate change and stakeholders' view on climate change.

2. Research methodology and Data

We collect data in 4 slum villages-Sophi Pir, Sophi Muoy, Chamkar Samraong Pir, which are located along Sangke river and Tuol Ta Aek which is located along old abandoned railways. Cambodia consisted of 2 railway networks: southern line and northern line. Southern line is 266 km connecting Phnom Penh and Sihanouk ville port constructed since 1960 and finished in 1969. The rehabilitation of this line was completed in 2011. Northern line is 368 km connecting Phnom Penh and Poipet, constructed since 1929 and finished in 1942. This line is still under rehabilitation. Battambang is connected to Northern line. The survey was conducted through purposive method with a sample of 120 households in those 4 villages in June, July and August 2017 by a group of students, who received training on research methodology provided by University of Battambang through this research project. The average household size is reported to be 5 members by household heads. We interviewed 120 household heads in those 4 villages to investigate about socio-economic issues and climate change. 491 household members were also interviewed about their employment and income.

3. Household heads' characteristics

Most of households in slum areas are led by female household heads. Of the interviewed 120 household heads in Sophi Pir, Sophi Muoy, Chamkar Samraong and Tuol Ta Aek, 70.8% are female and the remaining 28% are male. The divorce rate is high in the slum areas. 20% of household heads are divorced and 71 % are married (Table 1).

Like typical Cambodian family, the size of household is large. The average size of household members is 5 and around 50% of household has number of member between 4 and 6. Large families with member more than 7 are also present in slum areas, which accounted for about 31% of total households. Regarding settlement, we find about 40% started to settle in slum areas after 1991 when the Paris peace agreement was signed. During that period, many people living in Khmer-Thai border was sent to live with their families in their hometowns by international organizations such as the United Nations. We also met an old female household head who moved from Svay Rieng province to live in the slum area located behind provincial hospital. She told us that she could not live well in Svay Rieng Province because

working on the farm was not good due to flood and drought and she decided to settle in the slum area. Now she managed credit of Community Development Fund (CDF) in her area to provide small loans to urban poor. The credit is provided by government ministry for poor people across Cambodia. Her house was built on the public roads along with many other slum dwellers' houses. Most of the dwellers in this area are from Prey Veng, Kompong Cham and Khao I Dang refugee camps and most of them have started to settle in the areas since 1991.

The people in slum areas can live on their land but cannot sell their land to other people because land title is not provided to them by provincial authority. About 80% of household don't have land titles. Although land business has become popular in the province, it is warned that buyers should not buy land in those slum areas. The provincial authority has the power to relocate them when the area development is needed in the future. Most of the houses in slum areas have been built on road, close to railways and along river sides. Those areas will need to be developed into public parks, or public roads to make the province more beautiful for public use in the future.

Table 1: slum demographics

Village's name	Percent	Year of settlement	Percent
Sophi Pir	25.0	before 1979	50.0
Sophi Muoy	25.0	between 1980 and 1990	11.7
Chamkar Samraong Pir	25.0	between 1991 and 2001	20.8
Tuol Ta Aek	25.0	between 2002 and 2012	9.2
Gender		after 2012	7.5
Male	28.3	Place of birth	
Female	70.8	in the village	33.3
Household member		in other places	66.7
1 to 3	19.17	Land Title	
4 to 6	49.17	Have	17.5
7 to 9	30.83	Don't have	80.0
Marital Status		Others	1.7
single	6.7	ID poor or not	
Married	71.7	Yes	37.5
Divorced	20.0	No	62.5
Total observation N=120			

Of the 120 household heads, about 97% are older than 25. 20 percent of persons aged 25 years and over had no or only little education, women 24 percent and men 9 percent. Higher shares of men than women completed secondary and post-secondary. About 42% of men, as well as women, have primary school education level (Table 2).

Table 3 : Persons aged 25 years and over by educational attainment and sex. Percent.

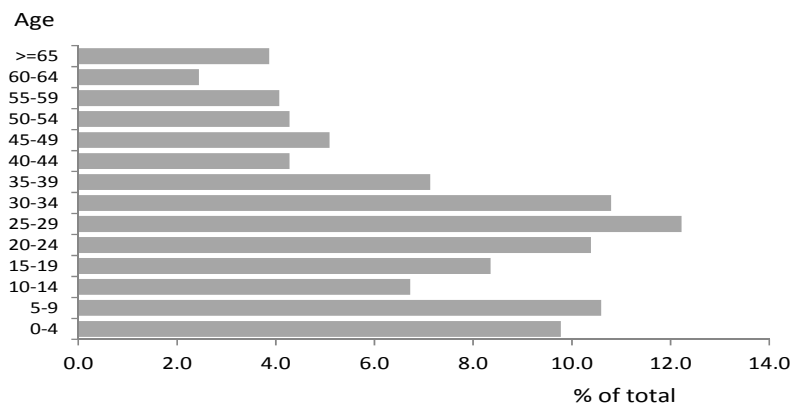
Educational attainment	Men	Women	Total
None	9.1	24.1	20.5
Primary school	42.4	42.2	41.9
Secondary school	21.2	18.1	18.8
High school	15.2	9.6	11.1
Bachelor degree	9.1	4.8	6.0

Master degree	3.0	0.0	.9
missing		1.2	.9
Total	100.0	100.0	100

4. Income and employment of people in slum areas

The majority of people living in slum areas are young. Of the 491 of household members who response to our interview, about 20 % of them are under 9 year old and about 60% are younger than 30 year old (Figure 1).

Figure 1: age pyramid of income earners in slum areas



Income security for people in slum areas can be fragile as the majority of income earners earn income on daily basis and large dependency ratio exists. About half of the total people in surveyed slum areas are working for daily or monthly income. The majority of income earners earn income on daily basis. Of the 491 individuals living in slum areas, 28% earn income on a daily basis, 20.5% on monthly basis and the remaining half don't earn any income. Some of those who don't earn income do household chores or go to school. The average daily income was 7.34\$ and monthly income 164\$ (Table 4).

Table 5: type of income earners

Earner	Status	Frequency	Percent	average income(USD)
non-income earners	study	122	24.85	
	household chore	129	26.27	
income earners	monthly basis	101	20.57	164.29
	daily basis	139	28.31	7.34
Total		491	100	

Most of monthly income earners work in restaurant and construction site. However, most of daily income earners work as sellers and construction workers. And most of the monthly income earners work in

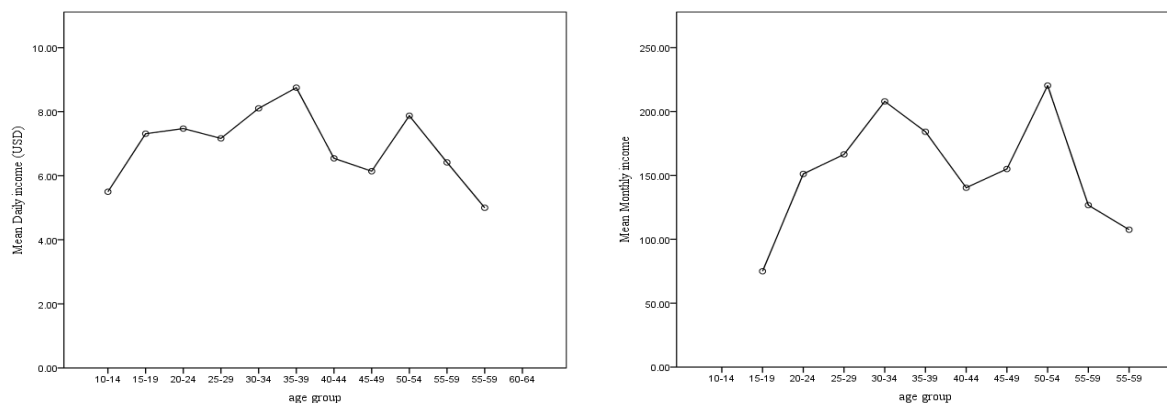
restaurants and construction sites. Recently beer gardens have been springing up in Battambang city and it becomes one of the destinations of job seekers to work as waiters or beer girls. A construction worker can earn about 225\$ per month or 7.4\$ per day. We also found some 8% of people in slum areas went to work in Thailand seasonally (Table 6). Other jobs that many slum dwellers do include moto-taxi drivers, cleaners in hotels or in restaurants, domestic workers and sale assistants.

There is an evidence of child labor, a person who is aged between 7 and 15 and work. However the percentage of child labor is very low. About 4% of the income earners are child workers who mostly work on daily basis. Some children went to work with their parents in construction sites or went around in the city to collect garbage such as bins, plastics for selling to recycle companies.

Table 7: occupation of income earners

occupation	Average income by occupation	
	Monthly income (\$)	Daily income(\$)
teacher	255.00 ; (n=5)	
physician	237.50 ; (n=3)	
construction worker	225.07 ; (n= 17)	7.43 ; (n=20)
restaurant worker	128.18 ; (n=22)	
seller	121.50 ; (n=8)	8.70 ; (n=62)
farmer	34.17 ; (n=3)	
others	161.63 ; (n=40)	5.83 ; (n=55)

Figure 2: age-earning profile for daily income earners and monthly income earners



The age-earning profiles for daily income earners and monthly income earners are not smooth bell-shaped curves as shown in graph x. The upward sloping of the curves suggests that daily and monthly income earners can earn more when they become older. Daily income of daily earners reaches its peak level when individual worker is between 30 to 40 year old. However, monthly income reached its peak when the income earners are between 50 to 60 year old. This difference in peak level reflects the fact that most of the daily income earners engaged in hard labor such as construction (Table 8).

There is a significant difference in income across those 4 villages for both type of income. People in Sophy Muoy earn the highest monthly income while people in Chamkar Samroang earn the highest daily

income as shown in table below. The ANOVA test cannot reject the hypotheses of the same mean across all 4 villages.

Table 9: income difference among 4 slum villages

Village's name	monthly mean	N	Std.
Sophi Muoy	185.50	20	75.4
Sophi Pir	177.11	29	118.1
Chamkar Samraong Pir	176.07	28	72.4
Tuol Ta Aek	117.38	24	78.4
Total	164.29	101	92.3

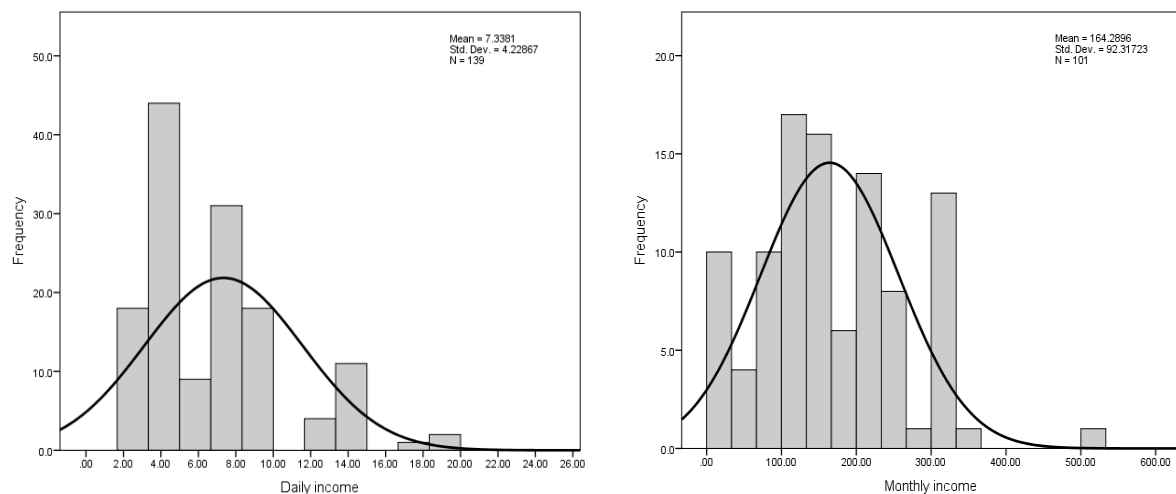
ANOVA test: F= 2.91; Sig=0.038

Village's name	daily mean	N	Std.
Chamkar Samraong Pir	8.72	23	4.97
Sophi Muoy	8.46	27	5.93
Sophi Pir	7.34	55	3.30
Tuol Ta Aek	5.52	34	2.65
Total	7.34	139	4.23

ANOVA test: F=3.75; Sig =0.013

People in urban areas seem to be living above poverty line. When dividing the whole income by the number of people we find the average income per person per day is about 3\$ although this does not take into account inequality in income distribution. There is dispersion in income distribution in the two groups of income earners as shown in Figure3 below. This may be one of the incentives that urban slum areas can attract people from other poor areas of the country.

Figure 3: income distribution in slum areas



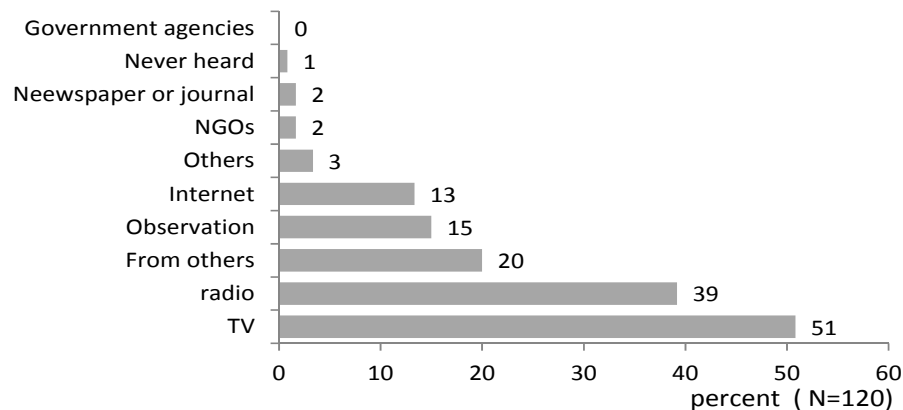
5. Issues of climate change

5.1 Perception about climate change

Almost people have heard about the word climate change. 90% of the 120 household heads said they used to hear about climate change. In addition, 93% said they experienced climate change in recent years, in particular after 2013. The spread of TV and radio as well as internet through smart phones allows people in slum areas to get information about climate change. People in Cambodia started to use smart phones to

disseminate information, in particular for young people, through Facebook. About 51 percent of respondents said they heard of climate change via TV, 39% via radio and 13 % via internet (Figure 4). About 10 years ago, most people go to internet café to use internet or to check email. But recent development of internet connection provide by telephone service providers allow people to use internet more easily at home. As a result, many internet cafés disappeared recently.

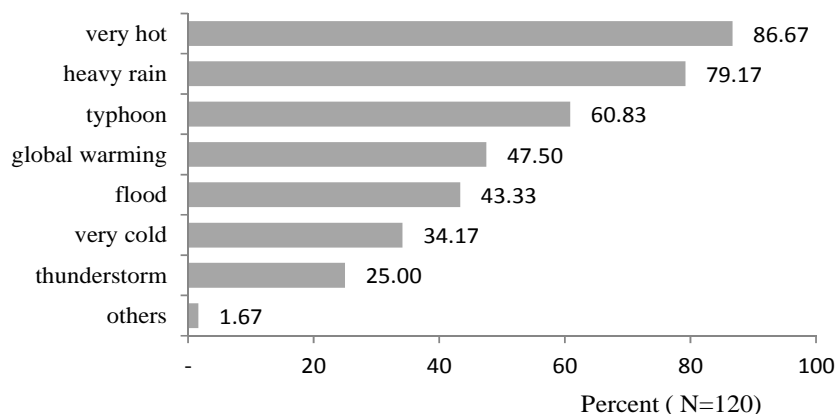
Figure 4: source of information on climate change



5.2 Types of climate change and its effects

Most people in Cambodia feel that the temperature has continued to increase. Three most major climate changes that people in slum areas perceived are hot weather, heavy rain and typhoon. About 87% of the 120 household heads responded that they experienced very hot weather, 79% heavy rain, 60% typhoon, and 43% flood. Some people who lived along Sangke River are also vulnerable to land slide (Figure 5).

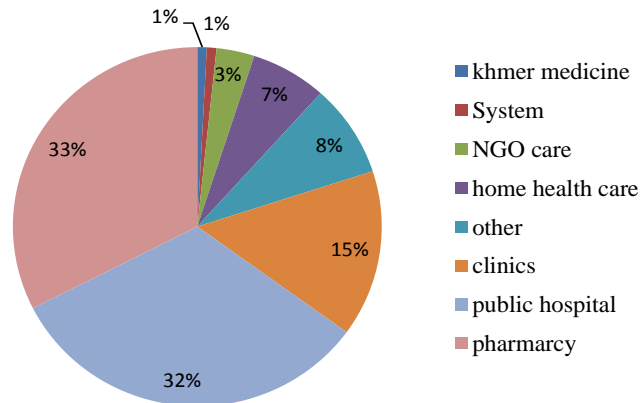
Figure 5: climate change that affect people in slum areas



The climate change did affect health of people in slum areas. About 90% of household heads in slum areas report that their health was negatively affected by climate change. People sometimes have diarrhea when the areas get flooded. When sick, the majority of people in slum areas go to hospital or pharmacies

to buy medicine. Private pharmacies have been accessible in almost areas of the city. About 32% went to pharmacy and 32 % went to hospital when they got sick. Some 15% of them went to clinics to have health treatment (Figure 6).

Figure 6: Places to go when getting sick



Hot weather is the most server climate change that affects people living in slum areas. About 46 % of slum people strongly agree that hot weather affected their living, and 37% agreed. Only 13% and 16% strongly agreed that flood and heavy rain affected their living, respectively (Table 10).

Table 11: severity of climate change by category

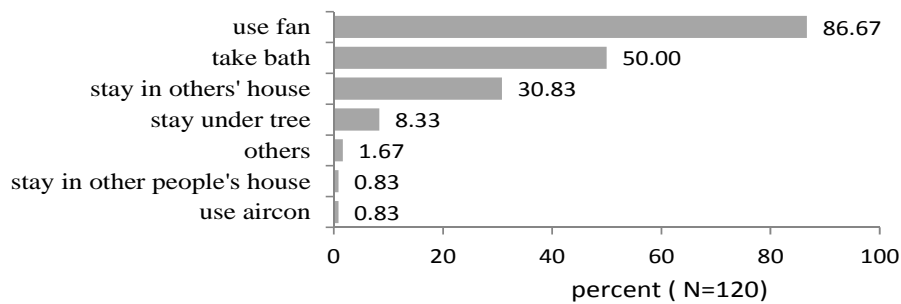
climate change	strongly agree	agree	Neither agree nor disagree	disagree	strongly disagree
cold weather	13.3	17.5	34.2	18.3	16.7
hot weather	46.7	37.5	11.7	2.5	1.7
flood	10.0	16.7	35.0	12.5	25.8
heavy rain	16.7	34.2	38.3	3.3	6.7
thunderstorm	8.3	11.7	21.7	17.5	39.2
typhoon	11.7	34.2	31.7	8.3	13.3

N=120

5.3 Climate Change Response

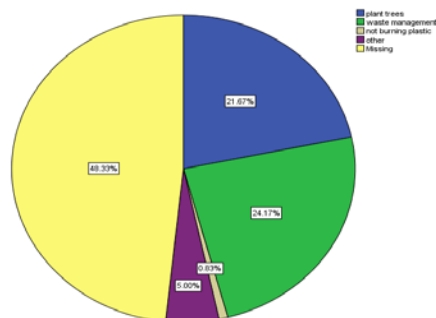
When the weather become very hot, people in slum areas use electric fan, take bath or go to stay in other people's houses. About 80 % of respondents used electric fan to cope with hot weather, 50% took bath and some 8% moved to stay under tree (Figure 7).

Figure 7: what to do when it is hot



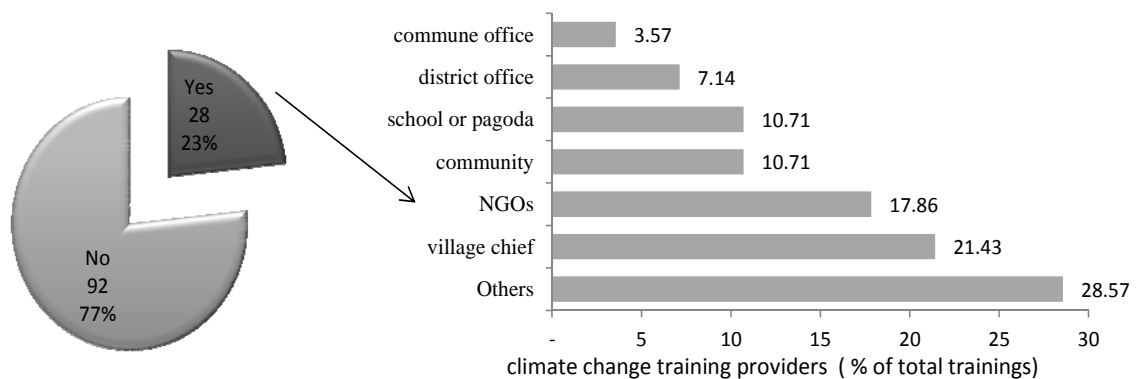
In response to climate change, 22% of the total sample said they planted trees, 24% were involved in waste management activities (Figure 8).

Figure 8: activities to response to climate change



In recent years, there has been some NGOs providing climate change trainings. The trainings mainly focus on how to response to climate change, how to adapt to climate change and what causes climate change. In our survey we find about 28% of the 120 household heads used to join trainings on climate change. Most of the trainings were conducted after 2013 by NGOs and village chiefs (Figure 9).

Figure 9: Used to join trainings on climate change? who provided trainings?



However, the majority of the people in slum areas don't want to move out to live in other places. About 33% of slum dwellers want to move out while the remaining 65% don't want to move out. This reflects the fact that when there is no suitable resettlement plan, the slum areas in the city will become more populated and it will become a challenge to make the city slum-free and beautiful in the future (Table 12).

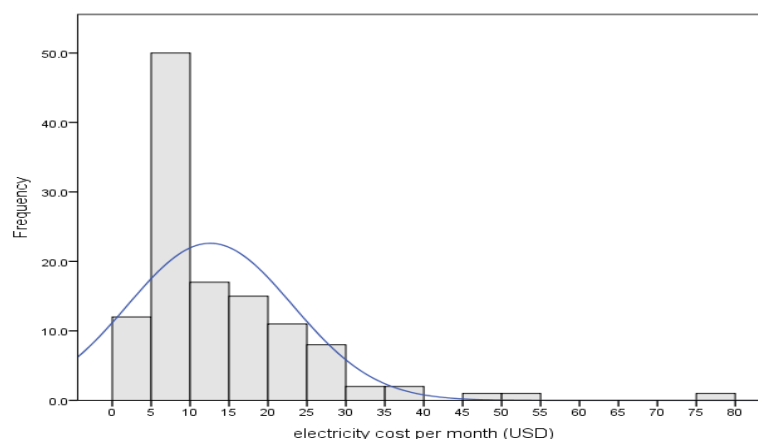
Table 13: intention to move out of slum areas

Do you want to move?	Frequency	Percent
want to leave	40	33.3
dont want to leave	78	65.0
other	2	1.7
Total	120	100.0

6. Access to electricity, water and credit

In our survey, we find each household has access to electricity. The average electricity cost per month for an average household was 12 \$ (Figure 10). However the cost varies depending on activities of each household as shown in the following Figure. Like many other areas of the country, electricity connection has performed far better than water connection. Most rural areas in Cambodia also have accessed to electricity but they cannot connect to clean water yet in most parts of the country.

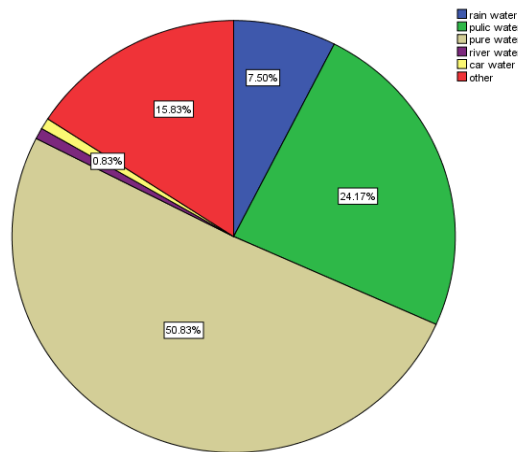
Figure 10: distribution of monthly electricity cost



People in slum areas used rain water, public water and pure drinking water for drinking. About 50% used pure drinking water sold by private companies. Many companies in the city produce drinking water to supply in town. Some household also connected to public water and about 25% use this water for drinking (Figure 11). As some people living along the river, they can drain river water by pumping machine to their houses for drinking. Some people in slum areas who don't connect to public water raised

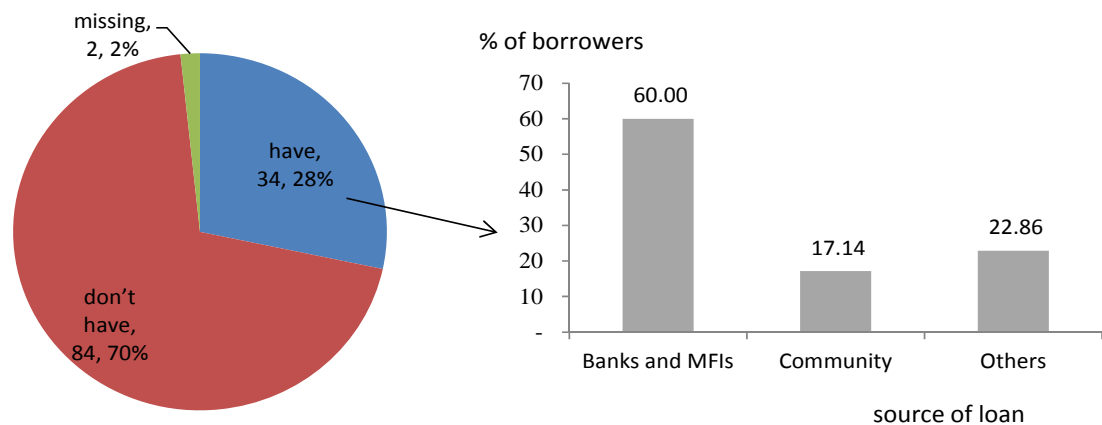
some issues about connection fee which is expensive for them. Uncertainty about when they are evicted also affects their decision to connect public water.

Figure 11: Access to water



Not many people in slum areas borrowed money. About 34% of household heads have borrowed money. About 60% of the borrowers borrowed from banks and MFIs. 17% borrowed from community and the remaining 22% borrowed from other sources such as friends (Figure 12). To borrow money some people submit their land title and some even use their motorbikes as collaterals to borrow money.

Figure 12: Access to credit



7. Institutional framework and Stakeholders’ views on climate change

There has been various institutions from international level to local level dealing with climate change. At international level, the Paris climate agreement 2015 was aimed at dealing with greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020. As of October 2017, 195 members of the

United Nations Framework Convention on Climate Change (UNFCCC) have signed the agreement, 168 of which have ratified it. Most developed countries are believed to emit carbon dioxide which is thought to be one of main drivers of climate change. This negative externality has posed a cost in developing countries which are not industrialized countries. Countries have faced challenge of mainstreaming and integrating climate change into national planning and development processes.

At national level in Cambodia, the Department of Climate Change, General Secretariat of the National Council for Sustainable Development is the core agency responsible for climate change activities in Cambodia. Recently it coordinated Cambodia Climate Change Alliance (CCCA), which is a multi-donor initiative funded by EU, UNDP, SIDA and DANIDA to strengthen national system and capacity to support the coordination of and implementation of Cambodia's climate change response. The approach of CCCA is to focus on capacity building and institutional strengthening targeting key national institutions, subnational authorities, and civil society.

At local level, many NGOs worked with local authorities to help urban poor people to adapt to and mitigate the risks associated with climate change. In Battambang city, there has been some non-government organizations (NGOs) collaborated with local governments such as commune authorities to provide some trainings about causes of climate change, the effects of climate change and climate change adaptation. NGOs also help reduce vulnerability of poor communities through providing educations, trainings about how to mitigate the risks associated with climate change.

Some NGO such as Cambodian Children's Trust (CCT) worked directly to support poor children in slum areas though providing educations, in-kind subsidy in the form of rice, children caring service. The vision of CCT is to see a Cambodia free from poverty, where all children grow up in families. We interviewed a boy whose parents are disabled and working in Banteay Meanchey as beggars. He is living with his grandmother who stays at home and taking care of a few children. This boy aged about 7 years old goes to education center run by CCT in the morning to study English language, Khmer language and math. CCT provided breakfast and lunch as incentives to go to study. In addition, as the family is too poor, 50 kg of rice was also provided by CCT for every 3 months. CCT had its own truck or Tuk Tuk to collect children in poverty ridden areas to go to study in its managed center. In addition to education provided by CCT, the kid also went to public school in the afternoon. In Cambodia, public education at primary, secondary level is free. However, in the city now there is a growing number of students who registered at private schools in particular at private schools that provide bilingual education in English and in Khmer. This story tell us that kids in slum areas may have better education opportunity than kids in other rural areas as there are many varieties of education centers in the city which can be accessible.

Another NGO called Cambodian education and waste management (COMPED) in cooperation with local authorities deals with the waste crisis, saves the environment and the reduction of greenhouse gas emissions by reducing the amount of organic waste disposed into dump site by promoting the compost approach. Solid waste in the city is one of the main causes of many kind of diseases if not well managed. The organization also provides more educational opportunities for poor and disadvantaged children and youths.

In addition to the above institutional arrangement, the poor have been equipped with mechanism to deal with risks of income fluctuation. In a slum in Chamkar Somrong Pir which located behind provincial hospital, community development fund (CDF) was managed by community chief to provide fund to

members. Some members borrow money for doing small businesses such as selling sugar cane juice or to smooth consumption when breadwinners cannot find enough income for household's spending.

According to head of Department of Land Management, Urban Planning & Construction of Battambang, people who lived on plots of land along the river which are state properties can continue to live there but they don't have rights to transfer and they don't have land title. And the state does not have policy to evict them from state-owned land. But if the state needs to develop the land, the state will ask them to move to other places without any compensation. But in case the state has some budget, they can receive some compensation. The community development fund was operated under the umbrella of the Urban Poor Development Fund (UPDF) which aims at improving housings and living condition of people in urban slums through grants from outside sources and group savings in Phnom Penh and other provincial towns. However, the community leader told us that the interest rate on loan was 2% per month, which is still very high because much of the fund was borrowed from UPDF Phnom Penh who charged interest rate of 1%. The default rate is low because the lender, community leader, live close to borrowers and can monitor the activities of borrowers well even though borrowers don't need to put collaterals such as land title to get funds. Whether the Urban Poor Development Fund (UPDF) is successful or not in providing housing, upgrading slums is ambiguous (Somsak et al 2009).

Head of Rotanak commune mentioned that most of the people living in the commune are government officials, businesspeople, workers and craftsmen. Regarding the impact of climate change, he told us that climate change caused people to get sick. People living in Rotanak commune has good sanitation and don't have shortage of water. About 99% of the people use state-run water supply service and the remaining 1% who are the poor don't have capacity to connect state-run water. Almost all people have access to electricity with reasonable price. Because the temperature is increasing, the demand for electricity, in particular for utilizing electric fans, also increases. He also stated that many people in his commune were indebted and there were some problem of drug usage. But now the problems of drug usages declined thanks to government's crackdown. People in his commune has experienced some climate change issues including flood, increase in temperature which cause people to get sick. And people who live along Sangke River are hard hit by climate change, in particular land slide. In his commune, there are some international organizations which help to disseminate information on climate change and he has a plan to plant trees and to establish reservoirs for keeping water in dry seasons to mitigate the effects of climate change.

8. Conclusion

This research focuses on economic situation of people in slum areas in 4 villages in Battambang city and how those people are affected by climate change. People in slum areas can earn income on daily or monthly basis and their income is higher than the poverty line of 1\$ per day. We find that the major climate change in the areas is hot weather. Most of them worked in construction sites or restaurants or shop assistants. Most of them heard about climate change through TV and Radio. Hot weather, heavy rain and typhoon are the top three climate issues that people in slum areas experienced. When the weather becomes very hot, people in slum areas use fan, take a bath or move to stay in other's houses. In recent

year, in particular after 2013, some NGOs started to provide climate change trainings to slums areas. Although they experience climate change, the majority don't want to move out of slum areas. Regarding electricity access, we find that all people in slum areas use electricity. Only about 25% of people in slum areas use public clean water because connection fee is still high for them. Some of them buy pure drinking water from private water supply companies instead for drinking. Because most people in slum areas have land titles, not many people borrowed money from banks and MFIs. It seems that there have been no concrete plans for resettlement of people in slum areas. This may slow down the process of the city development in the future as more people may move to live in slum areas. Many NGOs have worked with local authorities to address issues of education of children, climate change adaptation, housings and waste management. However, bigger projects undertaken by NGOs as well as by local authorities to address the issue of landslide have not been observed during our study period.

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Some photos

land slide



Interviewing CDF near provincial hospital



preparing questionnaire



slum in railway



Interview team



class discussion

