

Livelihood Restoration for Thai Ethnic Minority After Resettlement—Impacts in Son La Hydropower Plant



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Abstract Resettlement in hydropower projects always may harm the development of affected people in the migration areas. Son La hydropower plant is the largest hydroelectric project in Vietnam with a great influence on the livelihoods of millions of people, mainly ethnic minorities. The theory of inclusive social development states that economic development and infrastructure investment bring opportunities and equality in prosperity to all population groups, especially vulnerable people such as the poor, ethnic minorities, women and children. But there remains an issue of gender inequality in this economic growth model. This chapter analyzes the obstacles and challenges that households resettled by hydropower projects in stabilizing livelihoods and development. Thai ethnic minority has many difficulties during the relocation and adaption to new living conditions in resettlement sites. There were concerns about livelihood restoration in resettlement sites of Son La hydropower plant, particularly the limited interest and focus on job creation and livelihood support for affected Thai ethnic people. They have faced various obstacles to adapt to a modern lifestyle, which is different from their traditional ethnic culture. Moreover, illiterate people could not find a new job with a stable income.

Keywords Resettlement · Livelihood restoration · Ethnic · Hydropower plant · Vietnam

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1 Introduction

In order to achieve economic development goals and secure the energy supply for development, a number of developing countries have focused on building hydroelectric plants. Apart from the significant benefits from hydropower projects, such as electricity supply for socio-economic development and budget revenue generation, there are multiple negative impacts that hinder development, especially issues related to involuntary resettlement of displaced communities. There are concerns about issues surrounding forced land acquisition and adverse effects on people whose land is acquired by hydropower projects. Involuntary resettlement and farmland acquisition lead to loss of livelihood assets, less access to public services and disruption of traditional social networks of indigenous peoples, resulting in stress and burdens on displaced people (Gutman, 2003; IFC, 2012; WB, 2004).

An assessment of damages caused by relocation and resettlement in hydropower projects is a mandatory requirement by national regulations and donors. The resettlement plan and social assessment are strongly linked with displaced people; therefore, their interests and satisfaction should be integrated into these documents. The resettlement planning and social impact assessment processes both interact with people's sense of belonging and their wellbeing (Vanclay et al., 2015). Although donors such as the World Bank or International Finance Corporation (IFC) require compliance with social safeguard policies in case of involuntary relocation in projects, governments do not always fully comply by negotiating with the affected people. As a result, resettlement may lead to exposure to poverty and significant mental losses by displaced persons (Frank, 2017).

Various in-depth studies on social impacts of hydropower projects in the world indicated that many aspects are omitted in the planning and delivery of compensation and resettlement support for affected people such as stakeholder's engagement in planning and decision-making process; compensation and resettlement support mechanism is unclear and disadvantaged people are not given adequate attention in the compensation and resettlement policies (Gutman, 2003; Rowan, 2017; Smyth et al., 2015). Among the vulnerable people, ethnic minorities, particularly ethnic women, are exposed to double vulnerability because they have poor development indicators, including high poverty rate, living in disadvantaged areas, limited livelihoods, low resilience to shocks, among others. On the other hand, governments have few comprehensive researches on the impacts of relocation and resettlement, especially for ethnic minorities. Existing studies on social impact assessment of hydropower projects have not covered the adaptation of disadvantaged people to new living conditions, the ability to restore their livelihoods in the long term and particularly the plans to restore the traditional spiritual and cultural values of affected ethnic communities (Colchester, 2000; Gutman, 2003; Nguyen et al., 2017; Ronggang, 2008).

In the research on free-migrant women in the Three Gorges Dam Hydro Electric Power Plant (China), Yan Tan stated that women have less opportunity to participate in the relocation decision-making process. After being relocated, women had

difficulties in finding jobs in the non-agricultural sector, although they tried hard to participate in agricultural activities to ensure livelihoods in the new living environment. It is shown that gender perspectives are either incomplete or absent in resettlement planning and livelihood restoration (Tan, 2008: 1–38).

The development view argues that gender participation in the decision-making process and development planning, including resettlement and livelihood restoration plans for involuntarily displaced people by hydropower and infrastructure projects, brings obvious economic benefits (Gutman, 2003). However, the impacts of resettlement in hydropower projects on Vietnamese ethnic minority women have been discussed in few studies. Gender mainstreaming in resettlement policy of hydropower plants and infrastructure projects in general has not been adequately considered. Therefore, it is essential and urgent to analyze the gender mainstreaming in resettlement policy formulation for developing countries.

Vietnam is a developing country in needs of projects to build and upgrade infrastructure such as hydroelectric projects to meet development objectives. Hundreds of large and small hydropower projects have been built, mainly in mountainous areas, where ethnic minorities reside. Although the Government of Vietnam has made great efforts in resettlement planning, socio-environmental impact assessment and livelihood restoration, the immense impacts caused by hydropower projects have significantly affected the lives, livelihoods, cultural and spiritual properties of the affected people, especially the ethnic minorities and women. The social issues related to resettlement and livelihood recovery for displaced people are posing significant challenges to the government as well as the communities affected by hydropower projects.

2 Methodology

The approach in this chapter benefits from an anthropological perspective. The theory of inclusive social development with comprehensive development goals, without low-lying areas for disadvantaged people in society, demonstrates the social capacity to organize productive resources to meet changes in the social transformation, including organizational, infrastructure, physical, social, mental and psychological changes.

Nonetheless, there have been imbalances resulting from alterations, redundancies, deficiencies or disturbances that slow growth or threaten life during the development process. Therefore, inclusive development is viewed as the upward movements of the society with positive changes from lower to higher levels, including infrastructure conditions as well as results in enjoyment and creation, and must bring equal opportunities and prosperity to all. From an anthropological perspective, the issue of policy formulation needs to be seen by perceptions of both government and stakeholders with the uniform participation in the research of policy formulation and implementation (Michael, 1993).

A proper governance in the development of resettlement policies creates substantial power because the stakeholders' engagement is fundamental to success in governance. It requires the voice of stakeholders and the interests of all parties are taken into account in the formulation of resettlement policies. Engagement strategy should have a clear segregation in each stage of design and implementation. In addition, the voices of social organizations and individuals affected by the resettlement policies should be seriously considered (Erdiaw-Kwasie et al., 2014).

Gender mainstreaming in resettlement policies is essential. Gender roles are set by culture, social norms and values. However, gender division and gender-related influencing factors are insignificant in the current development of resettlement policies. There is a significant difference between men and women in need of livelihood restoration (UNDP, 2017; WB, 2004). Meanwhile, the resettlement policy in infrastructure projects often overlooks traditional cultural norms and ignores livelihood restoration factors that tend to be influenced by culture. Vulnerable groups, especially women from ethnic minorities, are always double-vulnerable due to their higher poverty rate, lower education levels, poorer access to social services, and being neglected in policy making. The resettlement policies of hydropower projects need to be improved with gender actions to help women and men restore their livelihoods successfully. Nevertheless, it is evident in Vietnam's hydropower projects that the resettlement plans are designed without taking into account gender mainstreaming. The resettlement plans failed to recognize the different roles of men and women in households as well as equality in decision-making to bring benefits from supportive policies and recovery opportunities to women, especially ethnic ones.

The livelihood of Thai people resettled in Son La hydropower is analyzed in this case study to learn their difficulties, especially women, in restoring their livelihoods. Displacement and involuntary resettlement have resulted in Thai women losing their livelihood assets, reducing their access to public services and disrupting their traditional social networks. Resettlement led to stresses and burdens on displaced people in general and Thai women in particular. The study also recommends how Vietnamese government should observe social safeguards policies in the face of involuntary relocation and resettlement of hydropower projects from the case of Son La hydropower plant.

In this chapter, the authors use field survey data, which was collected for the social impact assessment of resettlement in Son La hydropower project to inform its pre-feasibility study between 2001 and 2014. The authors conducted numerous field trips during the relocation of Thai ethnic communities in the districts of Da river reservoir to their new residence in Son La and Dien Bien provinces. The authors directly engaged in different surveys of major relocations in 2004, 2008 and 2014 with women and men from the displaced Thai communities previously living in Quynh Nhai and Thuan Chau districts (Son La province) and Tua Chua district (Dien Bien province) and currently moving to new houses in Moc Chau, Thuan Chau and Yen Chau districts (Son La province) and Tuan Giao district (Dien Bien province). The survey data was collected in ten years, allowing the research team to return to the study sites several times and replicate the qualitative surveys to assess the ex-ante and ex-post resettlement of selected resettled households.

In addition, the chapter benefited from a desk review of documents and policies of the Government of Vietnam related to resettlement and livelihood restoration for Son La hydropower project. The collected documents are arranged in chronological order and implementation issues of the resettlement plan by phases. They are policy changes and improvements, instead of building resettlement models in Moc Chau district (2003–2005), which were not suitable with Thai culture and expectations, the voluntary resettlement model, which was consulted with the displaced people, and the plan to restore livelihoods and preserve local cultural values in Thuan Chau district (2007–2008); and the consultations with affected Thai women with gender dimensions and participatory decision-making in post-resettlement livelihood restoration plan and indigenous cultural factors of Thai people. In 2004–2005, Dang made two field trips in Son La province to conduct in-depth interviews with 10 Thai women in It Ong commune of Muong La district (where they had to leave) and Tan Lap commune of Moc Chau district (where they had to resettle). In 2007, the research team (Dang and Pham Linh) had two meetings with district officials and 15 in-depth interviews with Thai women at the new resettlement site in the districts of Thuan Chau, Quynh Nhai and Muong La (Son La province). In 2014, Pham Van Loi and Pham Quang Linh received funds from Son La Department of Science and Technology to deliver qualitative surveys, including 10 in-depth interviews, two group discussions and field observations, and a 761-household survey on social impact assessment of resettlement in Son La hydropower project. Household survey data were analyzed by Dang and Pham Linh using SPSS.20 software (see Table 1).

Table 1 Demographic characteristics of the survey sample

		%	N (760)
Sex	Male	71.4	543
	Female	28.5	217
Education	Never been to school	9.2	70
	Primary	38.6	293
	Lower secondary school	37.2	283
	Higher secondary school	10.1	77
	College, university	4.9	27
Occupation	Agriculture	88.7	674
	Trade and service	2.1	16
	Paid employment	5.4	41
	Others	3.9	29
Marriage	Married	90.7	689
	Not married	5.1	39
	Widow, divorced separated	4.2	32
Type of resettlement	In-situ resettlement	40.9	264
	Displacement in resettlement site	59.1	381

Among the surveyed 645 resettled households, 264 households had in-situ resettlement and were relocated in their original commune, and 381 households moved to a new place of residence outside their district. Specifically, most of households in the districts, which were located in the reservoir center such as Muong La and Quynh Nhai, had in-situ resettlement, which means that these households resettled in the village or commune of their homeland. People from the districts far from the reservoir center such as Moc Chau and Mai Son had to move to new resettlement sites, in 50 km to 200 km away from their hometown.

3 Son La Hydropower Plant Resettlement Project Information

Son La hydropower plant is the biggest key project in Vietnam ever. In this important project, 92,301 people from 20,477 households in three provinces of Lai Chau, Dien Bien and Son La were relocated. The relocation and resettlement started in 2003 and lasted until 2013 with many social problems arising during the implementation. Among those affected by the Son La hydropower project, the Thai ethnic group, which is the largest ethnic population living in the floodplain area of the hydropower reservoir, accounts for 80%.

Currently, the population of Thai ethnic group in Vietnam is 1,550,423 people, ranking third in 54 ethnic groups. Thai people have a long history of residence and a unique culture in Son La province. This province is regarded as a cultural cradle of Thai people, especially the “black” Thai group. The affected Thai people accounted for more than 88% of total displaced households in Son La hydropower project.

The resettlement of people living in the floodplain area of the hydroelectric plant in Son La province took place in three stages:

Stage 1: Resettling people to clear land for the plant construction and testing the sample resettlement area in Tan Lap commune (Moc Chau district). This stage took place in 2003 and 2004 to resettle the people in It Ong and Muong Trai communes (Muong La district) and Liep Te commune (Thuan Chau district) and clear land for starting the plant construction by November 2005.

Stage 2: Resettling people living below the 140 m elevation and in the floodplain area for building a phase-1 cofferdam in December 2005.

Stage 3: Resettling people living people in the floodplain area in stage 3 in 2006–2010. This is the largest resettlement, which ended in April 2010. On May 15, 2010, the contractors started filling the reservoir. On November 5, 2010, the water level was 189.3 m to activate the power of Son La hydropower plant (see more Table 2).

Table 2 Resettlement progress in Son La hydropower project by 2010

Province	Total to be displaced population	Number of displaced people of which										Total displaced people by 2010
		Total	2003–2004	2005	2006	2007	2008	2009				
Son La	12,500	11,488	470	1,136	1,630	3,182	2,444	2,626	1,012			
Dien Bien	4,436	3,345	200	0	177	161	301	2,506	1,091			
Lai Chau	3,324	3,324	200	58	310	1,382	1,168	206	0			
Total	20,260	18,157	870	1,194	2,117	4,725	3,913	5,338	2,103			

Unit Household

Source Vietnamese Prime Minister's Decision, 2004, 2005, 2006



Thai rice fields of Na Pha, Villages, Muong Trai Commune, Muong La District before relocation and resettlement.

Photo by Dang, June 2007

Thai women catch crabs and snails in It Ong streams Muong La District before relocation and resettlement.

Photo by Dang, June 2007

Summary of Son La Hydropower resettlement in Son La province in each year is presented as follows:

The people in Son La province were resettled by four forms: Rural Resettlement, Urban Resettlement, Voluntary Resettlement and Resettlement under Decree 197. Rural Resettlement includes concentrated resettlement and mixed resettlement. Urban Resettlement consists only concentrated resettlement in Phieng Lanh town (Quynh Nhai district) and Chieng Sinh town (Son La city) (Vietnamese Prime Minister, 2004, 2013, 2014).

Under the Prime Minister's final decision in 2013, the resettlement plan for the people in Son La province was arranged as follows:

People were relocated in the form of concentrated resettlement in 54 sites, 237 locations, of which: rural concentrated resettlement 52 sites, 224 locations; urban concentrated resettlement 2 sites, 13 locations; mixed resettlement in 37 villages of 16 communes, and voluntary resettlement. A total of 12,584 households were relocated, of which: rural concentrated resettlement 9,862 households; urban concentrated resettlement 1,497 households; mixed resettlement 488 households; and voluntary resettlement 737 households. The total area of residential land and productive land is 37,207 ha, of which: residential land 580 ha (resettlement land 389 ha, reserve land 191 ha); farmland 17,900 ha; and forest land 18,726 ha. In the Son La hydropower project, all people subject to mixed resettlement are living in the rural area (Son La Province People's Committee, 2005, 2016; Vietnamese Primer Minister, 2013), (see Tables 3 and 4).

Thai displaced people account for 88% of the total displaced population. Therefore, they are most affected among the ethnic groups to be relocated for Son La hydropower project (see Table 5).

The survey 2014 shows that the life and income of the resettled Thai people have changed significantly after moving to a new place and especially when the project's

Table 3 Resettlement results in Son La province for Son La hydropower project

No	Resettlement form	Number of resettlement sites	Number of resettlement locations	Total number of households	of which	
					Rural	Urban
1	Rural concentrated resettlement	52	224	9,664	9,664	0
2	Rural mixed resettlement	16	37	488	488	0
3	Urban concentrated resettlement	2	13	1,497	0	1,497
4	Voluntary resettlement	–	–	737	737	0
5	Resettlement under Decree 197	–	–	198	198	0
Total		70	274	12,584	11,087	1,497

Source Vietnamese Prime Minister's Decision, 2013

Table 4 Summary of resettlement forms in Son La province

Resettlement forms	Number of households	
	Quantity	Percentage
Rural concentrated resettlement	9,664	76.80
Urban concentrated resettlement	1,317	10.47
Mixed resettlement (rural)	488	3.88
Voluntary resettlement	737	5.86
Resettlement under Decree 197	198	1.57
Total	12,584	100

Source Vietnamese Prime Minister's Decision, 2013

Table 5 Ethnic structure of people in floodplain area of Son La hydropower plant

Ethnic	Number of households	Number of people	Percentage (%)
Thai	6,699	42,225	87.95
Khang	307	1,751	3.85
La Ha	430	2,700	5.62
Kinh	280	1,230	2.56
Total	7,716	48,006	100

Source Institute of Agricultural Planning and Design, 1998:8

Table 6 Arable land of Thai people in the surveyed areas

Indicators	Prior to resettlement	After resettlement
Number of family members (person)	4.6	4.7
Number of main laborer (person)	2.4	2.6
<i>Ethnicity (%)</i>		
Thai	98.0	97.6
Others	2.0	2.4
<i>Average land area (m²/household)</i>		
Land for growing wet rice	2,000	293
Upland land growing rice	11,460	2,000
Land for growing vegetables and fruit trees	700	75,9
Forest land	18,470	2,566
Residential land	350	400
Garden	100	64

Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014

food supports finished in two years. The area of arable land of wet rice cultivation decreased by $2/3$ compared with the old place, and the area of upland cultivation also declined by half. Not to mention that the benefits from community forests are no longer the same. The life of the relocated Thai is actually more difficult (see Table 6).

For example, each household has an average of 2,000 m² of wet-rice field before relocation, and only 293 m² after relocation. Swidden land for upland paddy has also shrunk by 5–7 times. Land for crops and fruit trees before resettlement was 700 m² per household, and 72% of households no longer have this type of land after resettlement. Nonetheless, their residential land is larger, because Thai people have the cultural custom to build houses next to each other to visit and care in family and kinship relationships. In new resettlement sites, the housing plots are divided as planned, giving them a little larger residential land, but the family and community relationships are less tight for different reasons. First, households with family and kin relationships are not resettled in one place. Second, households with a close relationship do not build houses near each other because they have to draw lots to pick their residential land plots (see Table 7).

Table 7 Actual production land area of households before and after resettlement

Land category	Area	Prior to resettlement			After resettlement		
		In-situ resettlement (% hhs)	Displacement in resettlement site (% hhs)	N	In-situ resettlement (% hhs)	Displacement in resettlement site (% hhs)	N
Wet-rice land	***				*		
	< 1,000 m ²	36.3	20.4	164	90.2	83.0	523
	1,000 m ² –4,000 m ²	48.2	41.3	270	7.8	9.9	55
	4,000–8,000 m ²	4.9	17.9	78	0.8	2.5	11
	> 8,000 m ²	10.6	20.4	101	1.2	4.7	20
	Average	<i>100</i>	<i>100</i>	<i>609</i>	<i>100</i>	<i>100</i>	<i>609</i>
Swidden land	< 1,000 m ²	18.1	19.4	115	41.3	45.6	267
	1,000 m ² –4,000 m ²	11.5	9.3	63	14.0	9.6	69
	4,000–8,000 m ²	8.6	13.1	69	8.7	11.5	63
	> 8,000 m ²	61.7	58.2	363	36.0	33.3	209
	Average	<i>100</i>	<i>100</i>	<i>609</i>	<i>100</i>	<i>100</i>	<i>609</i>
Crop and fruit tree land	***				*		
	< 1,000 m ²	68.3	46.2	332	89.3	89.7	539
	1,000 m ² –4,000 m ²	7.8	13.4	67	4.1	2.2	18
	4,000–8,000 m ²	7.4	12.5	63	1.2	3.6	16
	> 8,000 m ²	16.5	27.9	140	5.3	4.5	29
Average	<i>100</i>	<i>100</i>	<i>602</i>	<i>100</i>	<i>100</i>	<i>602</i>	
Forest land	*				***		
	< 1,000 m ²	58.8	64.6	375	81.1	92.2	528
	1,000 m ² –4,000 m ²	8.6	5.6	41	4.1	4.2	25
	4,000–8,000 m ²	3.3	7.0	33	1.2	1.9	10

(continued)

Table 7 (continued)

Land category	Area	Prior to resettlement			After resettlement		
		In-situ resettlement (% hhs)	Displacement in resettlement site (% hhs)	N	In-situ resettlement (% hhs)	Displacement in resettlement site (% hhs)	N
	> 8,000 m ²	29.2	22.8	153	13.6	1.7	39
	Average	100	100	602	100	100	602
Residential land	*				***		
	< 300 m ²	51.7	46.5	290	97.9	94.4	572
	300 m ² –1,000 m ²	46.3	47.9	282	2.1	5.6	25
	> 1,000 m ²	2.1	5.6	25	0	0	0
		100	100	609	100	100	609
Gardening land	*						
	< 300 m ²	72.4	60.0	389	92.2	95.5	564
	300 m ² –1,000 m ²	18.1	23.9	129	5.8	3.1	25
	> 1,000 m ²	9.4	16.0	80	2.0	1.4	10
		100	100	599	100	100	599

Note Significance level: *** p < 0.001; ** p < 0.005; * p < 0.1

Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014



Burn cultivation along Da River in Nam Gion Commune, Muong La District. Photo by Dang, 2007



Building a new house in Muong Trai Commune. Photo by Dang, 2007

Households subject to involuntary resettlement have been significantly affected because they lost the stable livelihoods that they used to have in the original place of residence. Besides, resettled households were disconnected from their social relationships (e.g., family and community) and culture (e.g., festivals and traditional customs and practices associated with the forests and land which are the homeland of them and their ancestors). On the ground of the government's policy, Son La province decided to compensate each household by 400 m² of residential land, 19,000 m² of agricultural land and 13,000 m² of forest land. In fact, the households' agricultural

land, especially wet rice fields, which is the main livelihood of Thai households, has been largely downsized. In particular, the percentage of households with more than 1,000 m² of farmland dropped sharply after resettlement (from 63.8% prior to resettlement to only 8.4%) (Pham Quang Linh, 2016; Pham Van Loi, 2015).

The evaluation of compensation and resettlement policies in Son La hydropower project indicates that resettled people lost their important livelihoods from agriculture, especially land. The government made efforts to compensate affected households to enable them to attain an equivalent or better living standard than they had in the former residence. In reality, the land resource is limited because most agricultural land was allocated to legal owners. The local people do not have much wet rice land to give to their new neighbors. The land for growing vegetables and other crops as well as forest land are also limited because the available land is not productive. As a result, these mounting challenges have put resettled households in difficult situations.

4 Policy Effectiveness and Barriers on Livelihoods of Resettled Households

4.1 Policy Benefits

92.4% of displaced families benefited from the compensation, support and resettlement policies. The majority of them received relocation support (83.2%) and life stabilization support (42.3%). In addition, some households in the survey sample (7.6%) were not supported because they were local residents or teachers' families living in resettlement sites.

Nearly half of the households (49.5%) received one out of nine supports.¹ 27.9% of families got two supports, while a small percentage of resettled people were entitled to three or more supports (under 6.4%). There is no difference in the number of supports between the in-situ resettled households and the households relocated in resettlement sites (Table 8).

The analysis shows that 31.2% of households were better off and 22.2% of households had the same living standards, while nearly half of households were worse off (46.7%). In-situ resettled households had a better standard of living than those in resettlement sites, but the difference is insignificant ($p < 0.05$) (Fig. 1).

Sources of Livelihood

Nearly 90% of resettled households earn their income from agricultural production, so their livelihoods still rely on agriculture after resettlement. 59.1% of families shifted to other crops, mostly maize, while 56% of households changed their livestock structure, focusing more on cattle. Only 9.7% of families opened a local business.

¹ Nine forms of support include: relocation support, life stabilization support, business support, vocational training support, housing rental support, support for ethnic minorities, support for female-headed households, support for illiteracy eradication, and social support.

Table 8 Policy enjoyment by location and type of resettlement (%)

	No support	One support	Two supports	Three or more supports	N
<i>Location***</i>					
Mộc Châu	5.6	58.2	24.5	11.7	196
Mai Sơn	48.4	17.2	33.6	0.8	122
Mường La	5.0	57.0	29.0	9.0	200
Quỳnh Nhai	6.8	55.6	25.1	12.6	207
<i>Type of resettlement</i>					
In-situ resettlement	4.9	56.8	27.7	10.6	264
Displacement in resettlement sites	5.5	51.4	32.9	11.0	381

Note Significance level: *** $p < 0.001$

Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014

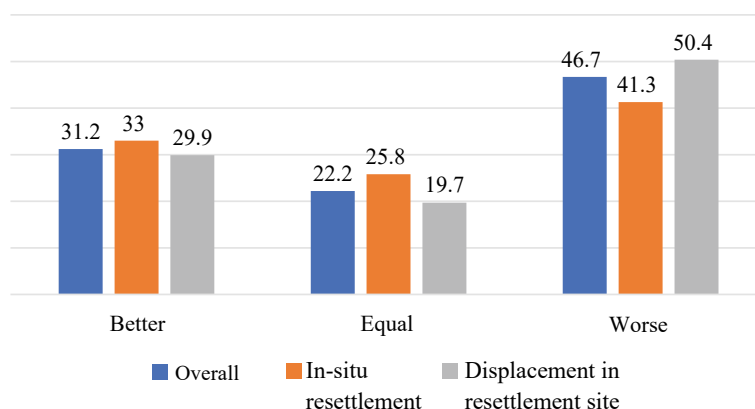


Fig. 1 Post-resettlement living standard by type of resettlement (%) (N = 645). (Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014)

Few families earn living from local handicraft, processing or tourism services (less than 3.7%).

Households mainly use the cash support to finance crops on their new land, and partially spend on family consumption, house construction/repair and live-stock production. Families in resettlement sites prioritized crops (52.8%) and house construction/repair (42.1%) more than in-situ resettled households (35.9% and 32.4%, respectively) (see Fig. 2).

The survey indicates that most of the resettled people use cash compensation and support to build houses, spend on family consumption and invest in crops and animal husbandry. After resettlement, they have almost no money left to fund businesses.

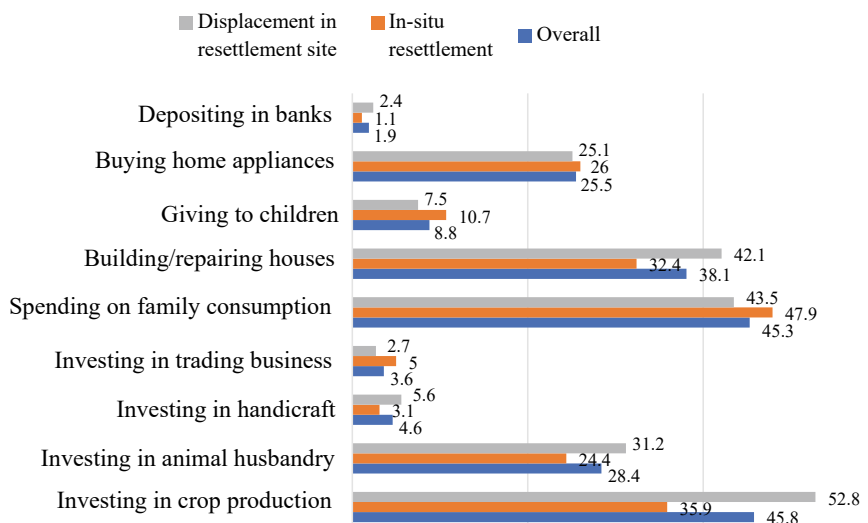


Fig. 2 Use of cash support by type of resettlement (%) (N = 645). (Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014)

4.2 Barriers to Livelihoods After Resettlement

To answer questions on policy evaluation opinions, people expressed more interest in occupation-related policies. Most respondents believe that cash support is not sufficient to start a new job or restore the existing livelihood after resettlement (58.7%). 32.6% interviewees believe that the irrigation system fails to meet the needs of agricultural development, while others think that they don't receive any vocational training for the current job (23.9%) (Table 9).

The field survey reveals that the government's policies on supports for resettled households have not been implemented as expected. The support packages on training to change production practices were effective when the infrastructure such as irrigation, transport and other necessary conditions (the inadequate training courses) in new resettlement sites is not sufficient for people to get new jobs or change their working customs.

Currently, the resettled households are challenged by lack of productive land, shortage of food and especially new knowledge to cultivate new crops in new climatic and soil conditions, which are different from their old hometown (see Table 10).

The policy to support resettled households has been prioritized by the government. However, in reality, households do not know how to use these production and credit supports effectively to finance their production and trading activities. The respondents suggested that the production and credit supports should be accompanied by appropriate occupational training and production models.

For example, there are rooms for improvement in selected policies such as credit and employment supports for resettled households, especially poor ethnic women.

Table 9 Opinions on barriers to livelihoods by gender of respondents (%)

	Male (N = 543)	Female (N = 217)	Overall (N = 760)
Don't receive any vocational training for the current job	21.2	30.8	23.9
Previous training is outdated to do the current job	10.6	11.5	10.9
Production practices impede rapid adaptation to the new occupational demands	7.6	7.7	7.6
Irrigation system does not meet the needs of agricultural development	27.3	46.2	32.6
Insufficient funds to start a new job or restore the existing livelihood	57.6	61.5	58.7
Difficult transport conditions	18.2	3.8	14.1

Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014

For example, the government only applied low interest rate credit to poor households. The field survey indicates that the credit policy is not suitable for both women who are able to restore production in a new place and for poor women who are eligible to preferential interest rates.

“There should be changes in loan maturity and value for household borrowers in the credit policy. The current policy allows households, who have to invest in completely new production, to borrow maximum VND 30 million, which is not enough to recover the production as before. Non-poor households like my family are not offered preferences, but the higher interest rates, so we do not dare to borrow. Meanwhile, poor Thai women who are eligible to preferential interest rates do not know how to apply for loans because they are illiterate, so they have to ask husbands or brothers (who are men) to process the borrowing procedures for them. Some do not know what to invest in production and do not dare to borrow either” (In-depth interview with Mrs. L.T.H., 45 years old, Thai ethnic group, Tan Lap commune, Moc Chau district, 2007).

“The land and forest allocation policy also has many shortcomings. There are many complex issues related to the boundaries between villages and communes. The allocation of land and forest caused different disputes and conflicts between resettled people and local residents. We directed the local residents to give land to the resettled people and the latter will plant what the former cultivate. But the new comers are unfamiliar with local climate and soil characteristics, so they usually failed and had no income” (FGD Leader group, Moc Chau District, 2007).

“The production support mechanism is inappropriate. For those who have to migrate to the new area, the allocated land is only a quarter of what they had in the old place. Therefore, there must be technical guidance for them to adapt to new production conditions. It takes a long time for the resettled people to restore their production. In addition, there is no investment or production support for local residents who handed over their land to the migrants, so they have faced a lot of

Table 10 Opinions on challenges of resettled households

	Gender		N = 760	Type of resettlement		N = 645
	Male (N = 543)	Female (N = 217)		In-situ resettlement (N = 264)	Displacement in resettlement sites (N = 381)	
Unsufficient arable land	87.7	86.1	558	88.3	85.8	558
New varieties of crop	***					
	23.7	27.8	173	11.7	34.8	163
New varieties of animal	9.6	9.6	67	6.4	12.4	64
Excess labor, no available jobs	**			***		
	54.9	49.7	368	51.6	58.4	346
Unsufficient wet rice land	***			*		
	75.4	74.3	525	38.4	61.6	560
Shortage of funds	*			**		
	62.5	64.7	446	59.1	66.5	408
Poor irrigation	**					
	51.4	46.5	350	45.8	51.2	315
Unfamiliarity with to new weather, climate, and cropping seasons	*			***		
	7.6	10.2	58	17.4	19.8	121
Inefficient uses of cash support	**			***		
	78.6	21.4	192	41.2	37.9	174
Lost traditional family and kin relationships	**			***		
	47.3	58.8	351	37.4	64.4	340

Note Significance level: *** p < 0.001; ** p < 0.005; * p < 0.1

Source Pham Van Loi, 2015 and Pham Quang Linh, 2016

difficulties. If the inadequate resettlement models are applied, people's livelihood cannot be developed because their production is not stable" (FGD Leader group, Quynh Nhai district, 2007).

As a large project with a massive number of affected people, of which the majority are ethnic minorities, the Son La hydropower project made some adjustments during

the course of implementation. The resettlement policies partly satisfy the immediate living needs of relocated people. Basically, Son La hydropower project supported the affected people to have a temporarily stable life. In addition to accommodation, it is necessary to have policies and financial mechanisms to create jobs (for households losing farmland or resettled people). It takes a long time to restore the lives and livelihoods of affected households (Pham Quang Hoan editor, 2012). However, the support policies to restore people's incomes have not been secured by long-term financial resources. The project is limited to compensation for land uses and directly damaged assets, mainly infrastructure, food relief during resettlement. Other indirect and intangible damages such as livelihoods, income, business location, fisheries, forest benefits, traditional cultural value, etc. have not been thoroughly considered in the resettlement plans.

For example, the project's livelihood restoration policy only compensates for losses from the crops in the old residence and pays a lump sum to support vocational training and job change. But in reality, there is no detailed guidance for the people, especially women. As a result, many Thai women have had a hard time after getting paid for resettlement and trying new production activities in new places.

"My family received compensation from the project and invested in livestock in the new place. But myself, as a woman, did not receive any technical guidance in building barns, taking care of livestock, particularly raising cattle and poultry. So I tinkered to find out how to make a garden to raise pigs and ducks. Then, the animals got sick and died. We lost all the money and did not know what to do to earn income" (In-depth interview with Mrs. Vi.T.C, 45 years old, Thai ethnic group, Muong Giang commune, Quynh Nhai district, 2007).

"I heard that there are households raising pigs according to the Biogas model, which is very successful, but it has not been replicated by the project to other households. In this Nghe Tong village, there are many Thai households had to tinker with pigeons and porcupines without advice from technical staff. So they all failed" (In-depth interview with Lo T. N., 38 years old, Nghe Tong village, Muong Giang commune, Quynh Nhai district, 2007).

While implementing the resettlement policy, there have been lots of arising problems from livelihood support for households. One single support policy was applied to the resettlement sites with different socio-economic conditions and different resettlement processes. Therefore, some resettled Thai households did not accept the livelihood restoration supports.

"Currently, there is a slowdown in the development of new resettlement sites. In many places with good conditions like Mai Son district, the migrants are poorer than the local people. Previously, the Thai village had many trees. In the new resettlement village, there are no trees at all. In Tan Lap commune of Moc Chau district, migrants want to return to their old villages because of the change in climate. Previously, they stayed in a place all the time and was topless. Now they have to wear sweaters all day long. Some households lived by rivers and earned their living from fishing. Now they lost the traditional livelihood and suddenly had to switch to tea cultivation. So they want to come back to where they lived before, because the new place is developing into an urban area. The most important thing is that the resettlement and livelihood

support policy is not appropriate, and the government's operating mechanism is not suitable" (Staff group discussion, Muong La district, 2007).

Thai ethnic women are familiar with farming activities, working hard and taking care of the family. Before the resettlement, they had a peaceful life, doing farming activities as wet rice cultivation, upland cultivation, animal husbandry and collection of forest products. Although living under self-sufficiency, their livelihood and income are quite stable. The natural conditions in the living environment favor them in a peaceful life, having food and raiment with close and cozy relationships in the community (Dang Thi Hoa, 2012). In addition to upland cultivation of rice, maize, cassava and legume, Thai women have a lot of experiences in growing intercropped vegetables; collecting forest products as food for their daily meals such as forest vegetables, bamboo shoots and mushrooms; catching mollusks and small animals as food for family meals such as snails, crabs, fish, shrimp, etc.

Because of the resettlement, the life of Thai women, which was self-contained with little impact, has changed dramatically. They do not earn any income, apart from the food subsidy provided by the state, and no longer access to natural benefits. They have to manage hard to feed the family. This is a considerable obstacle for Thai women resettled in the Son La hydroelectricity project. According to the results of in-depth interviews with Thai women in their new places, various respondents shared the view that the forest land is much smaller than the old place. Therefore, the gathering of forest products is challenging due to the rapid deterioration of forest. Previously, Thai women in Bia và Co Tran villages (Quynh Nhai district) went to the forest to pick various kinds of vegetables, bamboo shoots and mushrooms in the natural environment for daily meals. The stock of vegetables and mushrooms are considered by them to be plentiful and easy to find. At present, they still go to the forest in their new place, but get very little and not enough for daily meals. Ms. Lo Thi L. in Bia village (Quynh Nhai district) said: *"Before I and other Thai women went to the forest occasionally to pick vegetables, bamboo shoots and mushrooms, caught fishes and took moss from the stream for our meals. Now the streams are deeply flooded, the forest land was divided into small pieces and allocated to households for management, where they planted trees for economic purposes. Even the forests owned by some families are not rich in terms of vegetables and fruits as before. Currently, we rarely go to the forest, and shop in stores or markets instead because many things are available there and shopping is much more convenient. Everything is available but it costs a lot of money, not free from the natural environment like before resettlement"*.

While adapting to new living conditions, many Thai households had to alter their livelihoods. Previously, most of them earn their living from two-crop wet rice cultivation and upland cultivation. After resettlement, up to one-third of households shifted to cattle, poultry and aquaculture farming. Some households invested in small businesses. Particularly, 49.2% of households invested in farming, only 8% of households spent money on additional arable land; 30.38% of households invested in cattle, poultry and aquaculture. Most of the compensation were spent on household consumption, purchasing equipment, amenities, building houses and sharing with children.



Thai girls go to school in resettlement sites of Nam Gion commune. Photo by Dang, 2009.



Thai Women go to work as workers in the resettlement site of Phieng Lanh, Quynh Nhai. Photo by Pham Linh, 2014.

At the resettlement site in Phieng Lanh town (Quynh Nhai district), the choice of resettlement in the urban area means that they have only residential land and no more productive land. Then, many people have been looking for new forms of livelihood such as trading, motorbike taxi driving, photocopying, catering, etc. Most of women chose trading, meaning buying vegetables, fruits or food from farmers to sell in markets. Ms. Lo Thi V. informed that she earned VND 200,000–300,000 on a daily basis by doing this business. However, unlike the elderly, many young people are not interested in these jobs because they are ashamed. They prefer occupations which allow them less likely to appear on the streets, such as restaurant waiters or workers in faraway factories. Younger women, who are in good health conditions, usually chose working as workers (Field survey in a town of Quynh Nhai district, 2007).

Data from the survey (Table 11) shows that the main income sources of households from rice cultivation and collection of forest benefits before resettlement shifted to animal husbandry and working for hire after resettlement. These changes also reflect clearly the current situation of resettled Thai people in Son La hydropower plant.

The survey clearly presents the livelihoods of displaced Thai households in 2014 five districts/cities of Son La province after four years of resettlement. The ex-post resettlement issues with regard to livelihood are important challenges to central and provincial governments. The Prime Minister also distinctly indicated the concerns in his speech at the Son La Hydropower Plant Resettlement Review Conference in December 2016. According to the Prime Minister, the ethnic minorities made a tremendous contribution when they agreed to leave the hometown to clear land for the project. As evaluated by the Project Management Unit, the resettled people have earned more than VND 1.2 million/person/month in 2015, 3.92 times higher than their income before the resettlement. The poverty rate decreased by 2.56 times. Therefore, the Prime Minister questioned whether the results match the actual livelihoods of affected people. Obviously, there are rooms for improvements in the compensation policies because income-earning jobs have not been sufficiently created and the displaced people have not been attached to the new land. This key challenge poses a fundamental concern for leaders (Vietnamese Government, Son La province People's Committee, 2016; Vietnamese Prime Minister, 2013).

Table 11 Assessment of current household compared to ex-ante resettlement of Thai ethnic

Indicators	Male (N = 511)	Female (N = 189)	Total (N = 700)
<i>Household income**</i>			
<i>Much better</i>	6.3	4.2	5.7
<i>Better</i>	30.1	31.2	30.4
<i>Same</i>	25.2	24.3	25.0
<i>Worse</i>	18.0	21.7	19.0
<i>Much worse</i>	18.5	20.4	19.9
<i>Product conditions**</i>			
<i>Better</i>	5.7	4.8	5.4
<i>Same</i>	16.0	19.3	16.9
<i>Worse</i>	78.3	75.9	77.7
<i>Current obstacles*</i>			
<i>Lack of arable land</i>	75.4	74.3	75.1
<i>Lack of funds</i>	63.5	64.7	63.8
<i>Lack of water for farming</i>	51.4	46.5	50.1
<i>No training for new jobs</i>	21.2	30.8	23.9
<i>Failure to find a new job</i>	54.0	49.7	52.9
<i>Loss of traditional cultural activities of the community</i>	21.6	33.2	24.7

Unit %

Source Field survey results, Pham Van Loi and Pham Quang Linh, 2014

Note Significance level: **p < 0.001, *p < 0.01

As a cultural characteristic of Thai families, women usually take care of housework and farming activities. Men represent the households to communicate with the outside society and make decisions about all family affairs in relation to the community and the broader society. The issue of earnings and job seeking for the resettled Thai women is quite complicated. The ex-post resettlement jobs, such as animal husbandry and hired labor, are only suitable for men. Thai women have practically no job or income, and their lives depend substantially on the men in the family.

“For a long time, Thai women in the floodplain area of the hydropower plant as well as elsewhere are not only famous for weaving unique brocade fabrics, but also for their exquisite handicrafts made from fabric, such as dresses, shirts, blankets, pillows, cushions, curtains, towels, etc. Currently, these textile products are also used for daily life and partly for tourists. However, Thai women are less likely to weave brocade now. Many of them discarded the looms in the warehouse or in the garden. Villagers said that weaving is no longer important to them because they can easily buy these products from Thai people from other places in markets” (In-depth interviews with Mrs. Đ.T.N, Thai ethnic, Leader Cultural Department, Quynh Nhai District. 2014).

5 Some Remarks

Son La hydropower plant is a large project of Vietnam, which acquired land and resettled tens of thousands of households in Son La, Dien Bien, and Lai Chau provinces—hometown of Thai ethnic people. The Thai people had to sacrifice their homeland to develop the country.

The government introduced various policies to support, compensate and resettle the affected households. However, households have faced numerous difficulties and challenges after resettlement while restoring livelihoods and stabilizing their lives. The post-resettlement life was not equal to that in the hometown because they have lost important livelihoods from land, especially wet rice cultivation in river valleys.

The field survey in selected communes of Quynh Nhai and Moc Chau districts reveals the fact that a large number of resettled Thai do not have a job. They are not familiar with doing business, services and hiring labor after being resettled. As a result, they become even more vulnerable. New jobs such as working as hired labor or trading business are completely inappropriate with the inherent personality and skills of Thai traditional. Special, resettlement policies fail to accommodate the need of support in skill training for Thai women in particular and ethnic women in general in job conversion to adapt to new living conditions.

Findings from the study demonstrate the limitations of resettlement policies in hydroelectric projects, including Son La hydropower plant, livelihood recovery is challenging, especially for ethnic minority. Thai ethnic have become more disadvantaged because they lived in a close ethnic community and had limited social knowledge, causing their difficulties in adapting to the new community and new social relationships. On the other hand, they have to abandon existing knowledge in farming and collecting natural benefits from rivers, streams and forests to feed the daily meals of their families, or turn their back on experiences of using medicinal plants in health care. Moving to a new place, Thai ethnic must adapt to the new cultural relationships of the community and the new landscape environment. They are exposed to a completely new life, even though they are not fully equipped and supported with new social communication skills. The existing resettlement policies only meet a very small part of demand from the livelihoods and daily life of Thai people. Therefore, it is essential to have more adequate researches and assessments from the perspective of gender to measure the impacts of resettlement on livelihood stability and development opportunities for ethnic minority in hydroelectric projects in general and Son La hydropower plant in particular.

Lessons learned from resettlement policies in Son La hydropower plant have been taken by the government to apply to Trung Son hydropower plant, which is another large project in the Central Region of Vietnam implemented in ten years later. In addition to land and livelihood supports for resettled households, resettlement policies in Trung Son hydropower project have been mainstreamed with gender under the support of the World Bank in Vietnam to achieve the sustainable development.

There is a stronger focus on training in crop production, animal husbandry and forestry development for households, especially women. The household economic development model based on natural capital, human capital, social capital and gender mainstreaming has been adopted.

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