

# **Perceptions on Resettlement of the Local Communities: a Case Study of Htein Pin Village in Paunglaung Region**

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## **Abstract**

This study is focused on the current situation of relocation site of Upper Paunglaung dam and the perceptions on resettlement program of the Upper Paunglaung dam on resettled communities. The objectives of the study are to examine the current condition on the agriculturally based livelihoods of resettled communities and to explore the perceptions of the resettled communities on resettlement areas. Descriptive method is mainly used in this study. Secondary data were collected from the Township administrative department and primary data were collected by questionnaire with Likert response scale and face to face interviewed with 90 households (30 percent randomly selected) from Htein Pin village. Based on the survey result, it can be seen that all 90 households had no farmlands which were under the reservoir and they can grow only turmeric on the slope of the mountain. They faced livelihood difficulties. Furthermore, regarding the perceptions of the resettled communities, there are positive perceptions on housing, public building, electricity, education, communication and health facilities. However, some villagers have negative perceptions on the vocational training, market and government supporting for food and protein. Concerning with water supply and market, 90 households significantly pointed out that their employment opportunities and they wanted to inform to government to create employment opportunities for their sustainable livelihood activities.

Key words: resettlement, resettled communities, livelihoods

## **Introduction**

Today, energy is an unquestionable requirement for the advancement of a nation. Electricity is one of the most important energy resources for modern development. The demand for electricity is on the rise in Myanmar due to growing population and increasing economic activities. But the country cannot conform to the pace of energy demand, thereby there is now a lack of adequate power generation capacity, and the existing national grid network is incapable to power the whole population. Electricity is a major element for most of the economic activities. In recent years, due to power supply shortage and the pace of establishment of essential physical infrastructures, the government is building up new power plants in Myanmar. Three types of power plants were installed in Myanmar, (27) hydro power plant, (18) gas and steam plant and one coal plant. At the present, Myanmar is producing 3221 MW of electricity from hydro power, 1329.33 MW of electricity from gas and steam and 120 MW of electricity from coal sources. As potential renewable energy resources, hydropower will have a significant important role in the near future. The Ministry of Electric Power (MOEP) has been trying hard to implement further power projects exploiting available resources in Myanmar. Among 27 hydro power projects, Upper Paunglaung is a gravity dam on the Paunglaung River, about 40 km east of Pyinmana on the border of Naypyitaw Union Territory and Shan State. Dam type is roller compacted concrete (RCC) dam, and its height is 100 m. The primary purpose of the dam is hydroelectric power generation; it will support a 140 megawatts power station. The Upper Paunglaung hydropower project was officially opened in Dec 2015. The dam is at the southern end of the Paunglaung Valley, the only fertile plain along the river. The dam's 61 square kilometer reservoirs will flood the entire valley which is home to 23 villages, or 7998 people, who are mainly Burmese and Kayan. Villagers have been warned that they will have to move out and told to choose a new area for their village to settle higher up the nearby mountains. The authorities say that they will help to bulldoze the new

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area and after the villagers had moved, each household would be given compensation. However, the building of reservoir for hydropower projects can lead to negative social and livelihood impacts especially loss of traditional livelihoods for communities through resettlement and flooding of farmland. Government compensated for houses and farmland and supported the public buildings such as monastery, Pagoda, school, new agricultural land, road, bridge. But there are still problems concerning with socio economic condition. Thus, this study emphasized on the livelihood challenges of the local communities.

### **Rationale of the study**

There are many critics concerning with the construction of the hydropower dam in the world but every country faced the shortage of electricity. Electricity can be produced from water resources, oil, coal, wind or nuclear power but hydropower dams generate energy that is renewable and cleaner than other resources, but increasingly attacked in the press by many critics. In Myanmar, water resources are abundant; these are Ayarwaddy, Thanlwin, Sittaung and Chindwin. So the government will implement many future plans of hydro power projects in Myanmar. PaungLaung river is located near Naypyitaw and to fulfill the need of electricity of new capital Naypyidaw ,three hydropower dams were constructed on PaungLaung River;Lower PaungLaung dam,Upper PaungLaung dam and Middle PaungLaung dam.The first hydro power project is Lower PaungLaung dam among three dams but there are some impacts on villages near construction areas because of the dam area is far from people living area, however, in the case of the Upper PaungLaung dam, it caused the resettlement problem because there are 23 villages and their fertile land on the valley of the PaungLaung river. Before the project, the government and authorized people from the Ministry of Electric Power frequently negotiated with villagers and took agreements for compensations. As local communities, there were no experiences about resettlement. So, they have no ideas to change new livelihood activities. Ministry of Electric Power and government formed five members committee from each village and then listed houses and farmland which were compensated. Committee decided to relocate the new places which were nearby main road. But seven years later, they were not familiar with the new resettlement area. And their livelihoods were changed to shifting cultivation. Furthermore, their shifting cultivations were far away from their new housing areas. And because of the rising water level, their shifting lands were on the slope of the mountain. So, some villagers returned to shifting land and they stayed with temporary huts with the scattered pattern. And they scarified their new houses and new environment. Thus, this study focused on the current condition of the resettled communities and explored the local communities' perceptions on their resettlement areas.

### **Objectives of the Study**

The objectives of the study are

- (1) to examine the current agriculturally based livelihoods of resettled communities
- (2) to analyse the perceptions of resettled communities on resettlement area.

### **Method and Scope of the Study**

The research methods employed were document review, semi-structured household interviews and face to face interview with respondents. And this study used a case study and quantitative and qualitative approach. And Primary and secondary data were employed. To analyze the perceptions of the resettled communities on their resettlement program of Upper Paunglaung dam, one of the 23 resettled villages which is the largest households among them was selected. To get the primary data, a selected village, (Htein Pin village) thirty percent of households (90 household heads) from Htein Pin village were randomly selected for household interview and were surveyed by the structured questionnaires. Secondary data were obtained

from the Department of Electric Power and Department of Village Tract Administration. This study presents an analysis of perceptions of resettled communities on their resettlement areas because of the Upper PaungLaung dam. The resettlement process in Htein Pin village started in 2013 and totally 333 households were resettled. The structures questionnaire captured the participant's demographic background, and their perceived impact. Each question is asked about the households to rate impact as positive, negative or neutral. These questions were answered by using Likert response scale. The Likert scale range originally selected for the questionnaire was 1 to 5 allowing for variations of positive and negative but was simplified during data analysis.

## Results and Discussion

### Demographic Factors of Respondents

The demographic factor of the households consists of gender, age, marital status, educational level, family member, occupational level and yearly income of the households of Htein Pin villages. The demographic factors of households are shown in Table (1).

Table (1) Demographic factor of Respondents

Sr.No	Particular	Frequency	Percent (%)
1	<u>Gender</u>		
	Male	53	58.88
	Female	37	41.11
2	<u>Age</u>		
	21-30	8	8.9
	31-40	22	24.44
	41-50	30	33.32
	51-60	15	16.67
	>60	15	16.67
3	<u>Marital Status</u>		
	Single	8	8.89
	Divorced	10	11.11
	Married	72	80
4	<u>Family Member</u>		
	<5	9	10
	>5	81	90
5	<u>Educational Status</u>		
	Illiteracy	15	16.67
	Primary	65	72.22
	Secondary	8	8.89
	High	2	2.22
6	<u>Occupation</u>		
	Shifting	90	100
	Total	90	100

Source: Survey data, October 2018

According to Table (1), Gender of respondents can be divided into two groups: male and female. Out of 90 respondents of Htein Pin village, there are 53 males and 37 females. It means that males' respondents are greater than the females. And age level is between 41 and 50 is 30 percent which is the most. Furthermore, 80 percent of respondents are married. Family members of respondents are categorized into two groups. 10 percent of respondents are less than 5 family members and 90 percent of respondents are greater than 5 family members. It can be seen that most of the respondents are greater than 5 family members. Most respondents' educational status is primary level and occupation levels of all respondents are farmers.

**Survey Analysis**

Regarding the economic impact of Upper Paunglaung dam on Htein Pin village, farm size owned by households, Ya land owned by household, type of crop grown, irrigation and perception of respondents on socio economic condition are described.

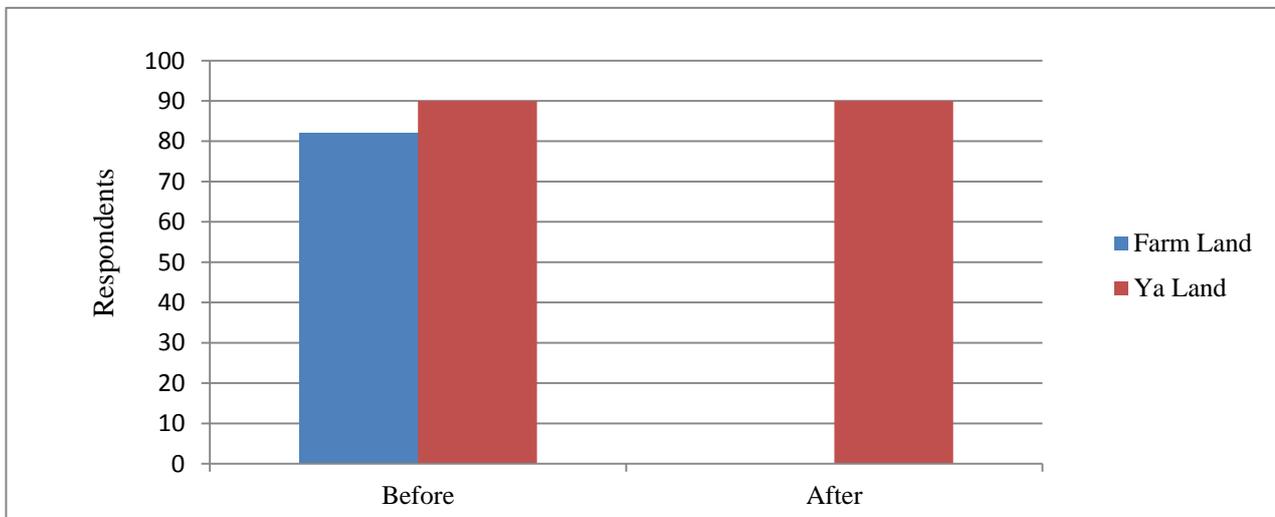
**Cultivable land owned by Households**

Cultivable land owned by households are divided into farm land and *Ya land*/*Taung Ya* are shown in Table (2).

Table (2) Cultivable land owned by Households

Sr.No	Farm Size(Acres) (0-5)	Before (2012)	After (2018)
1	Farm Land	82	0
2	<i>Ya Land</i>	90	90

Source: Survey data, October 2018



Source: Survey data, October 2018

Figure (1) Cultivable land owned by Households

According to Table (2) and Figure (1), before relocation, 82 respondents owned both farmland and *Ya* land but after relocation, all respondents did not own farmland because farmland were under reservoir. It can be seen that after resettlement, villagers possessed only *Ya* land and their livelihood is mainly depended on the shifting cultivation. Shifting cultivation is very far away from their new housing area. So, the villagers from Htein Pin village needed to return to their shifting land. There was a problem for villagers because it took three hour drive away from new village to shifting cultivation and also the road is rough. Therefore, villagers did not return daily to their housing area and they stayed with temporary bamboo huts in their shifting land. One of the Htein Pin villagers said that “*I cannot return to my new village because my shifting land is very far placing which is located on the slope of the mountain. So, I stayed with temporary bamboo hut near shifting cultivation. I returned when I had my family affairs and health problem*”. Furthermore, villagers incurred petrol cost for transportation from new village to their shifting cultivation. A 40 year old man said that “*petrol cost is 1500 kyats per day so I did not want to return home*”.

There were only old the aged people and students in new village. All working aged group were back to their shifting cultivation. And some houses were good but villagers closed their new houses and they were back to do for their livelihood.

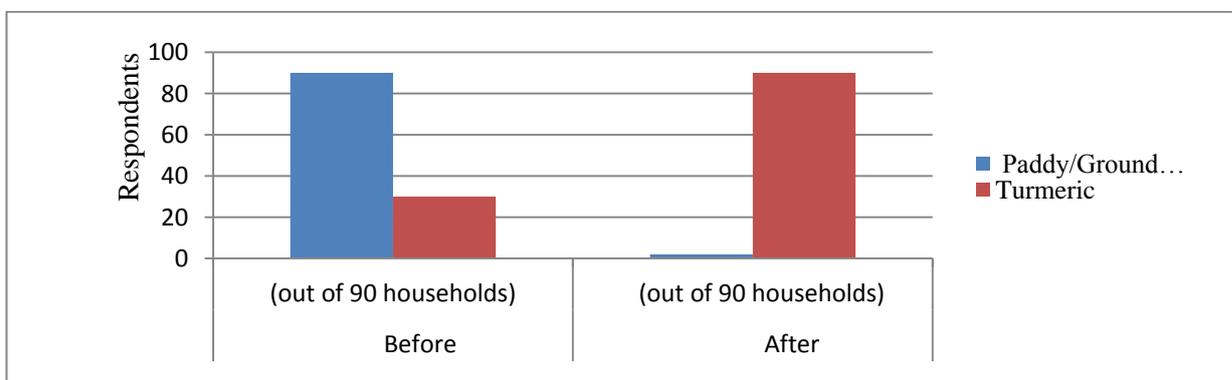
### Types of Crop

Before the main crops were paddy, there were groundnut and turmeric in Htein Pin village. But after the resettlement, crop pattern was changed to only Turmeric cultivation. Types of crops grown in Htein Pin village are shown in Table (3).

Table (3) Types of Crop

Sr. No	Crops	Before (2012) (out of 90 households)	After (2018) (out of 90 households)
1	Paddy/Ground nut/Turmeric	90	2
2	Turmeric	30	90

Source: Survey data, October 2018



Source: Survey data, October 2018

Figure (2) Types of Crop

According to Table (3) and Figure (2), before relocation, paddy, turmeric and ground nut are the major crops grown in Htein Pin village. After the resettlement, the major crop pattern changed to Turmeric because paddy and groundnut cannot grow in *Ya* land. Only turmeric can grow in *Ya* land. Therefore, it can be seen that the crop pattern was changed in Htein Pin village and the villagers' livelihood is only depended on turmeric cultivation. One of

the villagers explained that “*in the past, our farmlands were fertile lands but now the Ya lands on the slope of the mountain are filled with stone and I needed to find the vacant lands and needed to prepare to grow turmeric*”. He said that “*the most important problem is these lands could not grow paddy so we had to buy rice*”. According to interview with villagers, they faced with difficulties about their livelihoods.

**Main Sources of Water**

In a new living area, it depends on the water resources from rain. Government arranged water from mountain through pipeline.

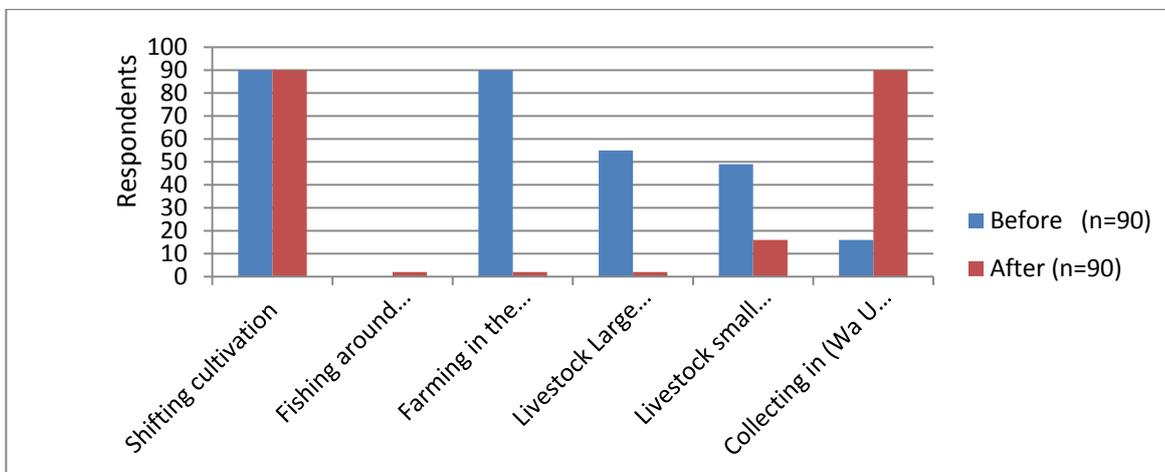
**Livelihood Activities before Resettlement and after Resettlement**

Local communities from Htein Pin village can survive with shifting cultivation, fishing around the reservoir, farming in the farm land, small livestock and collecting the Wa U, Bamboo shoot, collecting raw plants for broom and Taung Char U from the forest. Shifting cultivation is the main livelihood activity in Htein Pin village.

Table (4) Livelihood Activities

Livelihood Activities	Before (2012) (n=90)	After (2018) (n=90)
Shifting cultivation	90	90
Fishing around river/reservoir	0	2
Farming in the farm land	90	2
Livestock Large animal(Buffalo/cattle)	55	2
Livestock small animal(Chicken/Duck/Pig	49	16
Collecting in (Wa U /Bamboo Shoot/Taung Char U) from the forest	16	90

Source: Survey data, October 2018



Source: Survey data, October 2018

Figure (3) Livelihood Activities Before and After

From the above table and figure, before resettlement, shifting cultivation, farming in the Ya land and collecting Wa U, Taung Char U and bamboo shoots in the forest were the main important livelihoods for the villagers in Htein Pin village. After relocation, for their livelihoods, they went to jungle and they collected bamboo shoots in the rainy season and raw plants for the brooms. And in the hot season, they searched for Wa U and Taung Char U. It can be seen that their livelihoods are heavily dependent on the Non Timber Forest Products (NTFPs). A 59 year old man said that “*before, we are busy with our farm works but now we have no farmlands. So, we have to go to jungle to find forest products*”. Therefore, it means that their main livelihoods are shifting cultivation and forest depended livelihoods.

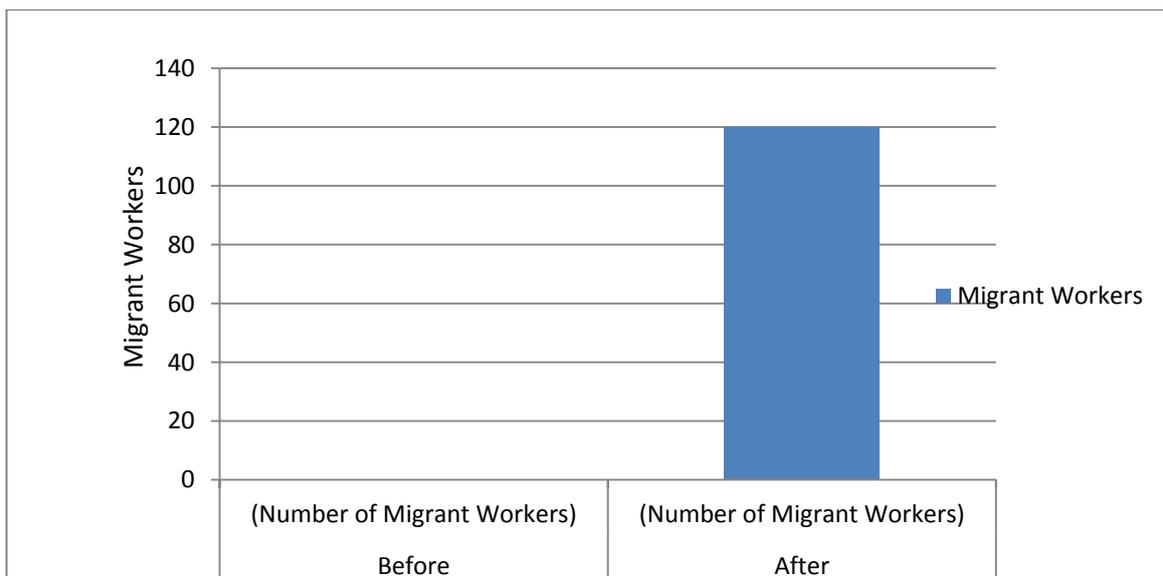
### Migrant Workers

In the old time, there were many employment opportunities in Htein Pin village. Workers around the Paunglaung region migrated to Htein Pin village to do the farm activities. And there were no migrant workers in this village but now the people from working aged group migrated to the neighboring countries such as Thai, Lao and China. The following table shows the migrant workers before and after resettlement.

Table (5) Migrant Workers Before and After

Migrant Workers	Before (2012) (Number of Migrant Workers)	After (2018) (Number of Migrant Workers)
Migrant Workers	0	120

Source: Key Informant Interview with Village Leader, 2018



Source: Table (5)

Figure (4) Migrant Workers Before and After

According to Table (5) and Figure (4), after resettlement, in new village, there were no work programmes and no farm activities. Therefore, people from working aged group had to

migrate to neighboring countries. Village leader said that “before, *young people had got income from farm activities but now these situations were lost*”. “*I am very sorry for that*”. He continued to say that “*new village is not only larger but also more beautiful than the old village but there are no young people in new village. Some had to return to shifting cultivation and some became migrant workers*”. “*And we are not united*”.

### The perceptions on the resettlement

To analyse the perception on the resettlement, rate the following indicators (1-5) based on observed perceptions. Very negative=1, negative =2, Neutral=3, positive= 4 and very positive =5.

Table (6) The Perception on the Resettlement (n=90)

Sr.No	Particular	Frequency (n=90)	Very Negativ e	Negativ e	Neutral	Positive	Very Positive
1	Assistance being received (food and protein support)	Frequency	77	10	0	3	0
		Percent (%)	85.56	11.11	0	3.33	0
2	Improvement housing	Frequency	45	25	0	20	0
		Percent (%)	50	27.78	0	22.22	0
3	Access to Electricity	Frequency	0	25	0	65	0
		Percent (%)	0	27.78	0	72.22	0
4	Access to water supply	Frequency	80	10	0	0	0
		Percent (%)	88.89	11.11	0	0	0
5	Access to road and transportation	Frequency	0	0	10	80	0
		Percent (%)	0	0	11.11	88.89	0
6	Access to communication technologies	Frequency	0	0	0	80	10
		Percent (%)	0	0	0	88.89	11.11
7	Access to livelihood resource/technologies support	Frequency	85	5	0	0	0
		Percent (%)	94.44	5.55	0	0	0
8	Access to the training opportunities(vocational training)	Frequency	90	0	0	0	0
		Percent(%)	100	0	0	0	0

9	Access to a range of income generating activities	Frequency	70	5	0	15	0
		Percent (%)	77.78	5.56	0	16.66	0
10	Access to education	Frequency	80	10	0	0	0
		Percent (%)	88.89	11.11	0	0	0
11	Access to health clinic	Frequency	85	5	0	0	0
		Percent (%)	64.44	5.56	0	0	0
12	Access to market	Frequency	90	0	0	0	0
		Percent (%)	100	0	0	0	0

Source: Survey data, October 2018

According to Table (6), all households indicated major improvement in road and transportation, communication technologies, education and health clinics as the positive changes experienced after resettlement. And many households pointed out water supply, livelihood resources and technologies support, training opportunities, income generating activities, and market as the negative perception on the resettlement. Households also expressed their very negative level about assistance being received (food and protein support); there is no arrangement program for assistance food and protein support. By studying the housing improvement, households are satisfied with their new house and new public building, there are positive perceptions identified by households. In addition, households are satisfied with access to electricity because the Ministry of Electric Power provided and connected the power grid line for villages. Six years later, villagers knew that there were no employment opportunities in new village and they faced many challenges in new resettlement areas. Furthermore, they worried about their future. A 59 years old man said that *“I want to inform government to create employment opportunities and market and industries. If not, we will be surely hungry in the future”*.

Regarding the perceptions on access to education and health facilities, most villagers have positive perceptions on them. One of the parents said that *“In old village, there was no secondary school. So, although my son was bright, he had to drop out of school because if my son continued to attend secondary school, he would go to another village. Now, government supported the secondary school”*. Most villagers were satisfied with health facilities. New Htein Pin village is not far from main road and also not far from Township hospital. Therefore, A 45 year old woman said that *“I was really happy because Township hospital is not far from our village. So, we did not need to worry about our health problems”*. All villagers were significantly satisfied with electricity, communication, education and health.

### Conclusions

By studying the survey results, the villagers from Htein Pin village owned only *Ya* lands and they can grow only turmeric because of the shifting cultivation. Their livelihood mainly depended on the turmeric planation but they have no new method for their agricultural activities. Because of the shifting cultivation, their livelihood is not secure because they need to find the vacant land every year. And they try to survive with forest products. Their life style

is suddenly and completely changed to turmeric farmers. And about 120 young people migrated to neighboring countries. Furthermore, villagers already built the big and better houses but they did not want to resettle in new village. They had to return to their shifting land because of their survivals. Regarding the analysis on the perception of villagers on resettlement, most villagers have the positive perceptions on housing, electricity, education, health facilities, transportation and communication. However, there are negative perceptions on vocation training, government supporting facilities and market potentials. According to face to face interview with village leaders and villagers, they really faced with livelihood difficulties. Based on the analysis of perceptions on resettlement, all households indicated major improvement in road and transportation, communication technologies, education and health clinics as the positive impacts of resettlement. After resettlement, all the villagers have negative perception on water supply. They faced the water scarcity in new village. Based on the research findings, the following recommendations are offered. This study can be concluded that because of construction of Upper Paunglaung dam, local people had to move to new village but, they have not only positive perceptions but also negative perceptions of the resettled people. Without electricity, region cannot develop but there are some negative impacts on resettles communities. And there should have improvement in the water supply system for villages. It is needed to arrange a clean water system in impacted villages. To get sustainable livelihood activities, it should be arranged to train the farmers towards the adoption of modern farming techniques. Furthermore, government should mind the villagers from the relocation site by providing the market research for Turmeric products and hence to promote the standard of living of villagers.

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