

Roles of Culture in Rural Resettlements in Laos:
A Case Study of Nongxong Village

by

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SUMMARY

In Laos, two major types of rural resettlements have been implemented. One is associated with the state policy and the other is associated especially with the hydropower development. In 1989, the 1st National Conference on the Forestry of Laos adopted a government plan to implement the permanent resettlement of a quarter of the country's population by the year 2000. The resettlement policy initiative was formed to achieve five goals: (1) access and service delivery, (2) opium eradication, (3) reduction of security concerns, (4) eradication of swidden farming, and (5) cultural integration and nation-building. To realize these goals, three resettlement instruments were used: focal sites, village consolidation, and land and forest allocation. Meanwhile, in the 1980s, the hydropower development in Laos started to become active when the World Bank, Asian Development Bank, United Nations Development Program, and Western countries advised the Government of Laos to develop its hydropower resources to fuel its economic development of Laos (International River, 1998). Since then, the Government of Laos has prioritised the hydropower development and welcomed foreign investments.

Some previous studies show that rural resettlements in Laos generate social problems, destroy people's livelihoods, and would bring cultural conflicts. It should be recognized that the common problems of impoverishment or failure of (involuntary) resettlements associated with the hydropower development, still being repeated now in developing countries, should be minimized or should not happen at all in Laos. Giving the fact that Laos is a multiethnic country,

more proper planning and implementation of resettlements from the viewpoint of project-affected people's culture should be taken into consideration.

This Ph.D. dissertation aims to clarify the role of culture in the context of rural resettlement implementations in Laos with the following three sub-objectives: (1) to identify cultural elements adopted in the practical implementation of resettlement processes and the sense of value behind such cultural elements, (2) to observe the current status of livelihood adaptations among people who are affected by hydropower development projects, and (3) to determine the characteristics of relationship between culture and the social adaptation of people who have been relocated to the resettlement site.

This Ph.D. dissertation has seven chapters. In Chapter I, the author describes problem statements in the context of resettlement implementations in Laos and then proposes research objectives for this Ph.D. dissertation. In Chapter II, the author reviews literature related to the proposed Ph.D. dissertation title e.g. "Roles of Culture in Rural Resettlement in Laos". The literature review comprises (1) hydropower development and involuntary resettlement experiences from three views - global view, regional view, and national view; (2) involuntary resettlement improvement guidelines proposed by well-known scholars and international organizations, and the *Resettlement with Development* concept which is a must for all stakeholders to view (involuntary) resettlements as an opportunity for development; and (3) involuntary resettlement policies of the World Bank, Asian Development Bank, and the Government of Laos. In Chapter III, the author describes the scope of this Ph.D. dissertation,

adopted theories, study sites, sampling, and data collections and analyses.

In Chapter IV (responding to sub-objective 1), it is explained how and what culture of project-affected people plays an important role in rural resettlement processes. The results show that the cultural elements such as symbols, heroes, rituals, and beliefs have played a practical and significant role in the consensus formation during the consultation & planning process and the physical relocation process. However, different ethnic groups place different levels of importance on symbols, rituals, and beliefs, while they place the same level of importance on heroes.

In Chapter V (responding to sub-objective 2), it is examined how resettlers of different ethnic groups respond to each other and to their host villagers in the context of their lives at the resettlement site. The Phong ethnic group has the highest physical adaptation level (93%) and the natural adaptation level (78%) but the lowest human adaptation level (68%); among the three ethnic groups, the Pao ethnic group has the highest social adaptation level (21%) and the human adaptation level (82%) but the lowest physical adaptation level (84%) and the natural adaptation level (48%); and the Hmong ethnic group has the lowest social adaptation level (12%), while their physical adaptation (85%), the natural adaptation (53%), and the human adaptation (77%) levels are the second highest among the three ethnic groups. Among the three ethnic groups, there are statistically significant differences in three aspects of adaptations: social, physical, and natural adaptations. In the livelihood adaptation, physical and human adaptations are not difficult for the three ethnic group members to achieve. Results show that because they

have high and similar levels of those two adaptations among those three ethnic groups. However, for all three ethnic groups, the social adaptation is the most difficult aspect for the three ethnic group members to adjust to when entering a new environment of resettlement site as it shows that people have a low adaptation level with the less difference among these three ethnic groups.

In Chapter VI (responding to sub-objective 3), the result shows that the culture of resettlers prohibits them from raising their level of social adaptation. It also shows that two categories of culture - universalism and security - limit the level to which resettlers can enhance their social adaptation. In contrast, the other two categories of culture-benevolence and conformity promote the formation of friendships in the resettlement site community. Based on these results, it can be concluded that people relocated to a new resettlement site can enhance their social adaptation through the importance they place on values such as benevolence and conformity.

Chapter VII summarizes the main findings from Chapter IV, Chapter V, and Chapter VI with an explanation of the role of culture in rural resettlement project implementations in Laos. It then describes the academic contributions of this Ph.D. dissertation and proposes further research into some remaining issues. After that, it discusses policy implications.

Culture helps in facilitating planning and consultations (process I) and physical relocation (process II). It reduced the psychological damage to project-affected people when the compensation they received for displacement took their culture into account. For instance,

house layout (a cultural element of symbols) options that are designed to cater to different ethnic groups. In process III (livelihood restoration), values (the deepest level of culture) influence project-affected people's livelihood adaptation in various ways, particularly their social adaptation.

By paying more attention to the sociocultural consideration of project-affected people in the planning process, conflicts and negative impacts to project-affected people will be minimized. Conflicts over dams have been heightened in the last two decades because of the social and environmental impacts of dams that were disregarded in the planning process (World Commission on Dams, 2000).

The results of this Ph.D. dissertation suggest that all stakeholders must be more aware not only of the social, economic, and environment, but also the cultural impact of (large) dam constructions causing involuntary resettlements. The results from Chapter IV suggest that it should be recognized that in some particular rural communities of Laos a certain belief or tradition of project-affected people is directly associated with the effective implementation of the resettlement project, and plays an important role. By comprehending project-affected people's culture, we can predict the impact on them. In other words, we can mitigate the negative impact on them, and prepare and implement the resettlement properly if we recognize their culture.

As Cernea and McDowell (2000) argue in their impoverishment, risks, and reconstruction model that to mitigate the negative impact of project-induced resettlement on

project-affected people, the concept of reversing impoverishment, risks, and reconstruction model of the *self-destroying prophecy* is a very important safeguarding tool for all stakeholders.

Compared to the existing literature on *rural resettlement in Laos*, this Ph.D. dissertation is unique for two reasons: (1) in terms of methodology and (2) supplementing previous studies. In Chapter VI, it applies statistical analysis in order to provide a clearer picture of the characteristics of relationships or forms of relationships between people's culture and their livelihood adaptation for a particular aspect, e.g. social adaptation. In Chapter IV, the methodology on measuring culture enriches the body of knowledge on how culture is important in the context of rural resettlements, particularly in the processes of planning & consultation and physical relocation. This finding supplements two previous studies: 1) Alton and Rattanaovong (2004) on how heroes are important from the viewpoint of development intervention; and 2) Cernea and McDowell (2000) on how culture is important from the viewpoint of mitigating risk and impoverishment to project-affected people and ensuring livelihood reconstruction for them.

Compared to the existing *literature on involuntary resettlement worldwide*, this Ph.D. dissertation is unique for one reason. The results from this Ph.D. dissertation supplement the impoverishment, risks, and reconstruction model from the viewpoint of the culture of project-affected people. In other words, the results suggest that from the viewpoint of culture, cultural risks could be identified from the eight common risks given by Cernea and McDowell (2000).

Overall, this Ph.D. dissertation can contribute to improving the policy on involuntary

resettlement and improving rural resettlement implementation in Laos, where the culture is diversified, given the fact that this Ph.D. dissertation is systematic study on the whole process of rural resettlement and the culture to comprehend the “Roles of Culture in Rural Resettlement in Laos” in a practical and detailed manner.

The concept of Resettlement with Development does not exist in Laos’s national policy. Detailed procedures and comprehensive guidelines are not currently available in the content of the relevant national policy (No. 561/CPI) of Laos. However, it is actually in current practice through e.g. the livelihood restoration/development plans of the Resettlement Action Plan of the Nam Theun 2 and Theun Hinboun Expansion Projects. It is important that the role of culture discussed above must be taken into consideration when the Government of Laos as well as Asian Development Bank and the World Bank want to amend the necessary involuntary resettlement policy for Laos.

Moreover, it should be noted that the current national policy No. 561/CPI of Laos is mainly based on the policies of the World Bank, Asian Development Bank, and lessons learned from NT 2 project experiences. Therefore, it is necessary for the policy makers to consider other cases of resettlement implementation in Laos. For instance, the case study in this Ph.D. dissertation should be reviewed and learned, and to comprehend how projects involve project-affected people in resettlement processes through their own culture, especially in process I and process II (indicating that Article 2: *Project-affected people* and Article 4: *Consultation* of Laos’ National Policy No. 561/CPI are being implemented properly).

Nonetheless, the national policy No. 561/CPI of Laos should be improved with the strong will of the Government of Laos to fill the gap of differences in perceiving involuntary resettlement that the World Bank perceives. The content of the Government of Laos's policy on involuntary resettlement shows that economic improvement or livelihood restoration of project-affected people gains much attention. The imbalance of this policy calls for reconsideration of its amendment, especially from the view point of social rehabilitation, policy on gender, and development of Asian Development Bank involuntary resettlement. Moreover, recognizing the role of culture in (involuntary) resettlement projects, such amendment should establish a suitable balance between sociocultural, economic, and environmental sustainability.

From the experiences worldwide, contents of policy on involuntary resettlement by all stakeholders (the World Bank, International Monetary Fund, Asian Development Bank, Organization for Economic Cooperation and Development, etc.) are improved with concerns on social, economic, and environmental aspects and become a requirement for borrower countries to follow. But still results from resettlement implementations are criticized. In this regard, it enforces all project owners to cooperate, follow regulations and rules, and share their responsibilities when implementing any resettlement projects.

Resettlement policies of both lenders (e.g. the World Bank, Asian Development Bank, International Monetary Fund, etc.) and borrower countries are sensible but implementations do not always guarantee the aims of those policies. Therefore, considering all angles and perceiving the resettlement of the Government of Laos call for policy modifications. In other

words, viewing (involuntary) resettlement from all angles is a must. Since 1989, this “angle of livelihood adaptation” is lacking. When the Government of Laos implements the resettlement and initially aims to achieve five objectives (access and service delivery, opium eradication, reduction of security concerns, eradication of widen farming, and cultural integration and national building), the angle of livelihood adaptation is overlooked.

Based on results from this Ph.D. research, it shows that the angle of livelihood adaptation of project-affected people should be considered. Inclusion of this angle into policy on (involuntary) resettlement of Laos would help in delivering and securing sociocultural and economic benefits of the state development to both present project-affected people and coming generations.

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
BP	Bank Procedure
EGAT	Electricity Generating Authority of Thailand
GoL	Government of Laos
GMS	Great Mekong Subregion
IRR	Impoverishment, Risks, and Reconstruction
NT2	Nam Theun 2 Power Project
NTFPs	Non-Timber Forest Products
OECD	Organization for Economic Co-operation and Development
OP	Operation Policy
PAP	Project-Affected People
THPC	Theun-Hinboun Power Company
THXP	Theun-Hinboun Expansion Project

CHAPTER I INTRODUCTION

1.1 Problem statements

Rural resettlements in Laos are problematic when especially they involve people from different ethnic groups with different livelihoods and cultures being compulsory to relocate into a single village. It is reported that the poorly implemented resettlement is one of many reasons causing ten thousands of vulnerable people died and suffered in Laos (Baird & Shoemaker, 2007). It would cause psychological damages with the fact that people are forced to change their entire livelihood and leave their familiar and beloved birthplaces. The first year after resettlement is generally characterised by a lowering living standards of those resettling and of the host villagers because resources are scarce (Daviau, 2006). In addition, in some areas, resettlers face with loss of assets, debt accumulation, rice deficits, and intensified contention for land. As a result, food insecurity is a common problem especially for the first three years after being relocated. Previous studies showed that poor implementation of resettlements increased poverty and death rate (Asian Development Bank, 2001; Baird & Shoemaker, 2005; Chamberlain, 2007; Daviau, 2006; Delang & Toro, 2011; European Union, 2011; Evrard & Goudineau, 2004; Lyttleton, Cohen, Rattaniavong, Thongkhamhane, & Sisaengrat, 2004). It is argued that the resettlement is a double process: deterritorialization and reterritorialization. Deterritorialization refers to leaving territory and changing whole traditional way of life; while reterritorialization refers to setting in a new environment and accepting and integrating into the culture (Evrard & Goudineau, 2004).

Giving the fact that Laos is a multiethnic country, more proper planning and implementation of resettlements should be taken into consideration. Current implementations

of rural resettlements now are not only making people's livelihood harder, but also such inadequate livelihoods would create ethnic conflicts and bring insecurity into the country.

Worldwide, previous studies show that most resettlements made the majority of resettlers' livelihood worsening economically. Nevertheless, it should be noted that involuntary resettlements should not be allowed to create eight common impoverishments in Laos as it does in elsewhere around the world (eight common impoverishments: landlessness, joblessness, homelessness, food insecurity, increased morbidity, marginalization, loss of access to common property resources, and community disarticulation).

In a multiethnic country with high potential for hydropower development like Laos, rural resettlements will continue to bring people with different cultures and livelihoods to live together in new environments because the Government of Laos (GoL) is boosting its economy through exploiting hydropower resources for the state development. If the GoL is unable to manage rural resettlements properly, rural people will be impoverished and damaged socially and economically. Understanding what people's culture is like and how it is important in the context of rural resettlement implementation processes is necessary and it is one of the strategies to minimize negative impacts to project-affected people (PAP).

The immediately few years after the physical relocation are a critical stage. Resettlers need to organize and manage their farms, find economic activities, interact to new neighbors, and adjust to new government administration (Scudder, 2012; European Union, 2011). Therefore, it is important to understand resettlers' adaptation to new living conditions in such initial years. The World Bank also recognized that developing mining and hydropower sectors in a sound manner from environmental and social as well as ethnical and financial perspectives would be a major challenge. Laos faces other challenges as it continues to push forward a market-oriented system. Those challenges include the limited capacity in the central

and provincial governments. A proper policy matches with the current situation of Laos would supplement the limited capacity in the central and provincial level, as well as all the stakeholders to plan and implement rural resettlement projects in Laos.

1.2 Research objectives

A proper policy would help the GoL to handle those challenges. Therefore, the main objectives of this Ph.D. dissertation are (1) to clarify the roles of culture and rural resettlements in Laos and (2) to discuss on policy implications with these following sub-objectives of clarification:

- cultural elements adopted in the implementation processes of resettlement and sense of value behind these cultural elements.
- current status of livelihood adaptation among PAP.
- characteristics of the relationship between culture and the social adaptation of people relocated to the resettlement site.

1.3 Organization of chapters

This Ph.D. dissertation has seven chapters. In Chapter I, the author describes problems of resettlement implementations in Laos and then proposes research objectives for this Ph.D. dissertation. In Chapter II, the author reviews literature related to the proposed Ph.D. dissertation title e.g. “Roles of Culture in Rural Resettlement in Laos”. This literature comprises (1) hydropower development and involuntary resettlement experiences from three views - global view, regional view, and national view; (2) involuntary resettlement improvement guidelines proposed by well-known scholars and international organizations, and the *Resettlement with Development* (RwD) concept which is a must for all stakeholders to

view (involuntary) resettlements as an opportunity for development; and (3) involuntary resettlement policies of the GoL, Asian Development Bank, and the World Bank. In Chapter III, the author describes the scope of this Ph.D. dissertation, adopted theories, study sites, and sampling and data collections. In Chapter IV, it is explained how and what culture of PAP plays an important role in rural resettlement processes. In Chapter V, it is examined how resettlers of different ethnic groups respond to each other and to their host villagers in the context of their lives at resettlement sites. In Chapter VI, it examines cultural influences to social adaptation of PAP. Finally, Chapter VII summarizes main findings from Chapter IV, Chapter V, and Chapter VI with an explanation of the role of culture in rural resettlement project implementations in Laos. It then describes the academic contribution of this Ph.D. dissertation and proposes further research into some remaining issues. After that, it discusses policy implications.

CHAPTER II LITERATURE REVIEWS

2.1 Hydropower development and involuntary resettlement experiences

2.1.1 Global view

Large dams emerged as one of the most significant and visible tools for the management of water resources during the 20th century. They were promoted as an important way to meet water and energy needs and support economic development. According to the World Commission on Dams, more than 45,000 large dams worldwide have played an important role in helping communities and economies harness water resources for food production, energy generation, flood control, and domestic use. It is estimated that some 30-40% of irrigated land worldwide now relies on dams which generates 19% of world electricity (World Commission on Dams, 2000).

According to World Commission on Dams (2000), hydropower is promoted as a comparative clean with low cost, renewable source of energy that relies on proven technology. In some countries where fossil fuel resources are limited, hydropower is especially attractive to governments (World Commission on Dams, 2000). Over 45,000 large dams have been built worldwide and nearly half the world's rivers are obstructed by those large dams (Duflo & Pande, 2007). The International Commission on Large Dams defines a large dam with a height of 15m or more from the foundation. In addition, if dams are between 5-15m high and have a reservoir volume of more than three million m³, they are also classified as large dams (World Commission on Dams, 2000).

Large dams displaced approximately 40 to 80 million people (McDonald, Webber, & Yuefang, 2008). According to World Commission on Dams' report (2000), over 45 million

people have been resettled since 1945 with the expansion of cities as the greatest cause of displacement (Webber & McDonald, 2004). And each year, approximately ten million people are displaced by development scheme worldwide (McDonald, Webber, & Yuefang, 2008).

Table 2-1: Top-ten dam-building countries

Rank	Country	Numbers
1	United States of America	9,265
2	China*	5,191
3	India**	5,101
4	Japan	3,076
5	Canada	1,166
6	South Africa	1,114
7	Spain	987
8	Turkey	741
9	Brazil***	684
10	France	622

Source: International Commission on Large Dams

Retrieved January 21, 2014, from

http://www.icold-cigb.org/GB/World_register/general_synthesis.asp?IDA=206

Note: *: China displaces the 1st largest number of people.

***: India displaces the 2nd largest number of people.

***: Brazil displaces the 3rd largest number of people.

It is cited that the world's largest recipient of the World Bank in the 1990s is China (Webber & McDonald, 2004). Since 1945, reservoir construction projects in China displaced approximately 12 million people (Webber & McDonald, 2004). In India, approximately 15 million people were displaced (Webber & McDonald, 2004). Still currently, China and India displace the largest number of people respectively (Table 2-1).

The full cost of large dams began to emerge as a serious public concern (World Commission on Dams, 2000). Involuntary resettlement is defined as development project results in unavoidable resettlement losses. People affected have no option but to rebuild their lives, incomes, and asset bases elsewhere (Asian Development Bank, 1998).

Involuntary resettlement can be categorized in three major types: (1) development-induced displacement and resettlement (or people displaced by infrastructure

projects), (2) disaster-induced displacement (or people displaced by natural disaster), and (3) conflict-induced displacement (or people displaced by political conflicts) (Navarra, Niehof, Vaart, Horst, & Suliyanto, 2012; Li Heming, Waley, & Rees, 2001). This Ph.D. dissertation focuses mainly on (1) development-induced resettlement particularly by dam constructions and its impacts on people. It is recognized that the adverse social impacts of development-induced compulsory resettlement continue to be unacceptable. It is cited by Scudder (2012) that such impacts include reducing the potential and purpose of what are supposed to be development projects by creating new poverty among project-affected people (PAP)

Based on Tilt, Braun, and He (2009), common social impacts of large dam projects can be characterized into (1) migration and resettlement of people near dam sites; (2) changes in the rural economy and employment structure; (3) effects on infrastructure and housing; (4) impacts on non-material or cultural aspects of life; and (5) impacts on community health and gender relations (Tilt, Braun, & He, 2009).

In the past, side-effects of some development projects destroy lifestyle and living standards of the poor people in local communities. These facts make project developers view that population displacement or involuntary resettlement is a painful obstacle (Gutman, 1994).

Scudder and Colson (1982) view displacement or involuntary resettlement as a cause of several dimensional stress during the initial stage of resettlement such as physiological, psychological, and sociocultural stress (Gutman, 1994). In addition, Gutman (1994) argues that the outcome of resettlement depends on relationship between resettlers and host population. This relation is influenced by cultural affinities and differences when PAP are resettled to a populated area.

Involuntary resettlement is one of many major issues in large development projects

(Gutman, 1994). Resettlement often means a more densely settled population that must survive on a reduced resource base. From displaced people's perspective, forced resettlement is always a disaster because lifetimes of investment and generations of achievement are swept away. By destroying productive assets and dismantling production systems, resettlement creates a high risk of chronic impoverishment (Partridge, 1989). Resettlement could make changes in individual capacities to produce goods and in social capacities. It also could influence material well-being, access to cultural artifacts, physical health, psychological health, and changes in emotions toward housing and environment (Webber & McDonald, 2004).

In summary, social fabric and productive assets of local communities and people are impoverished and destroyed by improper implementation of involuntary resettlements (McDonald, Webber, & Yuefang, 2008).

2.1.2 Regional view

In developing countries, irrigation and large dams for hydropower production is introduced and promoted for state development and poverty reduction. This notion has led developing countries and international agencies such as the World Bank to undertake major investments in dam construction (Duflo & Pande, 2007). In 2013, the World Bank lending to borrowers in East Asia and Pacific in energy and mining sectors is US\$ 736 million as the 4th largest shares among sectors (Table 2-2).

In Southeast Asia, large dam constructions affected people from ethnic minorities. These people tend to be concentrated in mountainous areas where dams are built (Bui & Schreinemachers, 2011). More specifically, the Great Mekong Subregion (GMS) is recently active in hydropower development. GMS countries include Cambodia, China, Laos, Myanmar, Thailand, and Vietnam.

Table 2-2: World Bank lending to borrowers in East Asia and Pacific by sector

Sector	Fiscal Year					
	2008	2009	2010	2011	2012	2013
Agriculture, Fishing, and Forestry	113	201	738	325	395	185
Education	234	941	1,127	164	249	579
Energy and Mining	666	946	643	1,695	508	736 ^{4th}
Finance	263	1,009	166	32	537	313
Health and Other Social Services	213	581	778	290	391	542
Industry and Trade	190	754	147	246	90	271
Information and Communications	10	11	14	28	53	35
Public Administration, Law, and Justice	889	1,474	1,908	2,221	1,988	1,428 ^{1st}
Transportation	1,532	1,205	1,155	1,942	1,070	1,098 ^{2nd}
Water, Sanitation, and Flood Protection	359	1,030	841	1,056	1,348	1,061 ^{3rd}

Source: World Bank, 2013

Hydropower development in the Mekong basin has been under consideration since the 1950s. But very little has been realized due to some factors including conflicts, a lack of finance, political risk, difficult geography, and environmental concern (Matthews, 2012).

Table 2-3: Large hydropower dams by country

Country	Currently in use	New dams by development stage		
		Under construction	Planning	Feasibility
Cambodia	1	2	5	10
Laos	8	6	19	43
Myanmar	29	29	14	NA
Thailand	18	0	0	0
Vietnam	13	21	14	NA
Total	69	58	52	NA

Source: Bui & Schreinemachers, 2011

Note: Large hydropower dam in this Table 2-3 is defined as having a capacity of > 10 MW.

NA= Not available

It is reported that the total estimated hydropower potential in the Mekong basin is 53,000 megawatt. Currently, only 17 hydropower schemes on tributary rivers have been completed, totaling more than 1,600 megawatt or 5% of the total potential (Orr, Pittock, Chapagain, & Dumaresq, 2012). In Cambodia, Laos, Myanmar, and Vietnam, 58 large dams

are currently under constructions and further 52 dams in the planning phase (Bui, Schreinemachers, & Berger, 2013).

Table 2-3 shows the overview of hydropower development by country. The data (Under construction and Planning stages) tell that Myanmar, Vietnam, and Laos are active in hydropower development respectively. In contrast, Thailand has no future domestic hydropower development.

① **Cambodia**

Cambodia, like Laos and Myanmar, currently has very little installed electrical generation capacity. Cambodia has a potential for 65 hydropower projects that could be combined capacity of 5,300 to 8,315 megawatt. Total potential energy generation could be as high as 41,400 Gigawatt hour/year. Greacen and Palettu (2007) cited that based on Asian Development Bank' study, 16 candidate hydroelectric sites totaling 2074 megawatt in Cambodia has identified.

② **Myanmar**

In Myanmar, still very little hydropower has actually been developed. Chinese and Japanese bilateral loan, private investors from China, Thailand, and Japan largely invest in hydropower in Myanmar (Greacen & Palettu, 2007). Like the Government of Laos (GoL), almost of Myanmar's planned hydropower capacity is to primary supply to demand in Thailand and secondary to Vietnam.

③ **Thailand**

The history of Thailand's energy can be tracked back in the early 1960s. Nowadays, most of Thailand's hydropower potential is almost over. Currently, it is difficult for Thailand to develop new hydropower project. In Thailand, new hydropower projects are controversial. So, Thailand faces difficulties to develop new dams. Therefore, Electricity Generating

Authority of Thailand (EGAT) depends on natural gas and coal covering for 70% and 12% of installed capacity respectively. By the year 2015, Thai government demands more than double (from 19,326 megawatt in 2004 to 40,978 megawatt) (Greacen & Palettu, 2007). With this estimation, Thai government becomes eager to invest hydropower development projects in neighboring countries, like in Laos, to realize their electricity needs.

④ **Vietnam**

Hydropower in Vietnam is mostly produced to meet with domestic demand. However, Vietnam keep develop large hydropower projects rapidly. From 2002-2004, Vietnam constructed 17 medium and large hydropower plants with total capacity of 2,952 megawatt, plus about 20 small hydropower plants with total capacity of 500 megawatt. Nevertheless, Vietnam is considering buying more hydropower from Laos and China.

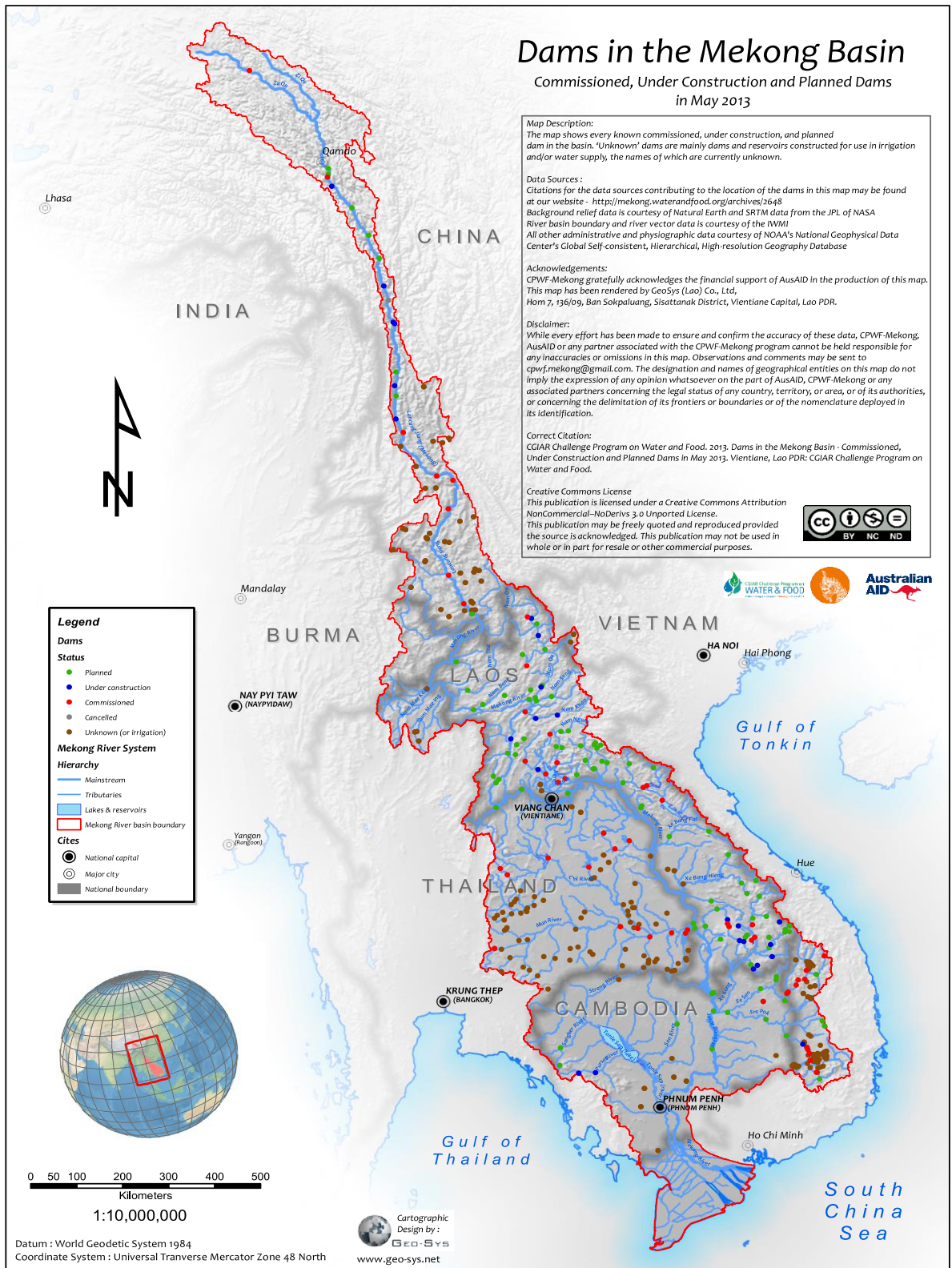


Figure 2-1: Hydropower dam with development stages along Mekong basin
Source: http://mekong.waterandfood.org/wp-content/uploads/Draft_A4.pdf (accessed March 30, 14)

2.1.3 National view: Laos

The scale of the hydropower boom in Southeast Asia is perhaps best observed in Laos (Matthews, 2012). Laos has a substantial hydropower potential. The GoL and project developers hope to gain huge revenue from exporting hydropower from Laos to neighboring countries. The term “Battery of Asia” is the moniker referring to this hope by the former Thai Prime Minister Thaksin Shinawatra. In 2003, EGAT signed a contract to buy almost electricity (995 megawatt) and guarantee a market for Laos’ electricity planted to produce 1,060 megawatt project. In 2005, the World Bank provided grants and a partial loan guarantee up to US\$ 270 million for Nam Thuen 2 Power project (NT2). NT2 is built by a group of investors led by Electricite de France with 35% share, EGAT with 25% share, the Italy-Thai Development Company with 15% share, and the GoL with 25% share (Greacen & Palettu, 2007).

Laos is a linguistically and ethnically the most diverse country in mainland Southeast Asia. The latest official classification in 2005 categorized the Lao population, as being composed of 49 ethnic groups divided into four ethno-linguistic families: Lao-Tai (eight ethnic groups), Mon-Khmer (32 ethnic groups), Sino-Tibetan (seven ethnic groups), and Hmong-Mien (two ethnic groups) (Laos, 2005b). In 2005, the Lao-Tai who arrived before the 13th century constituted 65% of the population, Mon-Khmer who arrived around the 15th century constituted 23%, Sino-Tibetan who arrived in the late 18th century constituted 3%, and Hmong-Mien who arrived in the 19th and early 20th centuries constituted 8% (Chazée, 1999; Laos, 2005b). The individual ethnic groups have different languages, cultures, and traditions. They often live in small and scattered settlements, and heavily depend on forest and land for their livelihoods which include shifting cultivation, non-timber forest products (NTFPs) collecting (Baird & Shoemaker, 2007).

According to Asian Development Bank (2012), about 66% of the Laos's population resided in rural areas as of 2011. It is acknowledged that the livelihood of rural people in Laos relies on subsistence farming and depends on land and forest (Savada, 1995). Forest provides important resources for rural people's livelihood like fire wood and wood for making houses. Due to natural disasters, chronic rice shortage in upland areas generally average 3-4 months but can last as long as eight months; in the lowland case, the average 1-3 months and vary from year to year depending on the occurrence of natural disasters, particularly droughts and floods (Schiller, Chanphengxay, Linqvist, & Apparao, 2006).

The GoL has been trying to involve people in the development of the state through resettlements. Relocating scattered remote communities into an accessible area would make the GoL easier provide development services such as sanitation, education, and healthcare, as well as better infrastructure like roads, irrigation, and electricity to provide people with better access to market. In a long-term consequence, minority ethnic people are encouraged to adopt the dominant ethnic Lao livelihood.

Up to date, two major types of rural resettlement have been implemented with the purpose of state development by the GoL. The first type is directly associated with the state policy and the other is specifically associated with hydropower development projects.

1) Resettlement associated with state policy

In 1989, the 1st National Conference on the Forestry of Laos adopted the government plan to implement permanent resettlements of a quarter of the country's population by the year 2000 (Evrard & Goudineau, 2004). The initiative of resettlement policy was formed to achieve five goals: (1) access and service delivery, (2) opium eradication, (3) reduction of security concerns, (4) eradication of shifting cultivation, and (5) cultural integration and national building. To realize these five goals, three resettlement instruments were used: focal

site, village consolidation, and land and forest allocation (Baird & Shoemaker, 2005).

① Access and service delivery

In Laos, scattered communities consisting of minority ethnic groups that often live in small settlements are found near forest, streams, and farmland for the sake of their livelihoods but they are far from roads. The GoL believes that it is more cost effective to bring people to development rather than bring development to people.

To provide better infrastructure and development services mentioned above, the GoL perceives the best strategy is relocating those scattered remote communities into more accessible areas. As a result, resettlers would benefit from permanent occupations and become integrated into the cash-based economy (Baird & Shoemaker, 2007).

② Cultural integration and national building

In addition to delivering services to scattered remote communities, the GoL believes that, sooner or later, they must also become integrated into the dominant Lao ethnic culture especially livelihood style.

③ Opium eradication

In chronic rice shortage areas, opium is an important cash crop. In the past, the opium cultivation for local sale and consumption could be found in upland communities in the northern Laos. At the 7th Congress of the Lao People's Revolutionary Party in 2001, the GoL responded to the international pressure for the eradication of opium with the promise of US\$ 80 million in aid to support the aeration by 2006. A report in 2004 cited an estimation that due to opium eradication efforts, around 25,000 highland people had been displaced by early 2004 (European Union, 2011).

④ Reduction of security concern

After the establishment of Laos in 1975, the security of country was an important issue in the late 1970s and the early 1980s for some areas and some ethnic groups. It was believed that in some parts of the country armed rebels could become active. However, at present, this security issue is not the reason for the GoL to implement rural resettlements in Laos (Baird & Shoemaker, 2007).

⑤ Eradication of shifting cultivation

In the early 1980s and the early 1990s, the GoL began to express her concerns about shifting cultivation/swidden farming practices of rural people. The shifting cultivation is perceived an unproductive system and an inefficient use of natural resources, and should be replaced with lowland rice farming that is generally considered more productive and more desirable. This way of farming was declared that it is backward and destructive to forest and the environment (Baird & Shoemaker, 2007).

The GoL enunciated her desire to eradicate swidden farming at the Sixth Party Congress in 1996 because the GoL perceived swidden farming/shifting cultivation as a problem and major cause of deforestation and erosion. In addition, the forestry is a major source of government revenue. Therefore, those whose livelihoods depend on shifting cultivation must be settled in areas where they can be allowed to earn a living and be provided land by the GoL (Lyttleton, Cohen, Rattanavong, Thongkhamhane, & Sisaengrat, 2004).

2) Resettlements associated with hydropower schemes

In the 1980s, the hydroelectric power development in Laos became active when the World Bank, Asian Development Bank, United Nation Development Program, and bilateral westerners advised Laos to develop its hydropower resources to fuel its economic development of Laos (International Rivers, 1998). From the late 1980s to the early 1990s, the International Monetary Fund, the World Bank, Asian Development Bank, and dam

construction consultants flocked to Laos after the GoL promulgated its foreign investment code in 1988.

Table 2-4 shows the approval hydropower project investments in Laos. In terms of total capital, the largest investments of hydropower project are NT2, Theun Hinboun, and Nam Ngum 2 respectively.

Table 2-4: Approved hydropower project investment in Laos

Year (Number of projects)	Company name/ Representative	Total capital (US\$)	Share (%)		Source/ Country
			Local	Foreign	
1995 (1)	Laodongha Co., Ltd	1,000,000	0	100	South Korea
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999 (1)	Nammo	151,000,000	25	75	Vietnam
2000	-	-	-	-	-
2001	-	-	-	-	-
2002 (1)	Nam Theun 2 Power* Co., Ltd	1,100,000,000	NA	NA	France
2003	-	-	-	-	-
2004 (2)	Nam Theun 1	1,000,000	0	100	Malaysia
	Xekatom Hydropower Project	1,000,000	0	100	Japan
2005	-	-	-	-	-
2006 (4)	NA	1,000,000	0	100	Malaysia
	Nam Ngum 2 Power*** Co., Ltd	790,000,000	25	75	Thailand
	NA	400,000,000	30	70	Japan
	NA	1,000,000	0	100	Malaysia
2007 (2)	Nam Ngum 5 Power Co., Ltd	200,000,000	15	85	China
	Nam Lik 12 Power Co., Ltd	150,000,000	20	80	
2008 (2)	Theun Hinboun Power** Co., Ltd	860,000,000	60	40	Norway
	Nam Ham Two Hydropower Company Limited	5,500,000	20	90	Singapore
2009 (2)	Nam Sim Power Co., Ltd	17,660,000	25	75	Norway
	Thailao Power Co., Ltd	76,000,000	20	80	Thailand

Note: *: Nam Theun 2 Power project has the largest investment value.

** : Theun Hinboun project has the 2nd largest investment value.

***: Nam Ngum 2 Power project has the 3rd largest investment value.

NA: Not available

Table 2-4: Approved hydropower project investment in Laos (continued)

Year (Total projects)	Company name/ Representative	Total capital (US\$)	Share (%)		Source/ Country
			Local	Foreign	
2010 (6)	NA	441,604,000	0	100	Vietnam
	Sunlabob Renewalegry Co., Ltd	712,910	20	80	Germany
	Hydropower Co., Ltd	3,794,931	100	0	Laos
	Tad Social adaptationn Power Co., Ltd	8,700,000	0	100	Thailand
	Nam Ngum 3 Power Co., Ltd	1,000,000	NA	NA	Thailand
	Nam Long Power Co., Ltd	1,298,500	100	0	Laos
2011 (3)	Nam Ham 2 Power Co., Ltd	8,000,000	80	20	Laos
	Nam Ou Power Co., Ltd	10,000,000	0	100	China
	Tad Slen Power Co., Ltd	8,700,000	0	100	Thailand
2012 (16)	Nambeng Power Co., Ltd	20,750,000	20	80	China
	Xenamnoy 1 Power Sole Co., Ltd	34,500,000	100	0	Laos
	Datang(Lao) Pakbeng Hydropower Co., Ltd	1,000,000	0	100	China
	Xe-Pian-Xe-Namnoy Power Co., Ltd	262,145,250	NA	NA	South Korea
	NA	9,407,000	0	100	Vietnam
	NA	22,190,000	100	0	Laos
	NA	20,000,000	100	0	Laos
	NA	10,980,000	100	0	Laos
	Nam Nhone Hydropower Co., Ltd	5,018,780	NA	NA	United states
	NA	9,538,288	100	0	Laos
	Hoang Anh Attapue Electric Co., Ltd	97,351,000	0	100	Vietnam
	Houay Ho Power Co., Ltd	195,000,000	20	80	Thailand
	Nam Lik 1-2 Power Co., Ltd	149,140,000	10	90	China
	Nam Mang Power 1 Co., Ltd	28,500,000	25	75	China
	NA	21,125,000	100	0	Laos
	Nam Ngiep 2 Power Co., Ltd	345,397,000	10	90	China
2013 (3)	Nam Ngiep 3 Power Sole Co., Ltd	69,000,000	100	0	Laos
	Nam Ngiep 1 Power Co., Ltd	868,000,000	NA	NA	Netherland
	Nam Phay Power Co., Ltd	218,210,000	15	85	China

Source: Ministry of Planning and Investment (as of January 28, 2014)

Note: NA=Not available

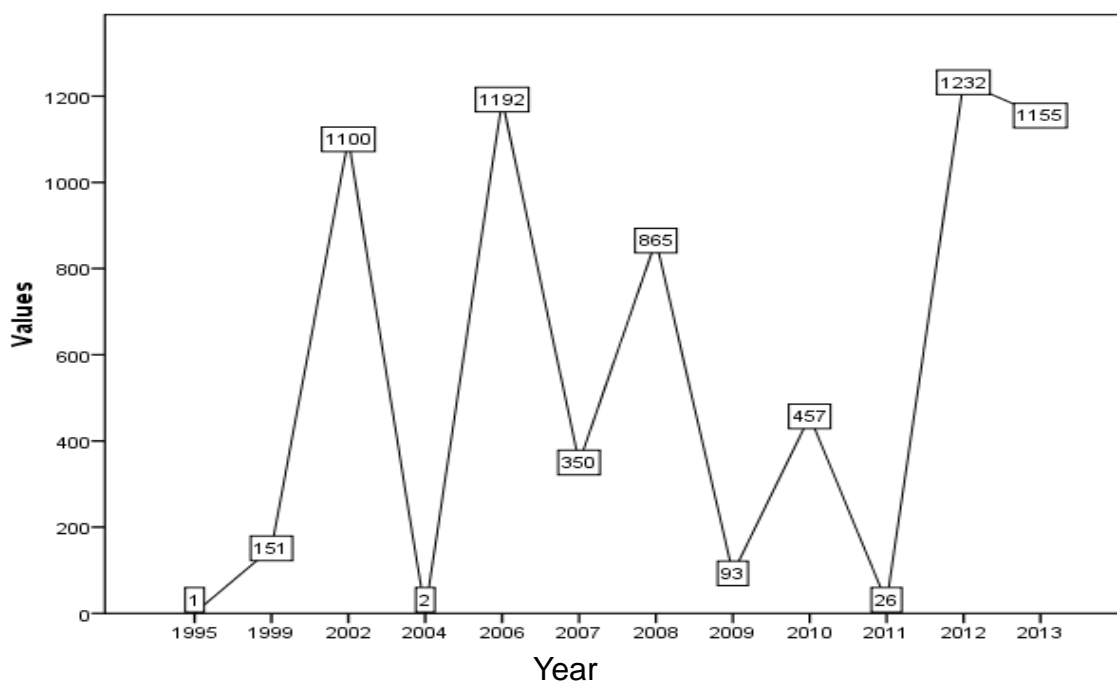


Figure 2-2: Hydropower investment (millions of US\$) in Laos
Source: Ministry of Planning and Investment (as of January 28, 2014)

Before 1993, only three hydropower plants had been developed and brought into operation in Laos. There were nine hydropower plants in the country in operation in 2009 (Phomsoupha, 2009). Figure 2-2 shows the hydropower investment in Laos. It indicates that the hydropower investment in Laos is fluctuated since 1995 and reaches the peak in 2012 with US\$ 1,232 million.

The hydropower sector has been an important contributor to Laos's economic growth and the national poverty reduction effort. The exports in this sector amount to approximately 30% of all Laos's export values (Phomsoupha, 2009).

Table 2-5: Laos hydropower project development stages

Stage	Operation	Under construction	Planning	Feasibility study	Unknown	Total
Project	9	9	26	46	63	153

Source: Lao PDR Development Report, 2010

Table 2-5 shows development stages of Laos hydropower projects. Numbers of projects in planning, feasibility study, and unknown stages tell that hydropower development in Laos is active. Data in Table 2-5 indicate that there are 153 hydropower projects in total from five stages. There are nine projects in operation stage, nine projects under construction stage, 26 projects in planning state, 46 projects in undergoing feasibility studies, and 63 projects in status unknown, of which there was as yet no memorandum of understanding.

Regarding to the involuntary resettlement project associated with especially hydropower development project, Cernea and MacDonald (2000) argue that project-affected people (PAP) are vulnerable to fall into eight common risks in involuntary resettlement implementation (eight common risks: landlessness, joblessness, homelessness, food insecurity, increased morbidity, marginalization, loss of access to common property resources, and community disarticulation). In other words, through these risks, the involuntary resettlement impoverishes PAP.

In this Ph.D. dissertation, results of (involuntary) rural resettlements in Laos associated with the national policy and hydropower development schemes are described in three aspects of PAP's lives such as social problems, destruction of people livelihoods, and cultural conflicts as following:

① **Social problems**

Social problems possibly occur before and after relocating people from their original villages to new resettlement villages. In some cases (Aka ethnic group), such relocation can be said psychologically hurtful, as living along the road is culturally forbidden by custom (Asia Development Bank, 2001). It is reported that resettlers often explain their illness and fear subjectively. They explain that they become ill because their soul remained in the old villages; Elders in a village explained they did not want to move saying that they fear being

taken by the naga (big snake) from the river. They also feared resettling near the river because they believe that the naga hides in dead trees lying on the ground in forested places (Daviau, 2006). Children from certain ethno linguistic groups (non Lao-Tai) are over-represented in statistics of human trafficking victims in Laos, and the majority of non Lao-Tai trafficking victims come from villages that have been resettled or relocated (European Union, 2011). In addition, Lyttleton, Cohen, Rattanaovong, Thongkhamhane, and Sisaengrat (2004) added that resettlements could provoke new forms of drug addiction, especially with methamphetamines.

② Destruction of people's livelihoods

Resettled people in resettlement sites, due to either the state policy or the hydropower development project, face problems with their compensated land. One of main problems faced by PAP to restore their livelihoods is insufficient arable land and fresh water supplies, linked with familiarizing new farming technique to wet rice cultivation (International Rivers, 2008). Relocating people from one place to another place means shifting their entire livelihood environment. It is reported that in 67 displaced villages from six provinces, serious problems were identified such as loss of assets, debt accumulation, rice deficits, intensified competition for land, and lack of government resources to provide assistance to relocated communities (Lyttleton, Cohen, Rattanaovong, Thongkhamhane, & Sisaengrat, 2004). People must rebuild their livelihood in unfamiliar environments with limitations and difficulties, compared to before the resettlement. Delang and Toro (2011) report that the most important problem that the displaced farmers face is a lack of land. This is the problem that is likely to persist and become worse in the future when more hydropower development projects are launched even though only 3.3% of land in Laos is arable.

③ Cultural conflicts

Cultural conflict between newcomers and host villagers are found in the resettlement

villages. Many villagers resettle outside their traditional boundaries and have experienced acts of vandalism, robberies, property destruction, animal theft, and psychological harassment by being told to go back to their villages by host villagers (Daviau, 2006). Opposing clan and residence systems makes intermarriage between groups culturally impossible (Asian Development Bank, 2001a).

2.1.4 Major resettlement problems and factors that lead to failures

Inability of dam constructors to implement resettlement projects properly is well-recognized worldwide (Webber & McDonald, 2004). Partridge (1989) argues that the major cause of failure in resettlement implementation is poor planning.

1) Major resettlement problems in the past

Twenty years ago, Gutman (1994) reported nine common resettlement problems related to large development projects including hydropower projects:

① Underestimation of the people to be displaced

Initial figures of estimation on people to be displaced and resettled is often lower than the actual figures when the project is executed (Gutman, 1994). Moreover, some borrower agencies did not conduct socioeconomic impacts study and they simply estimated the figure of people to be affected and resettled (Partridge, 1989).

② Underestimation of the complication of resettlement processes

Underestimation the complexity of resettlement process causes overruns, time slips, and other hardship among PAP (Gutman, 1994). Resettlements affect entire communities. Without any exceptions, the weak and strong, the skilled and unskilled, the poor and wealthy, the healthy and crippled alike are affected (Partridge, 1989).

③ Unfinished legal, policy, and institutional frameworks

Monitoring of resettlement plans with unfinished legal, policy, and institutional frameworks generate conflicts. Stakeholders may understand resettlement responsibilities in a different way (Gutman, 1994).

④ Unseen early impacts of project upon local population

Gutnam (1994) states, in some cases, the freezing of economic activities and public investment in the project area occurred well before the development project took place.

⑤ Incomplete compensation payments

Income derived from common resources such as fishery, public forest, and access to the local market for small merchants and landless laborers tend to be underestimated. Land compensation payments normally fail to cover true replacement costs. When land evaluation is made at current local market prices, land prices tend to go up 5-10 times in areas of massive expropriation. Therefore, displaced people could not buy new plots with compensation payment received (Gutman, 1994).

⑥ Vulnerable groups within the displaced population are overlooked

In some cases, vulnerable groups such as landless people, artisans, and ethnic people usually have limitation to gain benefit from legal ownership rights. As a result, assets and income of them are rarely taken into consideration when compensation is estimated (Gutman, 1994).

⑦ Inability in rebuilding displaced people's income earning capacity

Inability in rebuilding displaced people's income earning capacity is caused by long-term effect. Failure to restore incomes can drop living condition of the displaced people for many years or even generations. When development projects do not take care of the

displaced population's fortune after project areas are cleared, inability to restore livelihood of displaced people is realized (Gutman, 1994).

⑧ Overly ambitious goals

Some governments treat the involuntary resettlement as a chance in introducing major changes in rural areas for the state development. But such forced changes failed due to the inability of resettlers to cope with entirely livelihood changes at once (Gutman, 1994).

⑨ Absences of affected people's participation in planning and implementation of resettlement process

Early public participation and diversification of compensation options, relocation sites, and timing are significant factors for affected people to adjust themselves and peruse their needs at the resettlement community (Gutman, 1994). Gutman (1994) argues that due to lack of participation either of affected people or of native people, conflicts will occur. As a result, unsuccessful resettlement follows.

2) Major resettlement problems at the present

Five reasons for unpleasant outcome from or failures of resettlements were reported: (1) insufficient staff numbers and expertise, (2) insufficient finance, (3) no political will (on the part of implementation agencies and for those being affected), (4) insufficient compensation and development opportunities, and (5) insufficient participation (Tortajada, Altinbilek, & Biswas, 2012). Experience of dam construction worldwide suggests that insufficient compensation and frequent delays are a common feature in many developing countries (Heming et al., 2001). More recently, Tortajada, Altinbilek, and Biswas (2012) state five major factors leading to failed resettlement as following:

① Wrong assumption

Planners did not take the complexity of resettlement into consideration. They incorrectly assume that a compensation policy alone will be able to prevent the impoverishment and to restore living standards of displaced people.

② Failed approach

Long planning process overlooks the long-term effect on the living standard of majority of displaced population. The living standard of them is likely to drop during such long planning (approximately ten years), as well as during the immediate year following physical relocation.

③ Underestimate survey

The pre-project survey is conducted and the benchmark for the income restoration and living standard is established. But this benchmark figure is underestimated because of project-related termination of investment in the project site.

④ Imbalance safeguard policy

Tortajada, Altinbilek, and Biswas (2012) argue that sociocultural effects related with forced removal from a preferred homeland, psychological stress affecting the elderly and women and increased rates of illness and death that have been reported in resettlement areas are disregarded by the World Bank's safeguard policy.

⑤ Increase of dependency on cash expenditures

Rural people usually depend on natural resources for earning their living. Resettlements relocate them from that resource and limit them from common property resources. After relocation, these people tend to be more associated with cash expenditure for their livelihood restoration at resettlement sites. For instance, rural people are usually moved to less fertile soils that it needs inputs to increase productivity. In addition, relocating to new

site, rural people have less access to common property resources for grazing, fuel, building materials, and foraging.

2.2 Involuntary resettlement improvement guidelines

Though numerous research papers and reports from the World Bank keep mentioning negative impacts of dam construction activities to local people direct and indirectly, there are only a few guidelines for practitioners to minimize their unwelcome impacts to PAP. The World Bank accumulated evidences of unsuccessful resettlement implementation during the 1950s and the 1960s (Partridge, 1989). Those accumulated evidences disclose that forced resettlements dismantle system of production and damage previous way of life of PAP. Therefore, all resettlement projects must be perceived as development projects/programs which re-establish social and economic productivities. Consequently, the World Bank started to develop policy guidelines so that borrower countries can deal with involuntary resettlements.

2.2.1 Four-stage framework

The focus of the four-stage model is on how the majority of resettlers can be expected to behave over two generations. A successful resettlement process must enable them to improve their livelihood and become project beneficiaries (Scudder, 2012). Nevertheless, such a model is insufficient to evaluate the whole process since not all resettlement projects go through such stages in the model (Partridge, 1989).

2.2.2 Impoverishment, risks, and reconstruction model

Impoverishment, Risks, and Reconstruction (IRR) model, which has been formulated and developed by Professor Michael M. CERNEA since the 1980s. The IRR model is adopted by international organizations such as the World Bank, Asian Development Bank, and

Organization for Economic Cooperation and Development (Cernea & McDowell, 2000). The IRR model is a theoretical model for involuntary resettlement that highlights intrinsic risks that cause the impoverishment through displacement, as well as ways to counteract, eliminate, or mitigate such risks. In other words, the IRR model focuses on the social and economic contents of both segments of the processes: the forced displacement and the reestablishment. It aims precisely at defining risks, predicting cumulative impacts of displacement, and providing a practical guide for development interventions that mitigate negative impacts for PAP.

1) Defining the major impoverishment risks in displacement

As shown in Table 2-6, eight common processes and a general risk-pattern of displacement were identified by Cernea and McDowell (2000) as follows:

① Landlessness

It is argued that unless the land basis of people's production system is reconstructed elsewhere, or replaced with steady income-generating employment, landlessness sets in and PAP become impoverished. Empirical evidence shows that people's land size is decreased after resettlement. This also causes a reduction of livestock, crop yield, and family income (Cernea & McDowell, 2000).

② Joblessness

It is predicted that resettlers may lose their previous employment in three ways. (1) In urban areas, workers lose employment in industry and service. (2) In rural areas, landless laborers lose access to works on land owned by others and also lose the use of assets under common property regimes. (3) Self-employed small producers, craftsmen, shopkeepers, and others lose their small businesses. In addition, joblessness among resettlers is often found after project-related construction work ends. In the short run, resettlers may receive

employment in project-related jobs. However, such employment is short-lived and not sustainable since jobs quickly disappear towards the end of the project (Cernea & McDowell, 2000).

③ Homelessness

When people are forced to resettle, families lose natural and man-made capital assets and tend to experience a lasting sense of placelessness. Resettlers' risk of worsening housing conditions increases if compensation for demolished dwellings is paid at assessed market value rather than replacement value (Cernea & McDowell, 2000).

④ Marginalization

Marginalization has multiple facets such as economic deprivation when families lose incomes and their economic power is reduced. This would be accompanied by social and psychological facets of marginalization. It is reported that consequences of psychological marginalization are typically overlooked in resettlement planning (Cernea & McDowell, 2000).

⑤ Food insecurity

Inadequate resettlement leads food insecurity and undernourishment. Resettlers face with sudden drops in food crop availability and incomes during physical relocation. To rebuild regular food production at resettlement sites is not easy to achieve and may take years. Subsequently, risks related to nutrition reinforce rates of disease and death always occur (Cernea & McDowell, 2000).

⑥ Increased morbidity and mortality

It is argued that people with displacement experiences have higher levels of morbidity and mortality than people with no such experiences. It has been reported that more vulnerable groups, especially elderly people, suffer from higher rates of disease and death as a

result of home changes that is also associated with their mental health (Cernea & McDowell, 2000).

⑦ Loss of access to common property and services

Loss of common property resources has been damaging long-term consequences on the livelihood and social status of displaceds. In some countries, a sizeable proportion of impoverished household's income derives from forest products, wood for fuel, shared areas for animals to feed, and sources of stone (Cernea & McDowell, 2000).

⑧ Social disarticulation

Simple financial cost is not enough to rebuild and recover the livelihood of resettlers. One of the most important factors of all is the cost to serving social relationship, the burden of facing new socioeconomics in a resettlement site. In this sense, poverty is not just an absence of income and material assets such as land, shelter, and food. It includes that the loss of reciprocity networks directly worsens the corollary of poverty-powerlessness, dependency, and vulnerability (Cernea & McDowell, 2000).

Table 2-6: Major impoverishment risks in displacement

No.	Risks	Descriptions
①	Landlessness	<i>“Expropriation of land removes the main foundation upon which people’s productive systems, commercial activities, and livelihoods are constructed”</i> (Cernea & McDowell, 2000, page 23).
②	Joblessness	<i>“The risk of losing wage employment is very high both in urban and rural displacements for those employed in enterprises, services, or agriculture”</i> (Cernea & McDowell, 2000, page 24).
③	Homelessness	Loss of shelter tends to be only temporary for many resettlers. For some, homelessness or a drop in standards of accommodation continues to be a problem. More generally, being deprived of a family home space can lead to social stigma and loss of social status (Cernea & McDowell, 2000).
④	Marginalization	<i>“Marginalization occurs when families lose economic power and spiral on a “downward mobility” path. Middle-income farm households do not become landless, they become small landholders; small shopkeepers and craftsmen downsize and slip below poverty thresholds. Many individuals cannot use their earlier acquired skills at the new location; human capital is lost or rendered inactive or obsolete. Economic marginalization is often accompanied by social and psychological marginalization expressed in a drop in social status, in resettlers’ loss of confidence in society and in themselves, a feeling of injustice, and deepened vulnerability. The coerciveness of displacement and the victimization of resettlers tend to depreciate resettlers’ self-image, and they are often perceived by host communities as a socially degrading stigma”</i> (Cernea & McDowell, 2000, pages 26).
⑤	Food insecurity	<i>“Forced uprooting increases the risk that people will fall into temporary or chronic undernourishment, defined as calorie-protein intake levels below the minimum necessary for normal growth and work”</i> (Cernea & McDowell, 2000, page 27).
⑥	Increased morbidity and mortality	<i>“Massive population displacement threatens to cause serious declines in health levels. Displacement-induced social stress and psychological trauma are sometimes accompanied by the outbreak of relocation-related illnesses, particularly parasitic and vector-borne diseases such as malaria and schistosomiasis. The weakest segments of the demographic spectrum-infants, children, and the elderly-are affected most strongly”</i> (Cernea & McDowell, 2000, pages 27-28).
⑦	Loss of access to common property and services	<i>“For poor people, particularly for the landless and assetless, loss of access to the common property assets that belonged to relocated communities (pastures, forested lands, water bodies, burial grounds, quarries, etc.) results in significant deterioration in income and livelihood levels”</i> (Cernea & McDowell, 2000, page 29).
⑧	Social disarticulation	Involuntary resettlement breaks up the structure of society. This scatters and smashes social groups, dismantles social networks and connections between people (Cernea & McDowell, 2000).

Source: Author, 2015 (based on Cernea & McDowell, 2000, pages 23-30)

2) Livelihood reconstructions

Risk recognition is crucial for sound planning. Therefore, the IRR model is best useful when its resultant warnings about those predictions are taken seriously and acted upon to prevent those predictions from becoming reality or to minimize the damage it causes. Reversing the IRR model (Figure 2-3) indicates actions for safeguarding; reconstruction and development should be taken (Cernea & McDowell, 2000).

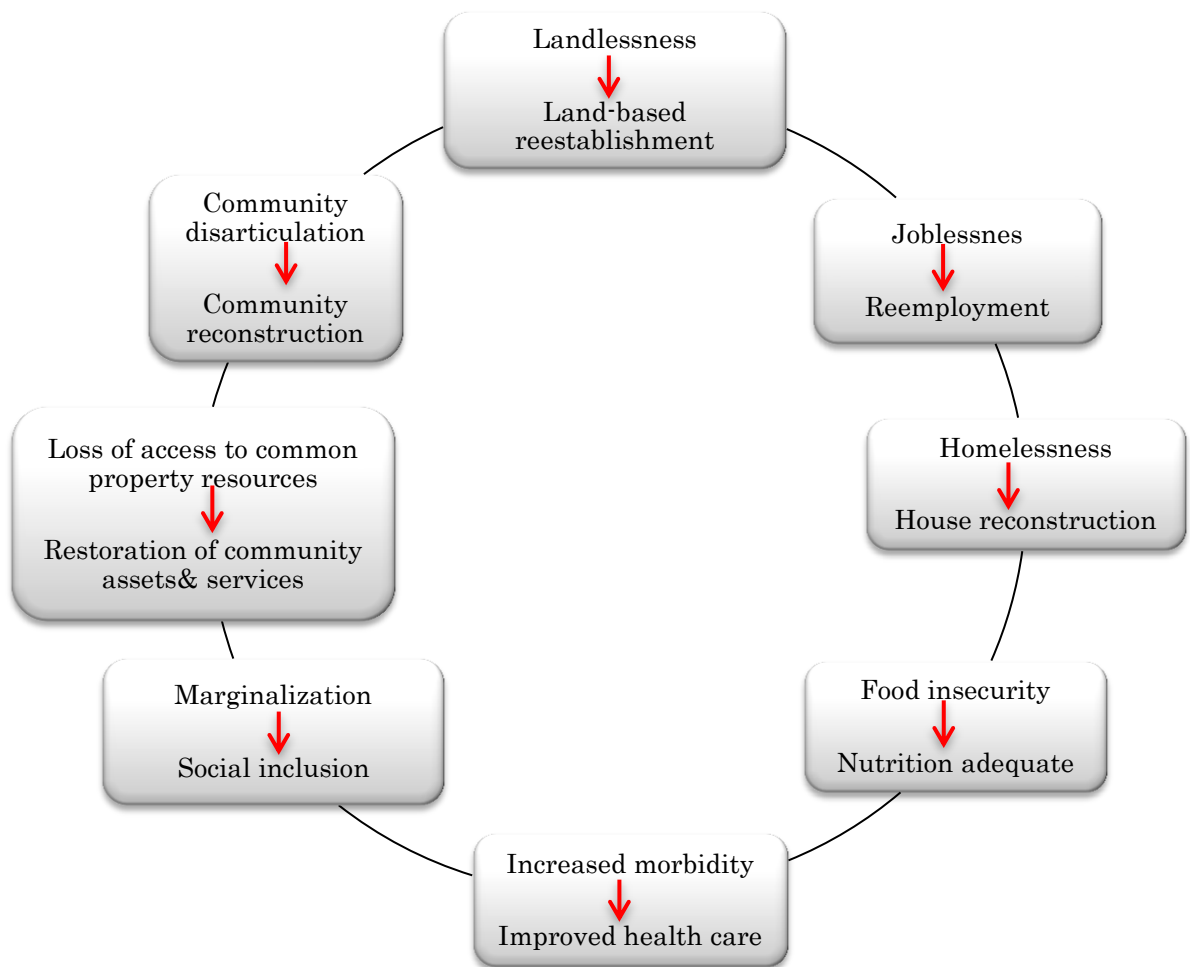


Figure 2-3: Risk reversals: the model as *self-destroying prophecy*
Source: Author, 2013 (based on Cernea & McDowell, 2000)

① From landlessness to land-based reestablishment and joblessness to reemployment

The key in reconstructing livelihood of displaced people to provide them cultivatable land or income generating employment. Evidences from developing countries confirm that compensating land with land (land-based resettlement) is a more plausible solution. Exchanging land for money usually does not succeed in replacing income. Cernea and McDowell (2000) argue that success tends to be correlated with several options, such as identifying equivalent lands, bringing new lands into production through land recovery, crop intensification or shifting to more valuable crops, diversification of on-farm or off-farm activities, and use of project-created production resources such as reservoirs, irrigated areas downstream, and so on. Moreover, investments for creating sustainable new employments in the relocation zone are essential as well (Cernea & McDowell, 2000).

② From homelessness to house reconstruction

It is reported that no fewer than two results found in a number of cultures. First, creation of poverty by lowering condition of housing can be successfully avoided by impartial budgeting for rebuilding costs in the resettlement programme. Secondly, displaced population shows tendency to heighten their standards of living above the previous level by incremental investments in kind (labor) and cash (Cernea & McDowell, 2000).

③ From food insecurity to adequate nutrition and increased morbidity to better health care

Quality of diet and health generally will long-term be a result of the financial condition of the resettled population. Offsetting immediate nutritional and health risks to resettlers and focusing on the most vulnerable groups such as children, the elderly people, and pregnant women are the first priority. Also needed are data and training, to promote required adaptations to habits of the resettlers and chances of dealing with situations of their new homes.

④ From social disarticulation to community reconstruction, from marginalization to social inclusion, and from expropriation to restoration of community assets and services

Community rebuilding refers to group structures. After physical relocation, rebuilding of social groups, structures, and bonding are needed to realize community rebuilding. Cernea and McDowell (2000) argue that reestablishing social networks and commonly-owned assets are complicated. However, planners often fail to notice these sociocultural and psychological aspects. Planners seldom concern themselves with helping resettlers to reintegrate with native people or covering the cost of loss of commonly-owned resources (Cernea & McDowell, 2000)

2.2.3 Resettlement with development concept

Main causes of dissatisfaction in all reservoir sites were precarious livelihoods, decline of living standards, and uncertainty of production development (Croll, 1999). *“The restoration of livelihoods in the event of involuntary resettlement is commonly based on providing compensation to those who are displaced. For this reason, it is proposed that by conducting resettlement as a development project in its own right, the performance of resettlements can be improved and the benefits will accrue to the local population”* (McDonald, Webber, & Yuefang, 2008). The World Bank advises that any resettlement must be perceived as a development project. With community participation, resettlers must be provided sufficient investments and opportunities to share project benefits, particularly the poor. Moreover, resettlers must be integrated socially and economically into the host communities (Webber & McDonald, 2004). The World Bank calls for the borrower country setting up a resettlement plan that reflects basic principles of (1) government responsibility, (2) rights of the displaced population and the mechanism for their participation in the project, and (3) protection of the host population’s interests (Hamilton, 1990).

Resettlement with Development (RwD) proposes a strategy to avoid failures of resettlement implementations recording. It is considered to be the ideal approach to undertake resettlements throughout developing countries. But until now, only a few developing countries have included this RwD in their national policies (McDonald, Webber, & Yuefang, 2008). Therefore, resettlement operations should be treated as development projects in their own right (McDonald, Webber, & Yuefang, 2008). Firstly restoring and then improving resettlers' livelihood in the sustainable manner is essential. In this regard, development means something that is carried out, rather than something that simply occurs. Finally, to qualify as development, a resettlement program must center around enhancing human capacities and expanding social opportunities by addressing the social and personal constraints that restrict people's choices (McDonald, Webber, & Yuefang, 2008). Unlike most developing countries, China established a legal framework and a variety of regulations to support involuntary resettlement. Its first policy on involuntary resettlement is tracked back to 1952. The first RwD proposal occurred in the mid-1960s and it took almost 30 years to be formally accepted. As a result, the Water Law of China was promulgated in 1988 (McDonald, Webber, & Yuefang, 2008).

The achievement in incorporating RwD to involuntary resettlement policy could be tracked between 1993 and 1998 (McDonald, Webber, & Yuefang, 2008). RwD, particularly in the rural resettlement context, is the term to emphasize a more comprehensive development approach inclusive of production activities such as forestry, agriculture, fishery and local enterprises. According to Croll (1999), the process of resettlement based on this concept is divided into three phases as follows: (1) mobilization or education and persuasion aimed at winning the co-cooperation of resettlers, (2) relocation or payment of compensation for old houses and land prior to allocation of new land, construction of new houses and new site

infrastructure, and (3) production development or providing means of production to generate incomes.

2.3 Policy reviews

2.3.1 The World Bank involuntary resettlement policy

The World Bank has experiences on involuntary resettlement since 1980, especially in an Asian context. Based on the World Bank's experiences between 1986-1993, Six major reasons realizing the success of resettlement are identified as follows: (1) political commitment of borrowers in the form of laws, policies, and resource allocations; (2) close adherence to established guidelines and procedures in implementation; (3) sound social analysis, reliable demographic assessments, and appropriate technical expertise in planning for development-oriented resettlement; (4) reliable cost estimates and provision of required financing with resettlement activities phased in tune with civil works construction; (5) effective executing agencies are responsive to local development needs, opportunities, and constraints; and (6) people's participation in setting resettlement objectives, identifying reestablishment solutions, and implementing them (World Bank, 1994).

The World Bank's policy on involuntary resettlement was originated from the internal Operational Manual Statement (OMS 2.33) to staff in February, 1980. Since then, it was revised and reissued a number of times. The most recent one is as an Operational Directive (OD 4.30). Until December 2001, the World Bank mandated Bank Procedure and Operational Policy on involuntary resettlement 4.12 (BP/OP 4.12) together to replace the OD 4.30.

Nevertheless, for some aspects, this BP/OP 4.12 is necessary to be reviewed and improved. In total, 52 recommendations on ten points to reform the World Bank Policy on involuntary resettlement OP 4.12 were proposed as following (Bugalski & Pred, 2013): 1)

recommendations on policy scope, 2) on prohibiting forced evictions and ensuring that displacement is truly a last resort, 3) on a category resettlement: using Twin-Project Approach, 4) on human rights impact assessment and due diligence, 5) on access to information, consultation, and active participation in decision making, 6) on respecting and fulfilling human rights to adequate housing , 7) on livelihood improvement and benefit-sharing , 8) on cut-off dates and eligibility for benefits , 9) on resettlement supervision, monitoring, and evaluation, 10) on ensuring access to an effective remedy.

Recommendations on 7) livelihood improvement and benefit-sharing above-mentioned, Bugalski and Pred (2013) suggest three points to be considered. They argue that 1) the revised World Bank policy objectives should be to improve living standards of displaced population through commensurate investments in resettlers' development; 2) the revised World Bank policy should contain requirements to enable displaced people, including women, to share in project benefits by increasing their access to resources and opportunities and through investments in development of their livelihoods, and in addition to compensation for losses. Potential strategies and mechanisms for project revenue benefits sharing must be explored with active participation of affected people, including women, during the project design and appraisal stage. The World Bank should provide guidance to borrowers regarding potential strategies or mechanisms for effective benefit sharing; 3) resettlement budgets must realistically reflect actual financial and technical investments needed, upfront and over time, to fully replace lost assets and develop living conditions and livelihoods of resettlers and achieve policy objectives, based on sound economic analysis. Budgets should take into account whether a portion of project revenue will be allowed to investments in displaced communities to support their on-going development. Justifications for all assumptions made in calculating compensation rates and other cost estimates must be included and disclosed in

the Resettlement Action Plan; 4) actual loss of income during the transition period should be compensated on a periodic basis through a social safety net system until such time as resettlers have been fully rehabilitated; and 5) benefit distribution should, wherever possible, accrue to women members of the affected facilities.

2.3.2 Asian Development Bank involuntary resettlement policy

Resettlement is viewed increasingly as a development issue. According to Asian Development Bank Policy on involuntary resettlement (1995), three important elements of involuntary resettlement are (1) compensation for lost assets and loss of livelihood and income, (2) assistance for relocation including provision of relocation sites with appropriate facilities and services, and (3) assistance for rehabilitation to achieve at least the same level of well-being with project as without it. This policy covers basic principles to implement an involuntary resettlement.

Asian Development Bank Policy on involuntary resettlement (1995) would be applicable to all projects approved after 31 December, 1995.

- Involuntary resettlement should be avoided where feasible
- Where population displacement is unavoidable, it should be minimized by exploring all viable project options
- If individuals or a community must lose their land, means of livelihood, social support systems, or way of life in order that a project might proceed, they should be compensated and assisted so that their economic and social future will generally be at least as favourable with project as without it. Appropriate land, housing, infrastructure, and other compensation, comparable to the without project situation, should be provided to adversely affected people, including indigenous groups, ethnic minorities, and

pastoralists who may have usufruct (the right of enjoying all the advantages) or customary rights to land or other resources taken for project.

- Any involuntary resettlement should, as far as possible, be conceived and executed as a part of development project or program and resettlement plans should be prepared with appropriate time bound actions and budgets. Resettlers should be provided sufficient resources and opportunities to re-establish their homes and livelihoods as soon as possible.
- Affected people should be fully informed and closely consulted on resettlement and compensation options. Where adversely affected people are particularly vulnerable, resettlement and compensation decisions should be preceded by a social preparation phase to build up the capacity of vulnerable people to deal with issues.
- Appropriate patterns of social organization should be promoted. Existing social and cultural institutions of resettlers and their hosts should be supported and used to the greatest extent possible. Resettlers should be integrated economically and socially into host communities so that adverse impacts on host communities are minimized. One of effective ways of achieving this integration may be by extending development benefits to host communities.
- Absence of formal legal title to land by some affected groups should not be a bar to compensation. Affected persons entitled to compensation and rehabilitation should be identified and recorded as early as possible, preferably at the project identification state, in order to prevent an influx of illegal encroachers, squatters, and other non-residents who wish to take

advantage of such benefits. Particular attention should be paid to needs of the poorest affected people including those without legal title to assets, female-headed households, and other vulnerable groups, such as indigenous people, and appropriate assistance should be provided to help them improve their status.

- Full costs of resettlement and compensation, including costs of social preparation and livelihood programs as well as incremental benefits over the “without project” situation, should be included in the presentation of project costs and benefits.
- To better assure timely availability of required resources and to ensure compliance with involuntary resettlement procedures during implementation, eligible costs of resettlement and compensation may be considered for inclusion in the World Bank loan financing for project it requested.

2.3.3 Evolution of Laos resettlement policy

It is stated that policies and legal regulations are requiring in many developing countries. Sensitivity to the political, legal, social and cultural context of a developing member country must be taken into consideration when proposing policy and planning principles. In addition, lesson learned must be centred in revising and refining policies. In 1998, Asian Development Bank undertook a review of resettlement policies and practices in several developing countries. The review found that the national resettlement policy was absent in Thailand, Malaysia, Pakistan, Nepal, Laos, Sri Lanka, Vietnam, Philippines, and India (McDonald, Webber, & Yuefang, 2008).

The GoL issued the decree (No. 192/PM) (Laos, 2005a) on compensation and resettlement of the development projects on July 7, 2015 and the national policy (No.

561/CPI) on environmental and social sustainability of hydropower sector in Laos on June 7, 2005. This decree is formulated with the support from the World Bank and Asian Development Bank and based on lesson learned from NT2 experiences.

The GoL realizes that sustainable development of the hydropower sector in Laos could be found on three important principles: economic sustainability relies upon the maintenance of the renewable resource based, and the use of the non-renewable resource rent to support the development of other factors of production; (2) social sustainability is based upon principles of inclusiveness, mutual understanding, and consensus; and (3) ecological impacts such as loss of biodiversity, accumulation of persistent pollutants, or disruption of ecological cycles (Laos, 2005c).

The national policy No. 561/CPI applies to hydropower projects constructed after 1990. In regard to PAP's livelihood, the national policy No. 561/CPI states that PAP will be recognized as those whose assets, resources and usages and livelihoods, and/or social or cultural structures are involuntarily altered by the project, and will be identified on the basis of social, economic, health, and cultural studies and impact assessments. All involuntary resettlement issues will be handled in accordance with the Resettlement Decree, which will be enacted by the government. The right of all PAP to sustainable livelihood options and services at least at the level previously enjoyed will be recognized, and be achieved through a Resettlement/Social Development Plan. The plan will consider distributional effects of development activities and participation of vulnerable groups, including women and ethnic minorities, and will commit to targets for replacement or compensation for loss of assets, livelihoods restoration, and services and community development over the entire life-span of project, with provision for monitoring and evaluation, participatory planning, and adaptive management. In cases where ethnic groups are in the project area, a specific plan to meet their

aspirations would be prepared in consultation with these communities (Laos, 2005c).

2.3.4 Association of policy on involuntary resettlement of the World Bank, Asian Development Bank, and the Government of Laos

Since 1980s, various agencies such as Japan International Cooperation Agency (JICA) adopted the World Bank's policy instruction and made its technical guidelines for resettlement. Similar to JICA, Asian Development Bank also adopted this policy on involuntary resettlement. In general, policies on involuntary resettlement of the World Bank and Asian Development Bank are similar. Nevertheless, Asian Development Bank's some policy contents are different from the World Bank's one. Asian Development Bank emphasizes on "indigenous people" and "gender" issues to meet with society of Asian countries. Detailed contents of the policies indicate that Asian Development Bank is familiar and understands situation of Asian countries where it plays an important role as a bank for development in Asia. On the other hand, the World Bank's policy has a wider scope (in which its policy aims to be applied worldwide), but less emphasizes on those indigenous and gender issues. Laos policy on (involuntary) resettlement is different from Asian Development Bank's and the World Bank's policies with the fact that the GoL's policy less emphasizes on social rehabilitation.

Specifically, policy and regulation related to involuntary resettlement between Asian Development Bank and the GoL can be differentiated. Asian Development Bank's policy on involuntary resettlement covers three main policies:

- (1) Safeguards Policy Statement (2009),
- (2) Policy on Indigenous People (2009), and
- (3) Policy on Gender and Development (2006);

But the GoL's policy on involuntary resettlement governs by five regulations:

- (1) 1991 Constitution,

- (2) 2003 Land Law,
- (3) Road Law (1999) and Town Planning Regulation (2004),
- (4) Decree No. 192/PM and Regulations No.2432/STEA on Compensation and Resettlement (2005), and
- (5) Decree No. 112/PM on Environmental Assessment (2010)

Nevertheless, in general, those two policies of Asian Development Bank and the GoL are similar. This similarity appears in main principles of the GoL's policies on land acquisition, compensation, assistance, resettlement, consultation, information dissemination, disclosure, and grievance redress.

2.3.5 Common concerns in policies of the Government of Laos, Asian Development Bank, and the World Bank

A. Objective of policies

Objectives of the three policies is the same as mentioning that involuntary resettlement should be avoided where feasible; where population displacement is unavoidable, resettlement activities should be conceived and executed as sustainable development program, providing sufficient investment resources to enable persons displaced by project to share in project benefits.

B. Human right issues

All three policies of the World Bank, Asian Development Bank, and the GoL recognize necessary of human rights in the context of (involuntary) resettlement. This is indicating in these policies through implementing project activities, especially in participatory process manner ensuring PAP's participation in resettlement project processes.

C. Compensation principles and livelihood restoration/development

The three policies of the World Bank, Asian Development Bank, and the GoL aim to

ensure that PAP are compensated and assisted to improve or maintain their pre-project incomes and living standards, and are not worse off than they would have been without project. The policies enforce ensuring compensation on “land for land”.

D. Cultural concerns

The World Bank and Asian Development Bank emphasize the concern on culture through indigenous people, while the GoL do not recognize the term “indigenous people”, but using the word “ethnic groups”. This term is more acceptable in the Laos context. Nevertheless, regardless using different terms, the three policies aim at ensuring that local culture and practices of PAP must be respected through all resettlement processes.

2.3.6 Differences among policies of the Government of Laos, Asian Development Bank, and the World Bank

A. Perceiving resettlement and commitment of project owners (donors)

Experiences in involuntary resettlement differentiate the World Bank, Asian Development Bank, and the GoL to perceive (involuntary) resettlement. The World Bank learns from its experiences that (involuntary) resettlement implementation results in failures and cannot ensure achievement in livelihood restoration of PAP. Therefore, the World Bank advises that every involuntary resettlement project must be perceived as an opportunity for development. In this regard, Asian Development Bank’s policy and the GoL’s policy have no detailed guideline in this concern in such perceiving. As a result, this different perceiving resettlement influence the commitment of ensuring PAP’s income and improving their livelihood by project owners. Being different from Asian Development Bank and the GoL, the World Bank enforces project owners to commit and must ensure to handling resettlement well.

B. “Resettlement with Development” concept

From experiences, the World Bank recognizes the danger of resettlement when it is not properly planned and implemented. Unlike Asian Development Bank and the GoL, through various reports, the World Bank emphasizes the concept of “RwD” is important to ensure the preferable outcome of resettlement implementation. However, in the GoL’s policy, it is not stated about the concept of RwD yet, but resettlement with development manner is practicing. This gap on recognizing the concept of RwD between the World Bank and the GoL needs to be filled.

2.4 Summary of literature reviews

At global, regional, and national levels, this Chapter II reviews involuntary resettlements in terms of (1) experiences of involuntary resettlement implementation from the past until the present (2) involuntary implementation improvement guidelines, and (3) involuntary resettlement policies. Constructing dams creates involuntary resettlements. Inability of various stakeholders to deliver commitments in PAP’s livelihood restoration has been criticized. The failure happened (in African) before repeats at geographically differences (in Asia) because economic development cannot stop and move forward to developing countries. The literatures say that a majority of results in involuntary resettlement implementations is not yet acceptable by the public.

We cannot ignore that dams are one of important ways to realize energy needs and transfer financial benefit. In addition, hydropower is comparatively clean with low cost and renewable energy source. A big challenge comes to all stakeholders to re-think, re-plan, and re-consider and amend policies for ensuring the state economic development and ensuring to restore and improve the livelihood of PAP. One advice from the World Bank is that perceiving (involuntary) resettlement as a development opportunity is a must in ensuring livelihood restoration for PAP. However, such opportunity mentioned above could not be easily achieved

as China proves that it took them for almost 30 years to implement Rwd concept. In this regard, the heavy-duty commitment of recipient countries comes as a first factor to successfully implement involuntary resettlement as a development project manner.

CHAPTER III METHODOLOGY

3.1 Conceptual framework

This Ph.D. dissertation is based on the conceptual framework shown in Figure 3-1. This framework covers three processes of resettlement associated with dam construction projects. In principle, there are three processes when implementing such resettlement projects. Process I covers planning and consultation. This process deals with (1) information gathering and dissemination and (2) various consultations on cultural preferences, resettlement site selection, design of village layout, and so on. Process II covers physical relocation. This process deals with actual activities such as designing village layouts and house structures, and physical moving of project-affected people (PAP) from their original villages to resettlement sites. Process III covers PAP's livelihood restoration. Based on these processes of a resettlement project, objectives of this Ph.D. dissertation were decided from the viewpoint of PAP's culture. Theory of culture by organizational anthropologists Hofsted. G., Hofsted G.J, and Minkov, M. (2010) was adopted as the conceptual basis for this Ph.D. Dissertation. In addition, this conceptual framework illustrates the focus of main chapters of this Ph.D. dissertation.

Resettlement Process (Case of hydropower development projects)			Concept of culture		
Process		Activity			
I	Planning	(1) Information gathering and discussion, (2) Various consultations such as consultation on cultural preferences, resettlement site selection, village layout design		Practical culture elements (Ch. IV)	Symbols
	Consultation				Heroes
II	Physical relocation	(3) Actual activities (designing village layout and house structure; and actual physical relocation)			Rituals
III	Livelihood restoration	PAP' Livelihood Adaptation (Ch. V)		PAP' Value (Ch. IV; Ch. VI) (36 sense of values/10 Categories)	Values

Figure 3-1: Conceptual framework for analyses

Source: Author, 2011

Note: PAP= Project-affected people

3.2 Concept and features of social capital

Social capital means the set of norms, institutions, and organizations that promote trust and cooperation among persons in communities and also in wider society (Durstun, 1999). According to Tiepoh and Reimer (2004), there are seven features of social capital: (1) Social capital has four fundamental modes of social relations; (2) Every fundamental mode of these social relations resides and functions within organizational or institutional structure and different social systems; (3) Social capital is strengthened each time it is activated; (4) Social capital is historically determined and acts as the starting point of the virtuous circle, (5) Social capital is transferable from one sphere of social life to another; (6) Social capital in economic exchange and development; and (7) there are similar benefits accrued from social capital in the civic sphere.

3.2.1 Benefits of social capital in rural communities

Many scholars have identified benefits of social capital, based on their case studies in rural communities across the world. According to Saegert, Thompson, and Warren (2001), most forms of social capital within poor communities have at least the potential to contribute to economic advancement and community revitalization strategies. But the potential and way of contributing can vary depending on the form of social capital. Social capital can maximize and utilize other capitals considering as community resources such as physical capital (road, school building, irrigation, etc.) and natural capital (forest, river, etc.). Seragedin and Grootaert's study (1996) shows that social capital can have an impact on development outcomes, including growth,

equity, and poverty alleviation. Social capital (particular structural one) in organizations and institutions provides an informal framework for sharing information, coordinating activities, and making collective decisions (Seragedin & Grootaert, 1996).

1) Economic exchange and development

It is cited that social capital helps the region create economic success (Serageldin & Grootaert, 1996). At the macroeconomic level, they consider how institutions, legal frameworks, and the government's role in the organization of production affect macroeconomic performance. Some scholars (Helliwell & Putnam, 1995; Knack & Keefer, 1997; Temple & Johnson, 1998; Whiteley, 2000) argue that social capital influences level of people's income. Social capital creates information sharing among economic agents. Furthermore, it is also claimed that it creates local economic prosperity (Serageldin & Grootaert, 1996).

2) Common resource management

Social capital is required for maintaining public goods. Benefits and usefulness of social capital in improving common resource management has various aspects such as setting up organizations, reducing transaction costs, cost effective problem solving, etc. From an administrative point of view, cognitive social capital such as norms, trusts, traditions, and reciprocity existing in the community is the foundation to regulate and create a structural social capital such as roles, rules, procedures, and networks. According to Wilson (1997), productive social capital generates understanding, compassion, trust, and an inclusive concept of community. He argues that a collective sense of responsibility generates participation in problem solving.

3) Community well-being

Another aspect of benefits of social capital is that it can create a sense of security among community members. When any household or family in a village face difficulties such as financial crisis or natural disaster, there will typically be helped from neighbors to recover as it is a tradition to help each other. Such traditions and norms are found under cognitive social capital. In addition, structural social capital such as rules, procedures, and precedents provided by the village administration is securing that community members share the responsibility for each other's well-being. Based on those rules, procedures, and precedents, people within the community help each other in difficult times such as helping each other during food shortage period by lending rice. Therefore, such sense of security holds people together and increases the community well-being.

3.2.2 Locus of definitions of social capital

There is no single universal definition of social capital even though scholars have identified its significant contributions to rural community development through economic exchange and development, increasing the effectiveness of common resource managements, and supporting community well-being as mentioned above. However, Uphoff and Wijayaratra (2000) cite that social capital can be understood as existing in either structural or cognitive forms. The two forms are connected in practical terms and interact with each other. Structural forms are indirectly rather than directly based on mental processes, but cognitive forms are purely mental and not observable like structural forms. The main difference between the two

forms is that structural forms are relatively external and objectified, while cognitive ones are internal and subjective.

Using those scholars' definitions to social capital as a basis, the locus of definition of social capital can be summarized into two sides and two bases as follow (Figure 3-2):

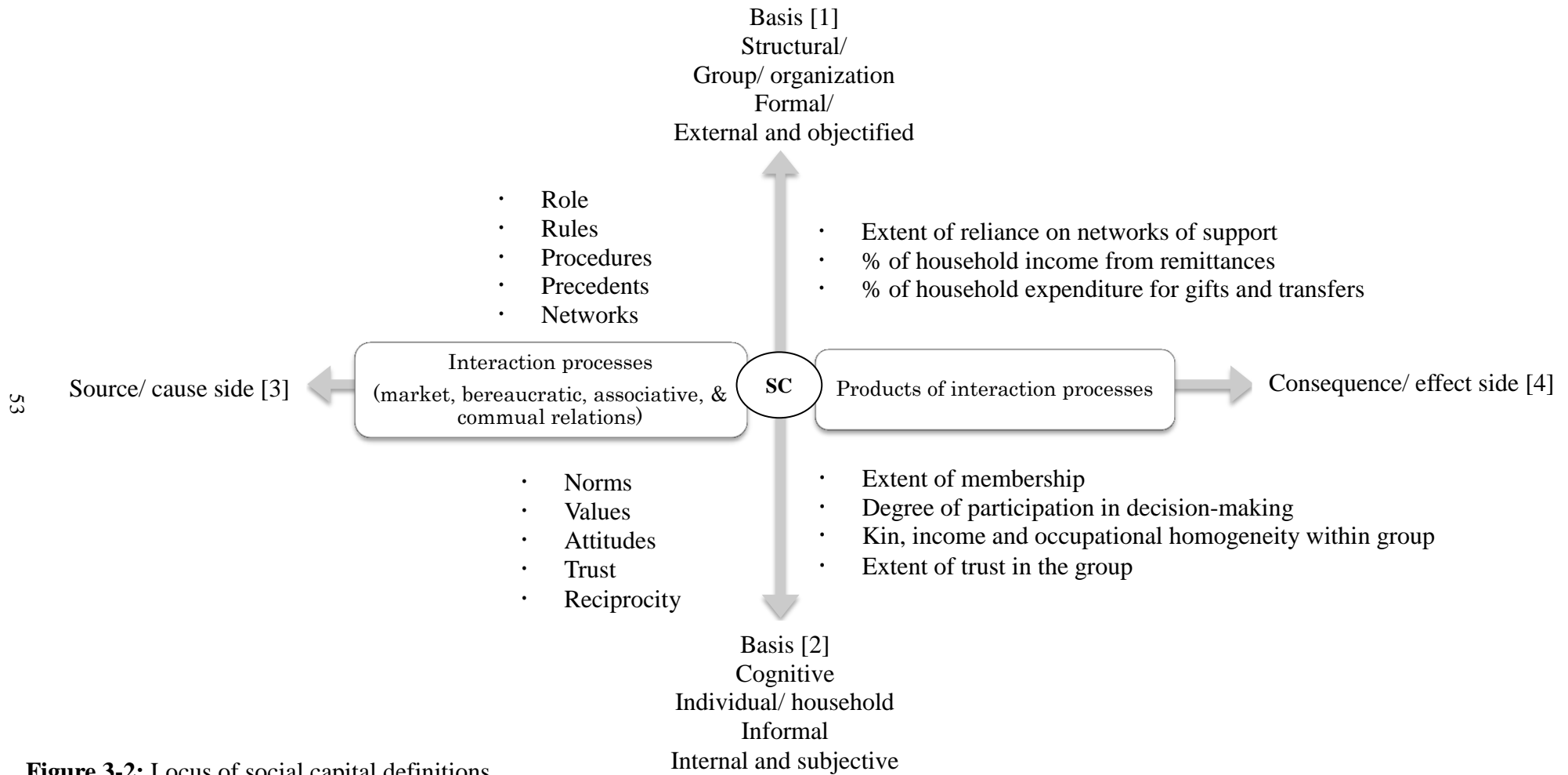


Figure 3-2: Locus of social capital definitions

Source: Author, 2012

Note: SC= social capital

1) Structural social capital basis

Structural social capital is formal, group or organization, external and objectified (Figure 3-2). This category derives from various aspects of social relationships that can be explicitly described and modified. Specifically, roles for decision-making, resource mobilization, communication, and conflict resolution are supportive of collective action (Uphoff & Wijayaratra, 2000).

2) Cognitive social capital basis

Cognitive social capital is informal, individual/household, internal, and cognitive (Figure 3-2). They are individual in origin but usually reflect broader, shared symbols, and meanings within culture or subculture. Norms of trust and reciprocity have often been written about as forms of cognitive social capital. It can be seen that values of truthfulness, sense of solidarity, and beliefs in fairness similarly create and maintain an environment in which mutually beneficial collective action becomes expected (Uphoff & Wijayaratra, 2000).

3) Social capital as source and as cause

Social capital is viewed as a source and as a cause in both structural and cognitive levels. They are referred to norms, values, attitude, trust, reciprocity, roles, rules, precedents, and networks being as roots of interaction among and between people (Figure 3-2). When scholars define social capital in the source or cause side, the focus can be based on interaction of four social relations: (1) market, (2) bureaucratic, (3) associative, and (4) communal relations. Tiepoh and Reimer (2004) claim that these four social relations could be found in most circumstances and their balance and relationship between them would be different. Market relation-based relationships tend to be short-term and limited for the purpose of exchange. Bureaucratic relations are the type of impersonal and formal relationships based on a rationalized division of labor, structuring of authority and positions through formal

principles and rules, and explicit or implicit allocation of rights and entitlements based on assigned positions and status. Associative relations are those primarily based on shared interests and characterized by focused objectives, informal structures, and short-term lifespan. Communal relations are those founded on strongly shared identity, in which rights and obligations of members are largely determined by custom, and distribution of goods and services (Tiepoh & Reimer, 2004).

4) Social capital as consequence and as effect

When scholars define social capital from perspective of consequences and effects (Figure 3-2), the focus is on the extent of usefulness and benefits of social capital contributing to community development through membership in various associations, groups, and social networks. In this context, extent of membership, degree of participation in decision-making, income and occupational homogeneity within group, extent of trust in group, extent of reliance on networks of support, percentage of household income from remittances, percentage of household expenditure for gifts and transfers, and old-age dependency ratio are included in both structural and cognitive bases of social capital.

3.3 Concept of culture

In 1952, Alfred Kroeber and Clyde Kluckhohn published a book called “*Culture*” that listed about 175 separate definitions but most of them had only minor differences (Vivelo, 1978). According to Oxford Dictionary, 7th edition, culture refers to customs and beliefs, art, way of life, and social organization of a particular country or group. Culture is produced in two different ways: in experiences of everyday interaction themselves or by specialized culture-producing organization (Collins, 1985). Organizational anthropologists (Hofstede G., Hofstede G.J., & Minkov, M., 2010) explain concept of culture in four different levels of

depth: symbols, heroes, rituals, and values (Figure 3-3).

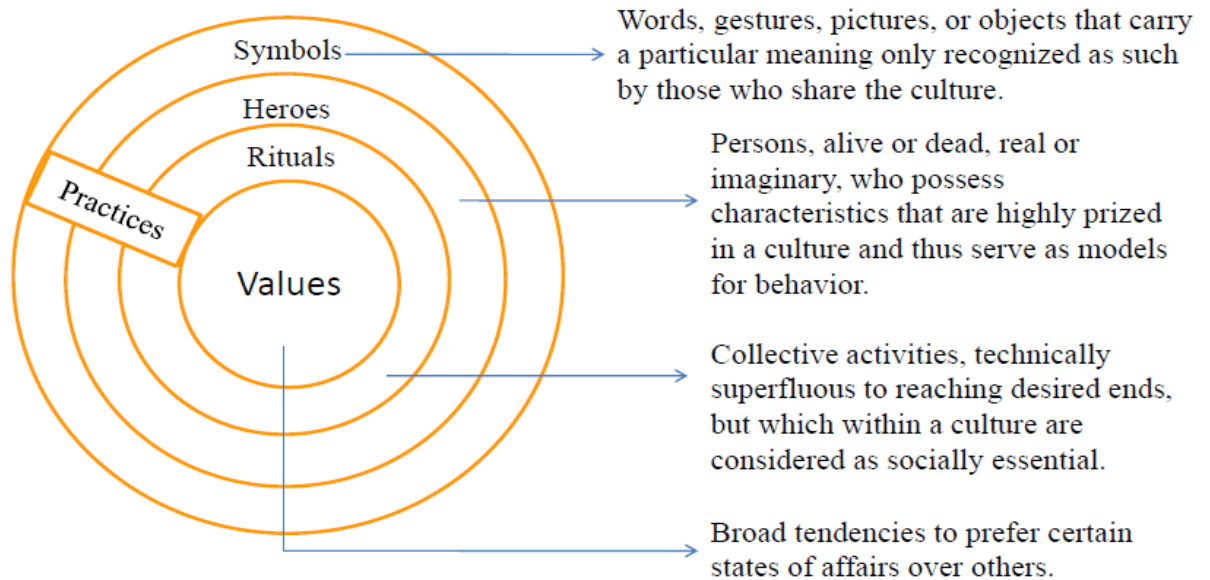


Figure 3-3: The onion-manifestation of culture at different of depth
Source: Hofstede G., Hofstede G.J., & Minkov, M., 2010

3.3.1 Nature of values

① A value is a belief

Allport (1961) explains that a value is a belief upon which a man acts by preference and values, like all belief, have cognitive, affective, and behavioural components (Rokeach, 1973).

② A value is enduring

According to Komin (1991), values do change throughout life. It is not completely stable and allows individual and social changes to take place. But, a value does not change overnight. It is sufficiently stable to provide continuity in human personality and social characteristics.

③ A value is a preference as well as a conception of desirable and desired

Desirable refers to how people think the world ought to be, while desired refers to

how people want the world to be for them. Desirable differs from desired in nature of norms involved. In case of desirable, norm is absolute, pertaining to what is ethically right. In case of desired, the norm is statistical. It indicates choices made by the majority. Desirable relates more to ideology, while desired to practical matters (Hofstede G., Hofstede G.J., & Minkov, M., 2010).

④ A value is a conception of something that is personally or socially preferable

Rokeach (1973) argues that when a person tells us about his values, it cannot be assumed that he necessarily intends them to apply equally to himself and to others. He states that if a person's values represent his "conceptions of the desirable", the question arises: desirable for whom, for himself, or for others?

⑤ Function of values

According to Rokeach (1973), values are multifaceted standards that guide conduct in a variety of ways: (1) they lead us to take particular positions on social issues; (2) they predispose us to favour one particular political or religious ideology over another; (3) they are standards employed to guide presentations of self to others; (4) they are standards to evaluate and judge, to heap praise and to fix blame on ourselves and others; (5) They are central to study of comparison processes and we employ them as standards to ascertain whether we are as moral and as competent as others; (6) they are, moreover, standards employed to persuade and influence others, and to tell us which beliefs, attitudes, values, and actions of others are worth challenging, protesting, and arguing about, or worth trying to influence or change; and (7) they are standards that tell us how to rationalize in psychoanalytic sense, beliefs, attitudes, and actions that would otherwise be personally and socially unacceptable so that we will end up with personal feelings of morality and competence, both indispensable ingredients for maintenance and enhancement of self-esteem.

⑥ A value refers to a mode of conduct or end-state of existence

Some philosophers and psychologists (see Rokeach, 1973) recognize distinction between means- and ends-values. When person has a value, he/she has beliefs concerning desirable modes of conduct or desirable end-state of existence. These two kinds of values refer as instrumental and terminal values.

3.3.2 Terminal and instrumental values in Thai society

Rokeach (1973) states that the instrumentality is not necessarily a consciously perceived instrumentality, and there is not necessarily a one-to-one correspondence between any one instrumental value and any one terminal value. Table 3-1A and Table 3-1B show terminal values consist of 20 values and instrumental values consist of 23 values according to one Thai value survey (Komin, 1991).

Table 3-1: Human value in Thai society

Terminal Values (20)		Instrumental Values (23)	
1 ◇	Brotherhood spirit (Being kind and helping others without expecting anything in return)	1	Self-controlled, tolerant-restrained (Being self-disciplined, tolerant on all matters)
2	Social recognition, (Being famous, respectful, and highly regarded in society)	2	Independent (Believing in oneself, self-dependent)
3	An exciting life (Having a colorful, exciting and adventurous life.)	3	Being responsive, flexible, witty, adjusting to situations and opportunities
4 ★	A comfortable life (Having a job, money, sufficient wealth, and good health)	4	Contented Accepting one's true status and being satisfied with what one has
5	True friendship (Having true and loyal friends who understand us)	5 ◇	Interdependent, mutually helpful (Depending on others, being helpful to others)
6 M	Mature love (Having true love and true understanding with opposite sex partner.)	6 ✓	Capable (Possessing capability, being determined, having skills in work)
7	Religious-spiritual life Having high moral standard and religiously grounded mind.	7	Calm-cautious Being calm, restraining emotion, and being discreet
8	Social relation Having good human relation and being accepted in social work	8	Caring-considerate Refraining from aggressive behavior, keeping relationship and friendship
9 M	A world of beauty Being an appreciator of the nature, music, and arts.	9 ◇	Loving-affectionate Being nurturing, kind, and gentle to others
10	Wisdom-knowledge Being satisfied with knowledge, experience, and wisdom	10	Forgiving and non-vengeful, Being forgiving
11	Self-esteem Being proud and maintaining self-values	11	Grateful Being honest and loyal to others.
12 M	National security Living in a country that is advanced, secure, and free from invasion	12	Ambitious/hardworking Setting high goals and working hard towards those goals
13 ★	Status-wealth Being rich, having wealth and helpers obtained through money	13	Polite-humble Being polite, humble, having good manners

Note: The symbols (◇, ★, ✓) in the columns mean these items will be combined and redefined; the letter “M” means the item will be modified in the context of this Ph.D. dissertation.

Table 3-1: Human value in Thai society (continued)

Terminal Values (20)		Instrumental Values (23)	
14	Freedom-independence (Having freedom in all matters, being oneself, depending on oneself)	14	Obedient-respectful Respecting and listening to elders who are more experienced and powerful, being obedient
15	Happiness-inner harmony (Being satisfied in what one has and what on is, having a calm and peaceful mind)	15 ✓	Educated Searching for higher education because education is wealth
16	Equality (Being in a society that has equality and justice)	16	Courageous Standing up for one's opinions and beliefs
17 *	Success in life Being success in one's job	17	Honest-sincere Being truthful and sincere.
18	Family happiness-security Having a warm, smooth, loving closed and secure family life	18	Responsible Knowing one's duties, responsibilities, and being on time
19	Pleasure Having happiness, fun, and recreation with a comfortable life	19	Fun-loving, humorous Appreciating fun, wit, humor, have a cheerful and relaxed life
20 M	A world at peace Being in a peaceful world that has no wars.	20	Imaginative, creative Being imaginative and artful
		21	Clean-neat Like cleanliness and tidiness.
		22 ◇	Kind-helpful Being kind, empathizing, and ready to help others.
		23	Broadminded, open-minded Being open to opinions and beliefs that are different from one's own

Source: Komin, 1991 (pages 28-33)

Note: The symbols (◇,*,✓) in the columns mean these items will be combined and redefined; the letter “M” means the item will be modified in the context of this Ph.D. dissertation.

3.3.3 Measurement of values

Komin (1991) replicated procedures used by Rokeach in 1967 through 1971 in American society, which was proved generally reliable and valid in cross-cultural researches, to develop a Thai Value Survey in Thailand (Shawyun & Tanchaisak, 2006). In both Rokeach’s (1968) and Komin’s (1991) Thai Value Survey (Komin, 1991), the instruction to the respondent is to arrange values in the two lists of instrumental and terminal values in

order of importance to respondents, as guiding principles in their lives. However, for this Ph.D. dissertation, this approach will not be used because the procedure of measuring values by Komin (1991) has some limitation when respondents are illiterate. In this Ph.D. dissertation, structured interviews were conducted instead of self-ranking because almost all villagers had difficulty in understanding the questions and the majority of them were illiterate.

3.4 Study sites

3.4.1 Resettlement project

Theun Hinboun Expansion Project (THXP) is an expansion of existing dam managed by Theun-Hinboun Power Company (THPC). Since 2007, this THXP relocated more than 4,000 people from 12 villages with multi-ethnic groups and started to improve the seasonal distribution of energy and increase energy generating capacity in 2012 (Figure 3-4).

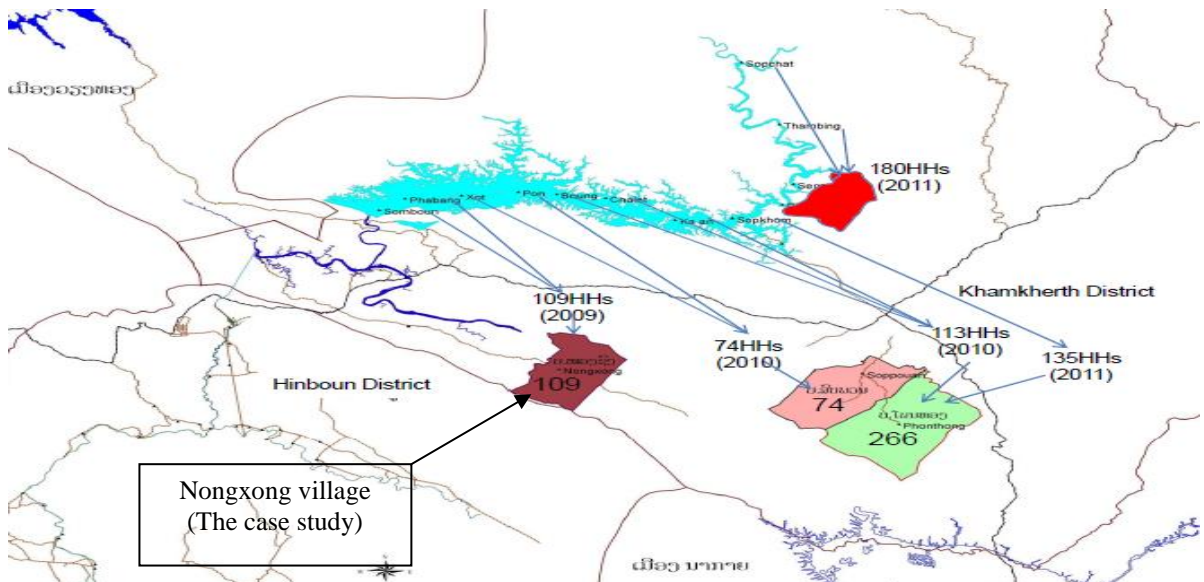


Figure 3-4: Location of resettlement sites due to THXP
Source: Field survey, 2011; integrated Extension Program, THXP, THPC



Photo 3-1A: Construction of THXP
Source: Field survey, 2011



Photo 3-1B: Construction of THXP
Source: Field survey, 2011

The dominant ethnic group under THXP area is Upland-Tai (79%), of which Tai-Mien and Tai-Pao are the most common. The second largest ethnic group is the Hmong (11%), followed by the Phong (8%) plus a few Thaveung and Khmu families (Theun-Hinboun Power Company, 2008). PAP have options to decide either to self-relocate or join resettlement projects. For households preferring a self-relocation, the THXP offered one-time final cash compensation after Self-Resettlement Proposals and plans by individual households were reviewed and approved by THXP and district authority. The households that agreed to join resettlement projects were relocated to four host villages where basic infrastructure such as health centers, roads, clean water, and electricity were prepared for their living as well as their livelihood restorations.



Photo 3-2: Compensatory houses at Phonethong resettlement village
Source: Field survey, 2011

Every resettled household is compensated with a new house built on a piece of land (1,000 m²), 0.5 hectare of farmland for cropping, and one hectare of farmland for rice cultivation.

Figure 3-5 reveals overall integrated extension program for livelihood improvement of THXP's resettlement action plan. It covers three sections: A. Program, B. Extension, and C. Integrated. B. Extension section shows the principle of implementation of livelihood improvement activities providing to PAP or resettled villagers and host villagers.

3.4.2 Nongxong village

Nongxong village (Figure 3-6), one of the four resettlement sites, was firstly completed with physical relocation of Somboun and Phabang villages with 109 households in 2009. The population of Nongxong resettlement site was 1,570 persons (246 households) with 60% of the dwellers coming from host villagers, 11% from Somboun village, and 29% from Phabang village. Ethnicity has been diversified from 11 to 18 ethnic groups throughout the resettlement. The Pao and Phong ethnic groups became the resettled new majority ethnic groups among existent three ethnic groups, while the Hmong ethnic group increased in population through the resettlement.

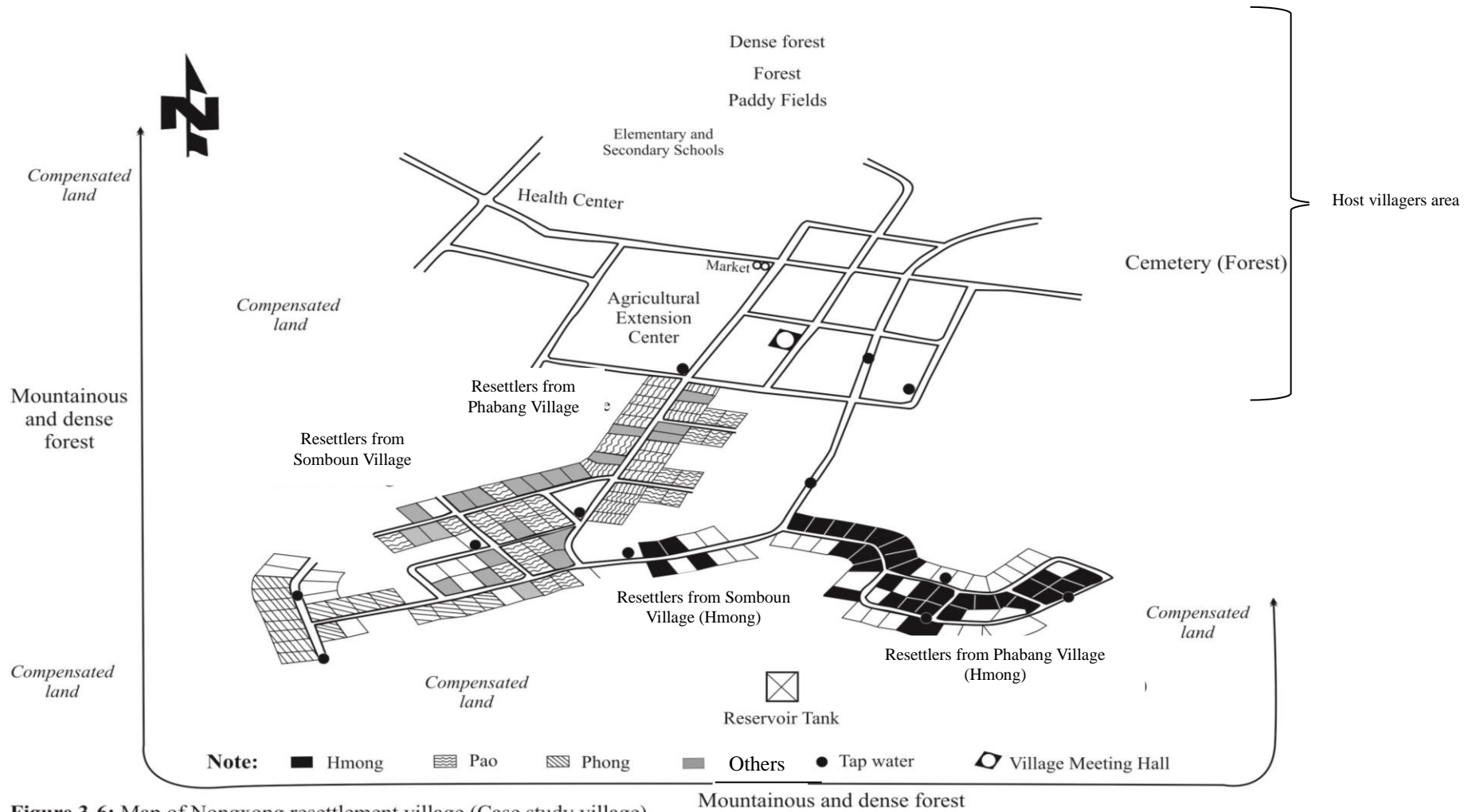


Figure 3-6: Map of Nongxong resettlement village (Case study village)
 Source: Field survey, 2011

1) Resettlers' income before relocation

Figure 3-7 shows Phabang villagers' income in 2008 by source, mainly from animal husbandry (54%), cropping (20%), and non-timber forest products (NTFPs) (14%).

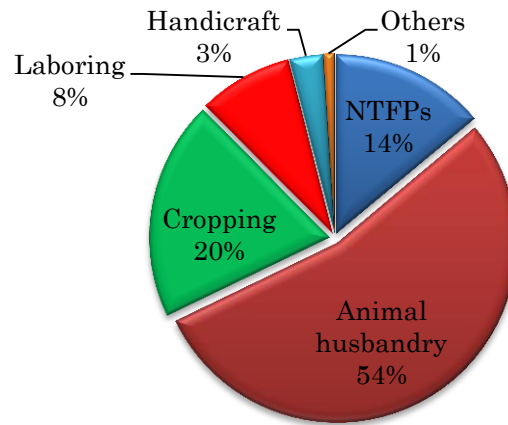


Figure 3-7: Phabang villagers' income in 2008 by source
Source: Field survey, 2011

Figure 3-7 shows Somboun villagers' income in 2008 by source. It shows that villagers in this village earn their income mainly from laboring (29%), animal husbandry (28%), and NTFPs (28%).

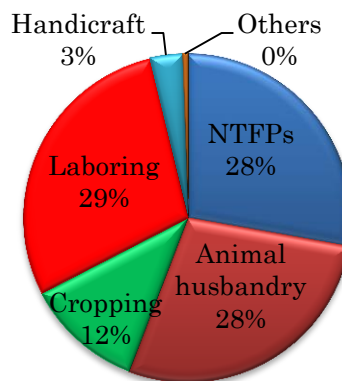


Figure 3-8: Somboun villagers' income in 2008 by source
Source: Field survey, 2011

Based on Figure 3-7 and Figure 3-8, it indicates that livelihood of both Phabang and Somboun villagers have some differences with the fact that dependency rate on those three main sources of income are different.

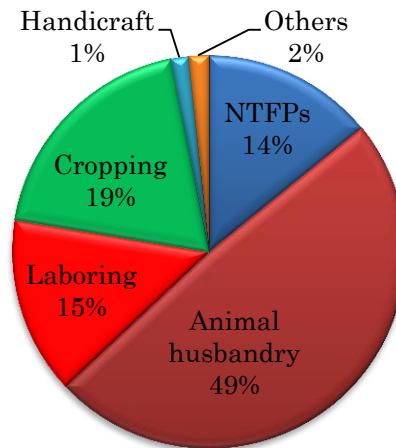


Figure 3-9: Pao ethnic group's income in 2008 by source
Source: Field survey, 2011

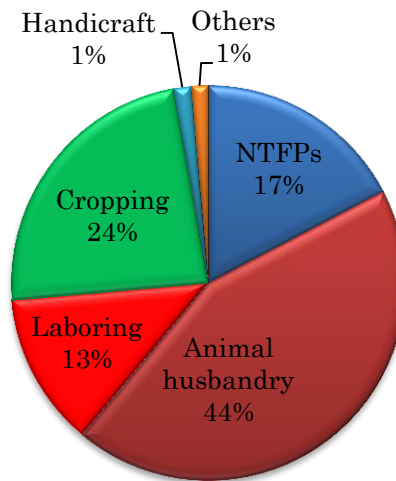


Figure 3-10: Hmong ethnic group's income in 2008 by source
Source: Field survey, 2011

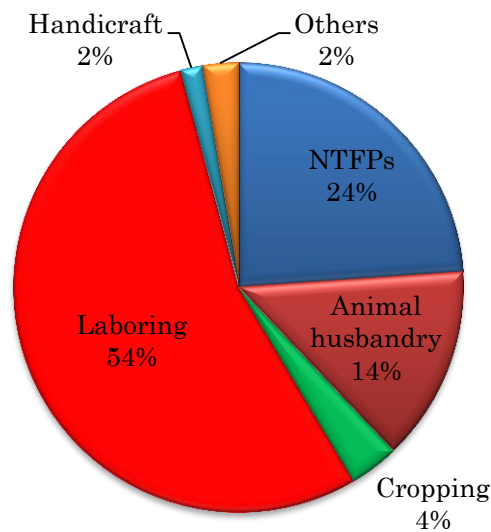


Figure 3-11: Phong ethnic group's income in 2008 by source
Source: Field survey, 2011

Figure 3-9, Figure 3-10, and Figure 3-11 say ethnic group's income composition in 2008. The Pao and the Hmong ethnic group's main income sources were animal husbandry (49% and 44% respectively), while the Phong ethnic group's one was laboring (54%).

2) Resettled households' expenditures

Table 3-2 shows resettled households' living expenditures in 2011 by ethnic group. For food and beverage, the Phong ethnic group spent more than the Pao and the Hmong ethnic groups covering 56%, 30%, and 4% respectively of their total expenditures in 2011. In contrast, for machinery, the Hmong ethnic group spent 83% while the Pao ethnic group did so only 33% of their total expenditures in 2011. And the Phong ethnic group did not spend money on machinery in 2011.

Table 3-2: Resettled households' expenditures in 2011 by ethnic group

Section	Ethnic group		Pao		Hmong		Phong		
				%		%		%	
Food & beverage	M	2,470,927	30		1,033,926	4		771,611	56
	Min.	120,000			0			79,000	
	Max.	10,150,000			11,000,000			1540,000	
Clothes & personal health care	M	1,174,878	14		1,049,296	5		279,444	20
	Min.	0			0			0	
	Max.	11,110,000			6,100,000			1,280,000	
Energy, lighting and water	M	1,372,073	17		1,337,778	6		172,500	13
	Min.	130,000			67,000			50,000	
	Max.	5,500,000			12,600,000			350,000	
Machinery	M	2,706,951	33		19,006,852	83		0	0
	Min.	0			0			0	
	Max.	60,000,000			200,300,000			0	
Agricultural inputs/tools	M	109,463	1		156,852	1		36,722	3
	Min.	0			0			0	
	Max.	600,000			890,000			115,000	
Social events & others	M	425,878	5		201,778	1		110,278	8
	Min.	100,000			0			0	
	Max.	1,400,000			1,350,000			325,000	

Source: Field survey, 2011

Villagers could easily find food and beverage, clothes and personal health care, and energy and lighting such as gasoline at the village (Photo 3-3; Photo 3-4; and Photo 3-6). In addition, Vietnamese merchants regularly come to Nongxong village to sell various daily life goods (Photo 3-5).



Photo 3-3: Host villager's grocery store and gasoline station in Nongxong resettlement village
Source: Field survey, 2011



Photo 3-4: Resettled villager's grocery store in Nongxong village
Source: Field survey, 2011



Photo 3-5: Vietnamese merchant regularly come to Nongxong village to sell goods
Source: Field survey, 2011



Photo 3-6: Host villager's early morning meat shop in Nongxong village
Source: Field survey, 2011

3.5 Sampling and data collection

After selecting a case study resettlement village, interviews with eight key persons, including village chief and livelihood development extension workers from November 5th to 21st, 2011, were conducted. The purpose of interviews was to obtain information on livelihood development extension activities. Over the same period, a survey on socioeconomic conditions of all resettled households was also conducted. Furthermore, data on livelihood adaptation and values were collected by structured interview with 74 households (Phong ethnic: 16 households; Hmong ethnic: 29 households; and Pao ethnic: 29 households) sampled at random from the 91 households of Hmong, Phong, and Pao ethnic groups (Table 3-3) from March 13th to April 6th, 2012.

Table 3-3: Population and households by ethnic group in Nongxong village

Ethnic group	Households: 246			Population: 1,570 (100%)		
	Host village (Nongxong)	Resettlement Villages		Host village (Nongxong)	Resettlement Villages	
		Somboun	Phabang		Somboun	Phabang
Air	-	1	-	-	3	-
Bo	-	1	-	-	7	-
Hmong	79	1	30	580	12	239
Kalerng	4	-	-	17	-	-
Khah	4	-	-	20	-	-
Khmu	13	-	-	82	-	-
Khouan	-	-	1	-	-	7
Lao Loum	1	-	-	8	-	-
Man	-	1	7	-	5	39
Mearn	2	3	-	14	15	-
Mon	-	-	1	-	-	2
Pao	-	16	26	-	81	128
Phong	-	12	6	-	53	34
Phou Thay	2	-	-	17	-	-
Phouan	2	-	-	10	-	-
Tai Toum	1	-	-	5	-	-
Yeng	7	-	-	46	-	-
Yor	22	-	-	135	-	-
Others	-	1	2	-	-	11
Total (%)	137	36	73	934(60%)	176(11%)	460(29%)

Source: Field survey, 2011

Table 3-4 shows a summary of data collections, adopted theories, and analytical tools in this Ph.D. dissertation. The objectives of Chapter IV are to identify (1) cultural elements adopted practically in the implementation of resettlement associated with hydroelectric power development and (2) the sense of value behind such cultural elements. This Chapter IV used qualitative method such as interviews with project managers and staff, focus group interviews with key persons such as village chiefs, elders, and clan leaders, and used descriptive statistics and Fisher's Exact Test (Formula of this test is available on page 83), based on the culture theories of Hofstede G., Hofstede G.J., and Minkov M. (2010), Rokeach (1973), and Komin (1991). Fisher's Exact Test is suitable to test statistically significant means difference among ethnic groups with category data and small sample sizes (while Chi-Square Test is suitable with the large sample size).

Chapter V attempts to ascertain the state of livelihood adaptation of resettlers from the five aspects of livelihood. One-Way Analysis of Variance (ANOVA) (Formula of this test is on page 101) was applied for data analyses to see whether there are statistically significant means difference of livelihood adaptation level among the three ethnic groups.

The aim of Chapter VI is to determine characteristics of the relationship between culture and the social adaptation of people who are relocated to the resettlement site. This Chapter adopts theories of Rokeach (1973), Komin (1991), and Hofstede G., Hofstede G.J., and Minkov M. (2010), using multiple regressions with the Stepwise and Enter methods as an analytical tool. Data on livelihood adaptation and degree of sense of values were collected by the structured interview with the sampled 74 households.

Table 3-4: Summary of data collections, adopted theories, and analytical tools

Main Chapters	Data collections and analyses	Adopted theories	Analytical tools
Chapter IV	<ol style="list-style-type: none"> 1. Key informant interviews with project managers and staff 2. Focus group interviews with village chief, elders, and clan leaders 3. Semi-structured interviews 4. Transect walks 5. Culture is measured with 5- scale categories. People were asked how much each item (value) is important to their life (from 1 is very little or no importance to 5 is utmost importance) 	Hofstede G., Hofstede G.J., and Minkov M., 2010; Rokeach, 1973; Komin, 1991	Qualitative, Descriptive statistics; Fisher's Exact Test
Chapter V	<ol style="list-style-type: none"> 1. Livelihood adaptation was measured with 24 indicators. 2. Responses are both qualitative and quantitative. 3. All data is converted to quantitative data (except economic aspect due to data limitations) with a simple mathematic formula 	Rural Livelihood Assets	Descriptive statistics; ANOVA
Chapter VI	<ol style="list-style-type: none"> 1. Cultural score is sum of 36 values score measuring in 5- scale categories (same data as Chapter IV) 2. Social adaptation is measured with eight indicators (See Table 5-1) 	Rokeach, 1973; Komin, 1991; and Hofstede G., Hofstede G.J., and Minkov M., 2010	Multiple regression

Source: Author, 2012

Table 3-5: Characteristics of sampled households by ethnic group

Characteristics		Ethnic group			Total (Household) (74)
		Phong (n=16)	Hmong (n=29)	Pao (n=29)	
Gender	Male	9	14	16	39
	Female	7	15	13	35
Age (years)	Mean	46	38.36	38.07	39.94
	SD	16.85	14.88	12.54	14.651
Schooling (years)	Mean	1.67	1.1	2.93	1.92
	SD	1.83	2.82	3.17	2.87
Household size (Number of persons)	Mean	4.67	7.62	5	5.97
	SD	1.63	2.71	1.43	2.45
Beliefs (Number of households)	Animism	16	16	13	45
	Animism & Buddhism	0	3	16	19
	Christianity	0	10	0	10
Main spoken language		Phong	Hmong	Lao	

Source: Field survey, 2011-2012

Table 3-5 shows characteristics of sample households by ethnic group. The average age of respondents from the Phong ethnic group was 46 years old, while the average age of respondents from the Hmong and the Pao ethnic groups was respectively 38 years old. The average number of years of schooling was 2.92 years for the Pao ethnic group, followed by 1.67 years for the Phong ethnic group and 1.1 years for the Hmong ethnic group. The average number of household members was 7.62 persons for the Hmong ethnic group, 5 persons for the Pao ethnic group, and 4.67 persons for the Phong ethnic group. These three ethnic groups have different beliefs. All Phong households believe in Animism, while the Pao households believe in both Animism and Buddhism, and the Hmong households believe in Animism, in both Animism and Buddhism, and in Christianity. Before the resettlement, the Phong ethnic group's main income sources in 2008 were labouring (54%) and NTFPs 24% (Figure 3-10); The Hmong ethnic group's income sources in 2008 were from animal raising (44%) and from

cropping (24%) (Figure 3-9). And the Pao ethnic group's main income sources in 2008 were animal raising (49%) and cropping (19%) (Figure 3-8).

From social, cultural, and economic point of views, these three ethnic groups were definitely different because they engaged in different livelihood activities for earning a living. Their livelihood experiences at their original villages would influence their strategies for restoring/re-establishing their livelihoods at resettlement site.

In addition, differences in levels of education, household size, language, and sense of values among these ethnic groups would limit interpersonal communication with other community members. All three ethnic groups have different religious beliefs, which make them have different ways of understanding the world along with different degree of sense of values and different ways of living.

CHAPTER IV PROJECT AFFECTED PEOPLE’S CULTURE AND RURAL RESETTLEMENT PROJECT IN LAOS

4.1 Introduction

Instead of delivering development to its people, the Government of Laos (GoL) is bringing people to development. Through the resettlement, the GoL also plans to achieve cultural integration, i.e. persuading minority ethnic groups to adopt customs of dominant ethnic groups such as the Lao ethnic group, especially the livelihood activities. Achieving in bringing people to development is difficult in practice due to the diversity of ethnic groups with rich cultures and livelihood traditions. Previous studies (Chamberlain, 2007; Daviau, 2006; European Union, 2011; Evrard & Goudineau, 2004; Lyttleton, Cohen, Rattanaovong, Thongkhamhane, & Sisaengrat, 2004) show that social and cultural conflicts had occurred in resettlement sites in the past decades and that more resettlements would occur in near future due to the state development plan of hydropower. To build a community/village with varied ethnicities, it is firstly necessary to understand how cultural considerations could be appropriately taken into consideration in development intervention by the GoL. Therefore, the objective of this Chapter IV is to identify cultural elements adopted practically in implementation of resettlement associated with hydroelectric power development and sense of values behind such cultural elements.

4.2 Methodology

4.2.1 Concept and measurement of culture

According to the Oxford Dictionary (7th edition), culture refers to customs and beliefs, art, way of life, and social organization of a particular country or group. Culture is

produced in two different ways: in experiences of everyday interactions themselves; or by specialized culture-producing organizations (Collins, 1985). According to the anthropologist (Hofstede G., Hofstede G.J., & Minkov M., 2010), total concept of culture is inherited in four different levels of depth: symbols, heroes, rituals, and values. Symbols include words, gestures, pictures, or objects that carry a particular meaning only recognized as such by those who share this culture. Heroes include persons, alive or dead, real or imaginary, who possess characteristics that are highly prized in a culture and thus serve as models for behaviour. Rituals include collective activities, technically superfluous to reaching desired ends, but within a culture are considered as socially essential. Values include broad tendencies to prefer certain states of affairs over others.

As mentioned above, various definitions to describe “culture” are complex, and it is not easy to comprehend culture by using a single definition. However, when measuring cultural differences, it is common to start with values that are the core of culture. Currently, there is a limited amount of cultural studies on Lao society. Literature on Lao people’s values is particularly scarce. A cultural study on Thailand, which is similar to Laos in terms of language, beliefs, and lifestyle, is a valuable reference for this Ph.D. dissertation. To measure values of Thai people, Komin (1991) replicated the procedures used by Rokeach (1967 through 1971) using a ranking approach. This approach was proved generally reliable and valid in cross-cultural researches (Shawyun & Tanchaisak, 2006). In Komin’s Thai Value Survey (1991), the instruction to respondents was to arrange values in two lists of instrumental and terminal values in order of importance to them, as guiding principles in their lives. However, this procedure of measuring values by Komin (1991) has some limitation when the respondents are illiterate.

It is acceptable to measure culture in an indirect way via values that have already

been proved by many previous studies mentioned above. However, some values existing in a country may not exist in other countries. In this Ph.D. dissertation, values are standards that guide conduct in a variety of ways (Rokeach, 1973). In addition, two lists of values and procedure for measuring values need to be localized. For this Ph.D. dissertation, 43 values (Table 3-1) stated by Komin (1991) based on Thai society are localized into 36 values applicable to Lao society (Table 4-1). Structured interviews are conducted instead of self-ranking because almost all villagers had difficulty in understanding the questions and the majority of them are illiterate.

Table 4-1: Modification of values used in this Ph.D. dissertation

Coding	Values
V ₁	Brotherhood spirit & Interdependence, mutually helpfulness, Kind helpfulness (Being kind and helping others without expecting anything in return; Depending on each other, being helpful to each other; Being kind, empathizing, and ready to help others; Being nurturing, kind, and gentle to others)
V ₂	Social recognition (Being popular, respected, and highly regarded in society)
V ₃	Exciting life (Having a colorful, exciting and adventurous life)
V ₄	Comfortable life, having status and wealth (Being rich, having wealth and helpers obtained through money; Being successful in one's job; Having a job, money, sufficient wealth, and good health)
V ₅	True friendship (Having true and loyal friends who understand us)
V ₆	Mature love with the same ethnicity (Having true love and true understanding with an opposite sex partner with the same ethnicity)
V ₇	Religious spiritual life to guide in living (Having high moral standards and religiously-grounded mind)
V ₈	Social relationships (Having good human relations and being accepted in social work)
V ₉	Beauty and abundance of nature (Being an appreciator of nature)
V ₁₀	Wisdom and knowledge (Being satisfied with knowledge, experience, and wisdom)
V ₁₁	Self-esteem (Having one's pride; Being proud and maintaining self-values)
V ₁₂	Community/village security (Being in a peaceful world that has no conflict; Living in a community that is advanced, secure, and free from invasion)
V ₁₃	Freedom/independence (Having freedom in all matters, being oneself, depending on oneself)
V ₁₄	Happiness/inner harmony (Being satisfied in what one has and is, having a calm and peaceful mind)

Table 4-1: Modification of values used in this Ph.D. dissertation (continued)

Coding	Values
V ₁₅	Equality (Being in a society that has equality and justice)
V ₁₆	Family happiness/security (Having a warm, smooth, loving, closed and secure family life)
V ₁₇	Pleasure (Having happiness, fun, and recreation with comfort life)
V ₁₈	Being self-controlled, tolerant/restrained (Self-disciplined, tolerant in all matters)
V ₁₉	Believing in oneself and independence
V ₂₀	Being responsive to situations/opportunities (Being flexible, clever, adjusting to situations and opportunities)
V ₂₁	Contented (Accepting one's true status and being satisfied with what one has)
V ₂₂	Educated and capable (Searching for higher education because education is wealth; Possessing capability; Being determined and having work skills)
V ₂₃	Calm/cautious (Being calm, restrain emotions, and discreet)
V ₂₄	Caring/considerate (Refraining from acting aggressively, keeping relationships and friendships)
V ₂₅	Forgiving and non-vengeful (Being forgiving)
V ₂₆	Grateful (Being honest and loyal to others)
V ₂₇	Ambitious/hardworking (Setting high goals and work hard towards those goals)
V ₂₈	Polite/humble (Being polite and humble; Having good manners)
V ₂₉	Obedient/respectful (Respecting and listening to the elders who are more experienced; Being obedient)
V ₃₀	Courageous (Standing for one's opinions and beliefs)
V ₃₁	Honest/sincere (Being truthful and sincere)
V ₃₂	Responsible (Knowing one's duties, responsibilities, and being on time)
V ₃₃	Fun-loving, humorous (Appreciating fun, being witty, humorous; Having a cheerful and relaxed life)
V ₃₄	Imaginative, creative (Being imaginative and artful)
V ₃₅	Clean/neat (Appreciating cleanliness and tidiness)
V ₃₆	Broadminded, open-minded (Being open to opinions and beliefs that are different from one's own)

Source: Author, 2012(based on Komin, 1991)

4.2.2 Data collections and analyses

Interviews with project managers and staff, focus group interviews with key persons such as village chiefs, elders, and clan leaders, and transect walk were conducted to gather existing documents, reports, information, and data for research objectives. A survey on values was conducted using structured interview, mainly by the author with assistance from clan leader and the Hmong language translators. In case of the Hmong ethnic group, respondents

were interviewed in Hmong language. The interviews were done at the respondents' houses where they mostly feel comfortable, have more discretion, and have enough time for interviewing. On average, it took 45 minutes for one interview. Respondents were asked how important a certain item (value) was to their life using scale categories (from 1- of very little or no importance to 5- of utmost importance). Then the 5-scale categorical data were converted into three levels: low (1, 2), medium (3), and high (4, 5). Information and data gathered from the field survey were analyzed qualitatively and quantitatively. Fisher's Exact Test was applied to test statistical significance of difference in importance level of value among the three ethnic groups.

Fisher's Exact Test is useful for categorical data with the small sample size. This test is an alternative of Chi-Squared Test when the sample size is small. Fisher's Exact Test was applied to test statistically significance among the three ethnic groups. It is used to examine the significance of association (contingency) between two or more kinds of classification (with the large sample, a Chi-Squared Test can be used in this situation). Field (2013) explains that Chi-Square Test has one problem with the small sample size, which is that the sampling distribution of the test statistic has an approximate chi-square distribution. The larger the sample size is, the better approximation becomes, and in the large sample size the approximation is good enough to not worry about the fact that it is an approximation. In the small sample size, the approximation is not good enough, making significance tests of the chi-square distribution inaccurate. In Chi-Square Test, expected frequency in each cell must be greater than 5. When expected frequencies are greater than 5, the sampling distribution is probably close enough to a perfect chi-square distribution for us not to worry. However, if the expected frequencies are too low, it probably means that the sample size is too small and that the sampling distribution of the test statistic is too deviant from a chi-square distribution to be

of any use. Therefore, Fisher’s Exact Test came up with a method for computing the exact probability of the chi-square statistic that is accurate when the sample size is small (Field, 2013).

In case we have the following 3 by 3 contingency table. The row total and the column total are called “marginal frequencies”. When the both marginal totals are fixed, the probability that we get the following table under the condition that the share of each category is the same among groups can be expressed as hypergeometric distribution. Formula of Fisher’s Exact Test¹ for 3x3 contingency table is as follows:

Table 4-2: Fisher’s Exact Test for 3x3 contingency

Category \ Group	1	2	2	Row total
1	<i>a</i>	<i>b</i>	<i>c</i>	<i>a+b+c</i>
2	<i>d</i>	<i>e</i>	<i>f</i>	<i>d+e+f</i>
3	<i>g</i>	<i>h</i>	<i>i</i>	<i>g+h+i</i>
Column total	<i>a+d+g</i>	<i>b+e+h</i>	<i>c+f+i</i>	

Source: Author, 2015

$$p = \frac{(a+b+c)!(d+e+f)!(g+h+i)!(a+d+g)!(b+e+h)!(c+f+i)}{n! a! b! c! d! e! f! g! h! i!}$$

where

a, b, c, d, e, f, g, h, and i are the number of observations in each cell;
n is the total sample size.

We calculate the all the possible cases and then pick up the rarer cases than the observed case. Then the total of the probabilities of all the rarer case is called “*p* value”. The *p*-value expresses how the observed case is rare under the condition that the share of each category is the same among groups.

¹ For more details on this Fisher’s Exact Test, please refer to Field, 2013, p. 723-724

4.3 Results and discussions

4.3.1 Practical cultural elements in resettlement processes

Resettlement project associated with dam construction consists of three processes. They are (I) planning and consultation process, (II) physical relocation process, and (III) livelihood restoration or livelihood development process. This Chapter IV focuses on process I and process II.

Local languages such as Lao, Hmong, and Phong are communication tools in meetings. During consultations, Lao and Hmong languages were used for communication to ensure that all project-affected people (PAP) participating in meetings could understand consultation contents. Consultations were facilitated by locally trained staff and organized on the same day for all ethnic groups and villagers were separated into groups according to ethnicity and gender. However, consultations relating to livelihood restoration activities at resettlement sites were organized with ethnic groups being mixed. When people (particularly the Phong and the Hmong ethnic groups) could not understand discussion, Lao translations of questions and discussions were made during consultations.

Based on interviews with resettlers and Theun-Hinboun Expansion Project (THXP) staff and reviewing official documents, involvement of PAP in (1) planning and consultation process (I) and physical relocation process (II) could be described through three stages: (1) information gathering and dissemination, (2) various consultations, and (3) actual activities. Through these three involvements, some certain practical cultural elements were identified under symbols, heroes, rituals, and beliefs (Table 4-3).

Table 4-3: Practical cultural elements in PAP’s involvement in resettlement processes

Process Culture	Consultation and Planning	Physical relocation
Symbols	Structure of house; location of house	
Heroes	Village chief; elders; clan leaders; traditional/spiritual leaders	
Rituals	Erection of the first post; spirit posts of the house; relocating village; leaving/relocating cemetery; new village and new house entering ceremonies	
Beliefs	“ Harm-Phi”, “ Meau Dee”	

Source: Field survey, 2011

1) Symbols

Symbols were identified as structure and location of house. Heroes were identified as village headmen who were same ethnicity as villagers, elders, clan-leaders, and traditional/spiritual leaders. Structure of compensatory houses was designed and constructed by project implementers based on the PAP’s previous house style. At planning process, houses and village layouts were designed and constructed with participation of PAP by selecting their preferred houses, giving comments, and suggesting changes through their own languages. As a result, PAP selected their house designed based on the traditional ethnic houses. In addition, location of compensatory house is important for resettlers. Most of resettlers preferred to live near to their relatives and friends who were from the same village and the same ethnic group.

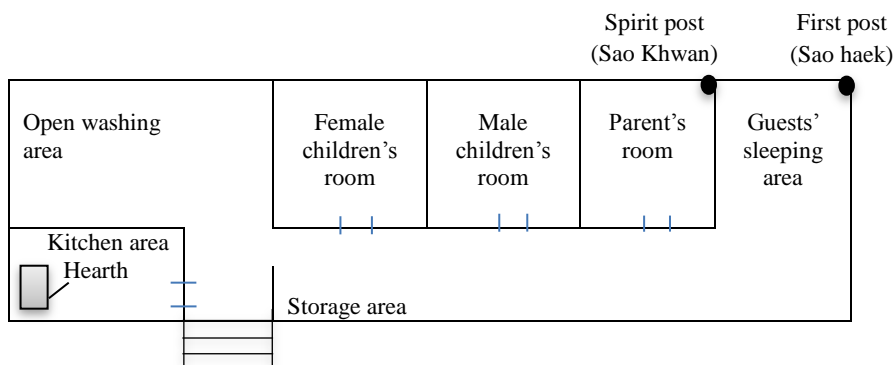


Figure 4-1: Khmu ethnic group's house layout
Source: Field survey, 2011



Photo 4-1: Pao ethnic group's house
Source: Field survey, 2011

Figure 4-1 shows house layout of the Khmu ethnic group. This design is similar to the Tai-Lao, which the Pao ethnic group belongs to. The house is constructed on poles above the ground with ladders and storage areas below the house for equipment and keeping animals.

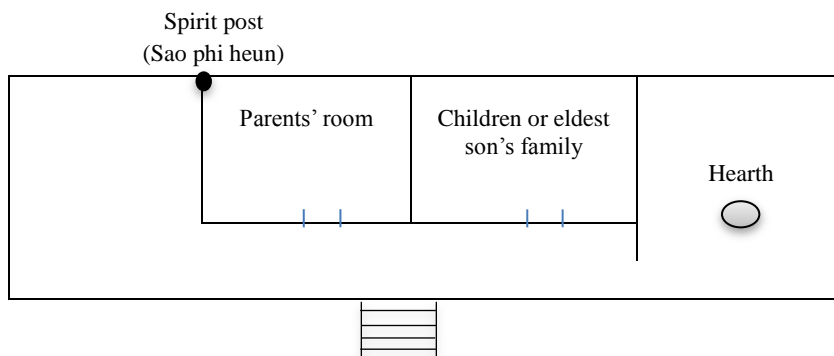


Figure 4-2: Phong ethnic group's house layout
 Source: Field survey, 2011



Photo 4-2: Phong ethnic groups' house
 Source: Field survey, 2011

Figure 4-2 shows house layout of the Phong and Thaveung ethnic groups. Their houses lack or have only very small verandas. The area in front of sleeping rooms serves as a place to socialise and eat.

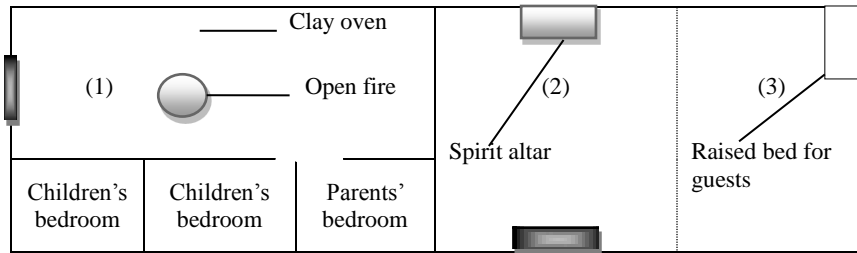


Figure 4-3: Hmong ethnic group's house layout
Source: Field survey, 2011



Photo 4-3: Hmong ethnic group's house
Source: Field survey, 2011

Figure 4-3 shows house layout of the Hmong ethnic group. The house is constructed directly on the earth with no pole. It consists of three main sections: (1) sleeping, cooking, and eating, (2) religious, and (3) socialising and guests sections.

Figure 4-1, Figure 4-2, and Figure 4-3 show two cultural differences in type of house layout: the post of house and the spirit altar. The Pao houses have two spirit posts in the east (Figure 4-1): the first post (*Sao haek*, in Lao) and spirit post (*Sao Khwan* in Lao). The Phong houses have a spirit post (*sao phi heun*, in Lao) in the west (Figure 4-2), while the Hmong houses have no spirit posts but do have a spirit altar inside (Figure 4-3). The Pao and Phong

spirit posts have different meanings based on their respective beliefs. The Pao spirit post refers to *Sao Khwan* based on Buddhism (*Sao* in Lao means pole and *Khwan* is synonymous with the word soul in English). But the Phong spirit post refers to *Sao Phi Heun* based on Animism (*Phi* in Lao means ghost and *heun* means house). As shown in Table 3-5, the Pao and the Phong ethnic groups have different beliefs. Therefore, it concludes that belief makes differences for the Pao and the Phong ethnic groups in meaning and interpreting the same thing in terms of symbols discussed above.

2) Heroes

What constitutes a hero differs among three ethnic groups. According to consultation staff and a manager of the social development division of THXP, for the Pao ethnic group, elders and village chiefs are highly respected, while religious/spiritual leaders are the most respected for the Hmong ethnic group. However, there are no particular heroes for the Phong ethnic group. In the interview with the Phong ethnic group members, respondents said that every Phong person has his own individual heroes who are his relatives.

Local villagers, including respected elders or clan leaders with indigenous knowledge should be consulted (Alton & Rattanavong, 2004). Alton and Rattanavong (2004) discuss heroes as an example of an important cultural element. They mention that key changes in culture arise in roles and functions of traditional council of elders and other village organizations. Although these roles are quite different for some ethnic groups, like Akha and Katu, the decline of their influence in official functions is a destabilizing factor in respect to these societies. They add that these traditional positions and those of clan leaders are underutilized in development projects (Alton & Rattanavong, 2004).

In Lao rural society, headman and council of elders preside over all ceremonies involving births, marriage, and death, as well as some rituals to honor the village guardian

spirit in rural Lao communities (Schliesinger, 2003). During planning and consultation process, PAP expressed village's spiritual desire and presided over actual ceremonies such as rituals in the physical relocation process. For instance, on the day of physical relocation, the eldest person of village leaves his house first and then ordinary persons follow. If the eldest person does not lead in moving, participants (villagers) refuse to carry out the physical relocating. In this respect, heroes play a very important role in such situations.

3) Rituals

Rituals are identified as erecting of the first post and the spirit post of house, relocating village, and leaving/relocating cemetery ceremonies. There are four necessary ceremonies that need to be implemented. They are (1) erecting the first post and the spirit post of house, (2) relocating village, (3) leaving/relocating cemetery, and (4) entering into the new village and new house. The preference of cultural ceremonies is delivered during consultation and planning and physical relocation processes. The THXP provided the financial support to compensate cost of all ceremonies of villages approved by the district authority consideration.

Erection of the first post and the spirit post of the house were conducted in case of the Phong and the Pao ethnic groups but were not necessary for the Hmong ethnic group. This ceremony was conducted based on the preferred day of the individual house owner before constructing house.

In relocating a village, territorial spirit (Phi Meuang/Phi Ban) needs to be informed, and all villagers are expected to participate before village being relocated to a new site. THXP provided necessary items for the territorial spirit informing ceremony such as one pig, two chickens, two jars of Lao traditional wine, some candles, tea, and white paper.

Leaving/relocating cemetery is another necessary ritual to be carried out. Financial support for this ceremony has two categories: a child's tomb is 450,000 kip (approximately

US\$ 50) while an adult's tomb is 1,250,000 kip (approximately US\$ 150). For the Hmong ethnic group (in Phabang village), each household performed the ceremony individually while other ethnic groups conducted such ceremonies all together at once. For new house entering ceremony, each house received one chicken. For other necessary items to perform ceremonies, the house owners are responsible for providing such necessary items by themselves (Theun-Hinboun Power Company, 2009a; Theun-Hinboun Power Company, 2009b).

4) Beliefs

From findings, *Beliefs* are “Harm-Phi” and “Meau Dee”. Recognizing such cultural elements is essential because it helps to lessen psychological damages to PAP when they are fulfilled in their spiritual desires. At consultation, people in the Hmong ethnic group said that they would like to move together as an ethnic group if possible (Theun-Hinboun Power Company, 2008). According to the focus group interview with village chiefs and elders, for all ethnic groups, location of father's and son's houses must be next to each other. They believe if another person's house is located between their houses, they will have an unhappy life and difficulties in earning a living. Such belief is called ‘Harm-phi’ in Lao language means “carrying a dead human body” in English. This belief is associated with the process of allocating a compensatory 1-ha of rice field for one resettled household during the process of dividing the compensatory rice fields in 2011. According to focus group interviews with village chiefs, the Hmong and the Phong clan leaders, and elders, the rice field or a piece of land for compensation must be located in accordance with their belief on ‘Harm-phi’. They said that it is impossible for them to accept the land if it is not accordance to their belief.

Figure 4-4 shows seven cases of land locations that violated the “Harm-Phi” belief. PAP reported that they would not accept compensatory house and farmland if it falls in any of these cases that violate their belief. They explained and gave reasons that they would face

many unfortunate events and difficulties in the future of earning a living.

Case 1	Father's land/house	Mr. X's land/house		Son's land/house
Case 2	Mr.A's land/house	Mr. X's land/house		Mr.A's land/house
Case 3	Mr.A's land/house	Forest		Mr.A's land/house
Case 4	Mr.A's land/house	River/stream (Width <3 meters)		Mr.A's land/house
Case 5	Father's land/house	Mr. B's land/house	Mr. C's land/house	Mr. D's land/house
	Mr. E's land/house	Mr. F's land/house	Mr. G's land/house	Son's land/house
Case 6	Mr.A's land/house	Mr. B's land/house	Mr. C's land/house	Mr. D's land/house
	Mr. E's land/house	Mr. F's land/house	Mr. G's land/house	Mr.A's land/house
Case 7	Father's land/house	Distance > 100 meters	Mr. X's land	Distance > 100 meters

Figure 4-4: Seven cases of location of cultivated lands/of houses against local people's beliefs

Source: Field survey, 2011

Note: The 2nd and 4th columns in grey represent the one-hectare of compensatory rice field/ 1,000 m² of land taken in exchange for building compensatory house for resettlers. The hectares of compensatory rice fields are separated into two parcels in some cases because of the availability of land.

Another local belief directly associated with resettlement process of physical relations is called "Meau Dee". "Meau Dee" in Lao language means "a good day" in English. Villagers decided "Meau Dee" or the actual day when they move to the resettlement site according to their beliefs. According to the interview and personal communication with elders, all households moved into the Nongxong village resettlement site in the same year, but on different dates in April and in June, 2009. As a result, completion of physical relocation of all households from original village to resettlement site was completed with 71 households in April and 38 households in June. At first, villagers decided month. Both April and June were the 5th and the 7th month of the year in the lunar calendar 2009. It is believed that entering a new house must be in an odd month. In Lao proverb, it is said "Keek You Koo Nee" (In English, Keek means odd number; You means stay; Koo means the even number, and Nee means be apart). Secondly, villagers decide day. In a week, there is a particular day that

villagers want to move. In the case of the Hmong ethnic group, Thursday is the best day for moving and entering the new house. In an interview with a Hmong clan leader, he said, “Our ancestors have taught us that when we move or relocate, the best day is Thursdays. Thursday is peaceful and sincere. It will bring us a happy life at our new house”.

4.3.2 Values behind practical cultural elements

Cultural elements such as symbols, heroes, rituals, and beliefs play a practical and significant role in consensus formation during consultations and planning process and physical relocation process. However, degree of value related to symbols, rituals, and beliefs is different among three ethnic groups, while the degree of value related to heroes is the same among three ethnic groups.

According to results from Fisher’s Exact Test (Table 4-4), there were 18 values out of 36 values in which there was a statistically significant difference among three ethnic groups at $p < 0.05$. In addition, the results indicate that out of 36 values, 18 values were not statistically significantly different at $p < 0.05$ among three ethnic groups (Appendix D). Therefore, it could be concluded that in overall different ethnic groups have some similarities and some differences in terms of values that are a fundamental part of their culture.

Table 4-4 show three ethnic groups sensed or placed different level of importance in the value related to religious/spiritual beliefs guiding their lives (V_8). This value is embodied in cultural elements, i.e., symbols, rituals, and beliefs in the resettlement process, particularly consultation and planning and physical relocation as it was described in symbols, rituals, and beliefs. Based on these findings, it could be concluded that these cultural elements are important for all three ethnic groups to different levels.

Table 4-4: Frequency distribution of degree of value's importance by ethnic group in 18 values with significant differences

Coding	Value	Ethnic group	Low	Medium	High	<i>P</i> -value
V ₁	Brotherhood spirit, independent, mutually helpful, kind-helpful	Hmong	0	0	29	0.000
		Pao	0	19	10	
		Phong	2	1	13	
V ₂	Social recognition	Hmong	0	2	27	0.001
		Pao	1	14	14	
		Phong	1	3	12	
V ₃	An exciting life	Hmong	1	2	26	0.005
		Pao	3	11	15	
		Phong	1	8	7	
V ₅	True friendship	Hmong	0	12	17	0.033
		Pao	0	18	11	
		Phong	1	4	11	
V ₈	Religious/spiritual life to guide in living	Hmong	0	3	26	0.003
		Pao	0	7	22	
		Phong	1	3	12	
V ₉	Social relation	Hmong	0	0	29	0.009
		Pao	0	2	27	
		Phong	1	2	13	
V ₁₂	Community/village security	Hmong	0	0	29	0.046
		Pao	0	6	23	
		Phong	0	3	13	
V ₁₃	Freedom/independence	Hmong	0	6	23	0.004
		Pao	3	16	10	
		Phong	2	8	6	
V ₁₄	Happiness/inner harmony	Hmong	0	1	28	0.001
		Pao	2	12	15	
		Phong	0	4	12	
V ₁₉	Believe in oneself and independent	Hmong	0	2	27	0.000
		Pao	0	8	21	
		Phong	1	9	6	
V ₂₀	Responsive to situations/opportunities	Hmong	0	4	25	0.002
		Pao	0	14	15	
		Phong	0	10	6	
V ₂₁	Contented	Hmong	0	3	26	0.027
		Pao	0	12	17	
		Phong	0	5	11	

Table 4-4: Frequency distribution of degree of value's importance by ethnic group in 19 values with significant differences (continued)

Coding	Value	Ethnic group	Low	Medium	High	<i>P</i> -value
V ₂₃	Calm/cautious	Hmong	1	2	26	0.009
V ₂₄	Caring/considerate	Hmong	0	3	26	0.030
		Pao	2	11	16	
		Phong	0	4	12	
V ₂₇	Ambitious/hardworking	Hmong	0	1	28	0.039
		Pao	0	6	23	
		Phong	0	5	11	
V ₂₈	Polite/humble	Hmong	0	4	25	0.010
		Pao	0	8	21	
		Phong	0	9	7	
V ₃₄	Imaginative/creative	Hmong	0	4	25	0.019
		Pao	0	11	18	
		Phong	0	8	8	
V ₃₅	Clean/neat	Hmong	0	4	25	0.032
		Pao	0	13	16	
		Phong	0	6	10	

Source: Author's computation, 2012

On the other hand, Appendix D shows that there is no difference in levels of sensing or placing level of importance in the value related to obedient/respectful values (V₂₉) among three ethnic groups. This value is related to cultural element of heroes. According to findings (Heroes), it was seen that different ethnic groups have their own heroes. Based on these two findings, it could be concluded that different ethnic groups have the same degree of sensing or placing level of importance in the value related relating to cultural elements, e.g., heroes. It implies that in each ethnic group, people are obedient and respectful to their own heroes at same level, even though heroes vary from one ethnic group to another. Alton and Rattanavong (2004) cite that when interventions are planned in rural areas of Laos, cultural consequences of those interventions should be anticipated as much as possible. Local villagers, including respected elders or clan leaders with indigenous knowledge should be consulted (Alton & Rattanavong, 2004). Heroes, such as a village headman with the same ethnicity, council of elders, clan leaders, and traditional/spiritual leaders, play a key role because they preside over

all important events of community members' lives such as birth, marriage, and death.

4.4 Conclusions

The cultural elements of PAP are identified through PAP's involvements in planning and consultation process and physical relocation process. Symbols are identified as the structure and location of house. Heroes are identified as village headmen who are the same ethnicity as villagers, elders, clan leaders, and traditional/spiritual leaders. Rituals are identified as erecting the first post and the spirit post of the house, relocating village and leaving/relocating cemetery ceremonies. Beliefs are identified as "Harm-Phi" and "Meau Dee". There are significant differences in practices as well as in senses of values related to those cultural elements among the Phong, the Hmong, and the Pao ethnic groups. Symbols, rituals, and beliefs are important to different ethnic groups to different levels while heroes are important to them to the same level.

To increase the efficiency of project implementation, especially in planning and consultation process and physical relocation process, where ethnic groups are mixed, cultural consideration must be taken into account. Culture governs people's lives in a multifaceted way. The results from this Chapter IV suggest that any development interventions associated with resettlements must truly respect local culture (symbols, heroes, rituals, belief, and value) of PAP and well as of host villagers in the resettlement site.

CHAPTER V STATE OF PROJECT AFFECTED PEOPLE'S LIVELIHOOD ADAPTATIONS

5.1 Introduction

Project-affected people (PAP) face serious problems and difficulties in restoring their livelihood, especially in the first three years after resettlement. In Laos, previous studies on this issue have shown that sociocultural difficulties arise in resettlement areas and resettlers frequently fail to adjust themselves to entirely new livelihoods and suffer from health problems and the poverty. However, the further study is still needed due to the fact that even more resettlements will arise because of more hydropower projects aimed at national economic development in Laos.

In this Ph.D. dissertation, five principles of sustainable livelihood approach are adopted and modified to investigate livelihood of rural people in the context of resettlement that entirely changes livelihoods of resettlers. The aim of this method is to use the five aspects of livelihood of rural people to see how well people have adjusted to their new environments after moving into resettlement sites.

In infrastructure development projects such as the hydropower development, PAP are relocated and compensated according to rules, laws, and regulations of the country. They are treated under same policy in receiving trainings to improve their knowledge and skills and receiving livelihood development services, etc. They are provided with basic infrastructure like roads, clean water, health centers, and school buildings. In some cases, they are relocated to same place under the same natural environment such as forest, river, mountain, and so on. Therefore, it is assumed that all affected households are provided equally with such physical and natural assets.

Scudder (2011) cites that the years immediately after the physical relocation require special attention in resettlement areas. During these initial years, resettlers must manage their new livelihood assets and livelihood strategies such as cultivated land, new jobs or income generating activities, adjusting to new neighbours, and adjusting to increased presence of government administrators. Therefore, it is important to understand resettlers' adaptation status in these initial years. Therefore, this Chapter V attempts to ascertain the state of livelihood adaptation of resettlers.

5.2 Methodology

5.2.1 Livelihood adaptation measurements

Livelihood adaptation measurement is widely used in literature on climate change adaptation, focusing on strategies used to cope with flood, drought, and dramatic climate changes as well as on adapting to/adopting new economic activities. However, livelihood adaptation measurement of rural resettlements that change the entire livelihood environment of rural people is lacking. As an approach to objective mentioned above, firstly, this Chapter V is based on five main livelihood assets developed by the Department for International Development: social, economic, physical, natural, and human assets (Krantz, 2001). Secondly, this Chapter V reviews the relevant literature to find what problems arise among resettlers during adaptation. Then, thirdly, based on actual situations from the direct observation, this Chapter V developed 24 indicators to measure livelihood adaptation (Table 5-1). As a result, livelihood adaptation in this Ph.D. dissertation refers to adjustments of oneself to an entirely new environment.

Table 5-1: List of 24 livelihood adaptation indicators

Social adaptation

- 1 Number of new friends within the same ethnic group
- 2 Relationship/communication within the same ethnic group
- 3 Feeling of trust in new friends within the same ethnic group
- 4 Number of new friends among different ethnic groups
- 5 Relationship/communication among different ethnic groups
- 6 Feeling of trust in new friends among different ethnic groups
- 7 Experiences in having conflicts with host villagers
- 8 Experiences in having conflicts with other resettled villagers

Economic adaptation

- 9 Status of credit/debt
- 10 Saving
- 11 Perception on financial changes

Physical adaptation

- 12 Feeling comfortable in living with a new house
- 13 Feeling comfortable in living with a new tap water & underground water
- 14 Feeling comfortable in living with a new lighting system (electricity)
- 15 Feeling comfortable in living with a new roads
- 16 Feeling comfortable in living with a toilet

Natural adaptation

- 17 Knowledge in NTFPs in the new forest
- 18 Frequency in collecting NTFPs in the forest
- 19 Frequency of going back to mother village to find food

Human adaptation

- 20 Experiencing in becoming sick with new disease
- 21 Knowledge gained from vegetable gardening activities
- 22 Knowledge gained from catfish-raising activities
- 23 Knowledge gained from Yangbong planting activities
- 24 Knowledge gained from other activities

Source: Author, 2012

Note: NTFPs= Non-timber forest products

In this Ph.D. dissertation, *social adaptation* (total maximum score is 76) refers to interacting with community members within the same ethnic group and among different ethnic groups for both host and resettled villagers. First, the quantity of new friends within and among ethnic groups (indicators 1 & 4). With the collected data, the number of new friends of the respondent is scored based on the interval scale: 0 = 0, 1-5 =1, 6-10 = 2, etc. This implies that respondents who report that they have no friends is given 0, respondents who report that they have 1-5 new friends is given a score of 1. Based on data collected, the

maximum score in this indicator is 18.

The relationships/communication with new friends within and among ethnic groups (indicators 2 & 5) measures frequency of communicating with others on average in a month through social, cultural, and economic activities, including going to friends' house, receiving food from friends; having drinking parties together, giving friends some food, going to collect non-timber forest products (NTFPs) together, having dinner together, friends' coming to one's house, and going to market together. The score is coded same as the previous indicator 1&4. The maximum score in this indicator is also 18.

Feeling of trust in new friends (indicators 3 & 6) is a Yes/No question and is used for asking people whether they trust their new friends via indirect questions (If you want some money, do you think your friends will lend you some?). When respondents respond “Yes”, they are given score of 1 and if “No”, they are given no score. The experiences of conflicts with host villagers and with resettled villagers (indicators 7 & 8) is also a Yes/No question and is used for asking people whether they have experienced conflicts via direct questions (Since you have moved here, have you ever had any conflicts with others?). When respondents respond “Yes”, they are given a score of 0, and if “No”, they are given a score of 1. *The economic adaptation* refers to the current financial status of respondents measured with three indicators: debt, savings, and perceptions of financial change after relocation. The *physical adaptation* (indicators 12-16) refers to feelings of comfortable and familiar living with new houses; water supply, lighting, new roads, and toilets. The *human adaptation* (indicators 20-24) refers to health, perception of gaining new skills, and knowledge from livelihood restoration activities. The *natural adaptation* refers to knowledge about new forest surroundings (indicator 17), frequency of collecting NTFPs in new forest (indicator 18), and frequency of going back to the original village to collect and find food (indicator 19).



Photo 5-1: At Nongxong village, resettled villager (left) selling her fishes taken from the river near to the original village

Source: Field survey, 2011

For indicator 17, people were tested on their general knowledge on NTFPs available and their variability. For indicators 18 and 19, the ranges of the frequency of collecting NTFPs at new forest and the frequency of going back to original village for collecting food are assigned and given scores: “Never”, “Few times until now”, “Less than 10 times until now”, “1-2 times/week”, “3-4 times/week”, “5-6 times/week”, and “every day”. For instance, if people report that they never collect NTFPs at the new forest (indicator 18), they are given a score of 1 because it implies that they are not yet familiar with the new forest. In addition, if they report that they never go back to the original village for collecting food, they are given a score of 7 because it implies that they are familiar with and have adjusted themselves to the new forest where they can find their food. Therefore, it is not necessary for them to go back to their original village for food.

5.2.2 Data collections and analyses

Interviews were conducted with eight key persons, including village chief and livelihood development extension workers, from November 5-21, 2011. A purpose of interviews was to obtain general information on livelihood development extension activities provided to PAP. Over same period, a survey on the social-economic condition of resettlers was also conducted. Furthermore, from March 13-April 6, 2012, data on livelihood adaptation were collected by the structured interview with 74 households sampled at random. Livelihood adaptation consists of five aspects discussed above: social, economic, physical, natural, and human aspects. The responses to questionnaires (except the economic aspect items) are converted into scores and the level of social adaptation is calculated with the formula:

$$SA = \frac{SA}{TMS} \times 100 (\%)$$

Where

SA= Social adaptation, AS= Actual score, and TMS= Total maximum score (TMS= 76)². The result is interpreted that as the higher the ratio the better the adaptation for people.

Then, in order to test statistically significant mean differences among three ethnic groups, One-Way Analysis of Variance (ANOVA)³ is applied. If there is no difference among the population means of groups, the following statistic follows F-distribution with degree of freedom ($m-1, n-m$).

$$F = \frac{\text{between variance}}{\text{within variance}} = \frac{\sum_i n_i (\bar{y}_i - \bar{y})^2 / (m-1)}{\sum_i \sum_j (y_{ij} - \bar{y}_i)^2 / (n-m)}$$

Where

n_i = sample size of the group i
 \bar{y}_i = sample mean of the group i

² Details of scores given to social adaptation indicators (1 to 8) are available on pages 98-99. The maximum scores are 18 for social adaptation indicators 1, 2, 4, and 5 respectively and 1 for social adaptation indicators 3, 6, 7, and 8 respectively. Therefore, 76=18+18+1+18+18+1+1+1

³ <https://en.wikipedia.org/wiki/F-test> (accessed on 30 June 2015)

\bar{y} = total sample mean
 m = the number of groups
 y_{ij} = the j observation in the i out of m groups
 n = total sample size

5.3 Results and discussions

5.3.1 State of social, physical, natural, and human adaptations

Figure 5-1 shows the level of livelihood adaptations by ethnic group. At a glance, it is apparent that three features. They are (1) comparatively high adaptation with less difference between ethnic groups in the physical and the human adaptation respectively; (2) not low adaptation but notable differences among ethnic groups in the natural adaptation, and (3) clearly low adaptation with fewer differences among ethnic groups in the social adaptation. As a result, the Phong ethnic group is likely to be different from the Pao ethnic group and the Hmong ethnic group, due to a skewed score on the natural adaptation.

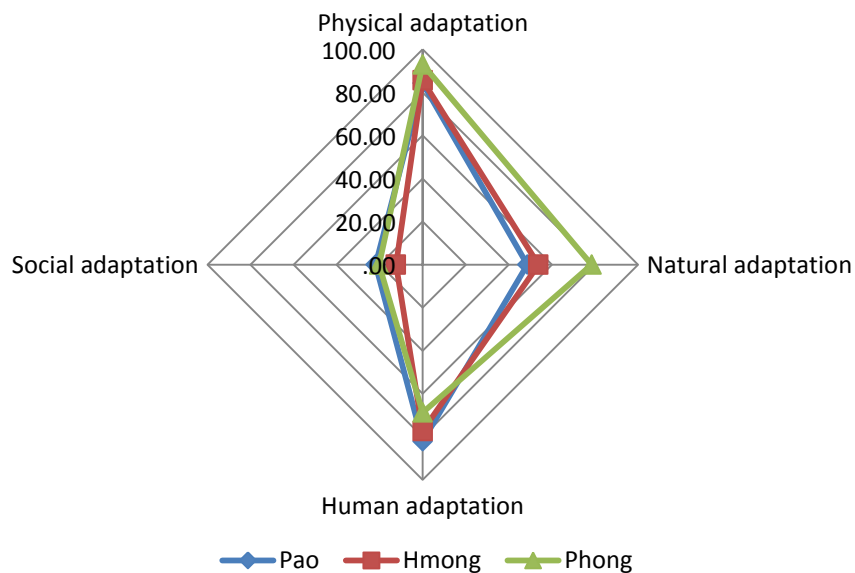


Figure 5-1: Livelihood adaptation level by ethnic group and aspect
 Source: Author's computation, 2012

Based on result of ANOVA-F Test (Table 5-2 and Table 5-3), the means of social

adaptation ($F(2, 71) = 9.949, p = 0.000$) and natural adaptation ($F(2, 71) = 24.300, p = 0.000$) among three ethnic groups have very strong statistically significant differences at $p < 0.01$. In addition, means of physical adaptation ($F(2, 71) = 6.152, p = 0.003$) among three ethnic groups have strong statistically significant differences as well at $p < 0.05$.

Table 5-2: Descriptive statistics

Adaptation	Ethnic group		
	Phong ($n=16$)	Hmong ($n=29$)	Pao ($n=29$)
	Mean	Mean	Mean
Social	20.25	12.45	21.86
Physical	93.00	85.66	84.28
Natural	78.50	53.76	48.59
Human	68.75	77.24	82.07

Source: Author's computation, 2012

Table 5-3: Result of ANOVA

Adaptation	F -statistics	P -value
Social	9.946	0.000
Physical	6.152	0.003
Natural	24.300	0.000
Human	1.886	0.159

Source: Author's computation, 2012

To further examine the statistically significant means differences between three ethnic groups, T-Test⁴ was applied as the following formula. If there is no difference between the population means of two groups, the following statistics follows t -distribution with degree of freedom (n_1+n_2-2).

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

⁴ For more details on T-Test, please refer to Field (2013), p. 365-368

where

n_i = sample size of the group i

\bar{x}_i = sample mean of the group i

s^2 = variance of the whole sample

$$s^2 = \frac{\sum (x_{1i} - \bar{x}_1)^2 + \sum (x_{2i} - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

Table 5-4 shows the statistically significant differences in means between ethnic groups. In social adaptation, the Hmong and the Phong ethnic groups (3.341*); and the Hmong and the Pao ethnic groups (4.637*) have statistically significant mean differences at $p < 0.05$.

Table 5-4: Mean differences in social adaptation between ethnic groups (t -statistic)

Ethnic group	Phong ($n=16$)	Hmong ($n=29$)	Pao ($n=29$)
Phong		3.431*	0.512*
Hmong			4.637*
Pao			

Source: Author's computation, 2012

Note: * : Statistically significant at $p < 0.05$.

Table 5-5 shows the statistically significant differences in means between ethnic groups. In the physical adaptation, the Phong and the Hmong ethnic groups (3.244*); and the Phong and the Pao ethnic groups (3.342*) have statistically significant mean differences at $p < 0.05$.

Table 5-5: Mean differences in physical adaptation between ethnic groups (t -statistic)

Ethnic group	Phong ($n=16$)	Hmong ($n=29$)	Pao ($n=29$)
Phong		3.244*	3.342*
Hmong			0.595*
Pao			

Source: Author's computation, 2012

Note: * : Statistically significant at $p < 0.05$.

Table 5-6 shows the statistically significant differences in mean between ethnic groups. In the natural adaptation, the Phong and the Hmong ethnic groups (6.311*); and the Phong and the Pao ethnic groups (6.309*) have statistically significant mean differences at $p < 0.05$.

Table 5-6: Mean differences in natural adaptation between ethnic groups (*t*-statistic)

Ethnic group	Phong (<i>n</i> =16)	Hmong (<i>n</i> =29)	Pao (<i>n</i> =29)
Phong		6.311*	6.309*
Hmong			1.362*
Pao			

Source: Author's computation, 2012

Note: * : Statistically significant at $p < 0.05$.

Table 5-7 shows the statistically significant mean differences between ethnic groups. In the human adaptation, there is no statistically significant mean difference between ethnic groups.

Table 5-7: Mean differences in human adaptation between ethnic groups (*t*-statistic)

Ethnic group	Phong (<i>n</i> =16)	Hmong (<i>n</i> =29)	Pao (<i>n</i> =29)
Phong		1.299	1.602
Hmong			0.991
Pao			

Source: Author's computation, 2012

Note: * : Statistically significant at $p < 0.05$.

5.3.2 State of economic adaptation

Table 5-8 shows current economic status of three ethnic groups. Having saving ratio between the Phong and the Hmong ethnic groups is notably different, with 100% of the Hmong ethnic group and the Pao ethnic group engaging in saving while only 25% of the Phong ethnic group reported doing so. In interviews with the Phong ethnic respondents,

majority of them (12 out of 16 households) reported that they usually spend all money they have earned in a day at once. They reported when they need food or money, as a routine they will leave house in the early morning and return home when they get some for that day. Data on the average household expenditure in 2011 indicates the Phong ethnic group spent 56% of their money on food and beverage (Table 3-2). They reported that, in case of illness, money is not necessary to buy modern medicines because they usually heal with traditional technique and medicines. In addition, they believe that their clan leader or elders in village can help in healing. From the information mentioned above, it can be concluded that, for the Phong ethnic group, saving money is not their custom.

Table 5-8 shows there is a notable difference in terms of savings among three ethnic groups. But, this difference is not a matter of different economic adaptation levels. Rather, it is a difference in terms of saving behaviour, especially that of the Phong ethnic group compared to the other ethnic groups. In contrast, the three ethnic groups have almost no debt. So, it implies that three ethnic groups are able to maintain their economic status after moving to the resettlement site at the same level as that prior to resettlement.

Table 5-8: State of economic adaptation by ethnic group

Ethnic group	Do saving (%)		Being in debt (%)		Perception on financial changes (%)		
	Yes	No	Yes	No	Worse	Same	Better
Phong	25	75	0	100	6	94	0
Hmong	100	0	0	100	0	100	0
Pao	100	0	0	100	8	92	0

Source: Field survey, 2012

5.4 Conclusions

Results from this Chapter V suggest that under same circumstances at a resettlement site, PAP have both same and different adaptation levels. Findings on income before

resettlement and monetary expenditure at the resettlement site indicate that three ethnic groups have differences in their way of living. They have different behaviour in terms of earning and spending their money. As a result, their livelihood adaptation results are different in certain ways. The results from the descriptive statistics (Table 5-8) show that three ethnic groups (Phong, Hmong, and Pao) have similar economic status. It implies that they also have similar economic adaptation status. On the other hand, they have some differences. The three ethnic groups have differences in three aspects of adaptation: social, physical, and natural proven by statistical analyses. The statistical analyses further explain that, among five aspects of livelihood adaptation in each ethnic group's adaptation, physical and human adaptations are not difficult for them to achieve because they have comparatively high adaptation with fewer differences among three ethnic groups. But, for all PAP, social adaptation is the most difficult one to achieve when entering a new livelihood environment as they have clearly low adaptation with less difference among three ethnic groups. It is assumed that various factors cause such similarities and differences in livelihood adaptations among three ethnic groups. Those factors include socioeconomic characteristics, tradition and custom of living, previous livelihood system, and culture or preferences of each ethnic group.

CHAPTER VI CULTURAL INFLUENCES TO SOCIAL ADAPTATION OF PROJECT-AFFECTED PEOPLE

6.1 Introduction

Currently, literature concerning culture of people influencing their adaptation and adjustment to resettlement sites is lacking and gains little attention from policy makers. But the need for such researches is growing particularly in a multi-ethnic country like Laos. Gutman (1994) argues that when project-affected people (PAP) are resettled to a populated area, final outcome of the resettlement depends significantly on relation between resettlers and host population. This relation is influenced by the similarities and differences of their culture.

This Chapter VI has an objective to determine characteristics of relationship between culture and social adaptation of people who have been relocated to a resettlement site. Results from analyses can provide a clear picture about the strength and direction of cultural affects to social adaptation of PAP/ resettlers.

This Chapter VI focuses on social adaptation for two reasons. One reason is related to actual condition of resettlement projects. According to compensation policy of the Theun-Hinboun Power Company (THPC), all PAP are treated under the same company policy. It means that they are compensated for their loss with certain forms of capital such as physical capital (house and primary infrastructure), natural capital (forest), financial/economic capital (in kind such as various income generating activities), and service that helps in development of human capital such as healthcare and education. However, social capital cannot be given to the PAP. Instead, they have to gain it by adapting themselves to their new environment at resettlement site. The other reason is related to results from Chapter V where it was concluded

that among all five aspects of livelihood adaptations, it is the most difficult for PAP to achieve social adaptation.

6.2 Methodology

6.2.1 Culture and its measurement

This Chapter VI utilizes the same set of data as Chapter IV. However, in this chapter, the modified 36 values (see Chapter IV) were categorized into 10 universal categories (Table 6-1) adapted from Ros, Schwartz, and Surkiss (1999) and Schwartz (1994) for data analyses as following: (1) Achievement includes two values: comfortable life & status-wealth and educated and capable; (2) Benevolence includes six values: brotherhood spirit and interdependent, mutually helpful, kind-helpful, true friendship, social relation, caring-considerate, forgiving and non-revengeful, and honest-sincere; (3) Conformity includes four values: mature love with the same ethnic group, grateful, polite-humble, and responsible; (4) Hedonism includes five values: happiness-inner harmony, pleasure, contented, calm-caution, and fun-loving and humorous; (5) Power includes one value: social recognition; (6) Security includes three values: community/village security, family happiness/security, and clean/neat; (7) Self-direction includes seven values: self-esteem, freedom/independence, self-controlled, tolerant-restrained, believe in oneself and independence, responsive to situation, ambitious-hard working, and imaginative; (8) Stimulation includes two values: courageous and exciting life; (9) Tradition includes two values: religious-spiritual life to guide in a living, and (10) Universalism includes four values: beauty and abundance of nature, wisdom-knowledge, equality, and broad minded.

Table 6-1: Modification of values by category used in this Ph.D. dissertation

Coding	Value	Explanation	Category
V ₁	A comfortable life and having status and wealth	Being rich, having wealth and helpers obtained through money; being successful in one's job; having a job, money, sufficient wealth, and good health	(1) Achievement
V ₂	Educated and Capable	Searching for higher education because education is wealth; possessing capability; being determined and having work skills	
V ₃	Brotherhood spirit and Interdependent, mutually helpful, Kind/helpful	Being kind and helpful without expecting anything in return; depending on each other; being nurturing and gentle to others	(2) Benevolence
V ₄	True friendship	Having true and loyal friends who understand us	
V ₅	Social relation	Having good human relations and be accepted in social work	
V ₆	Caring/considerate	Refraining from being aggressive, keeping relationship and friendship	
V ₇	Forgiving and non-vengeful	Being forgiving	
V ₈	Honest and sincere	Being trustful and sincere	
V ₉	Mature love with the same ethnic group	Having true love and true understanding with an opposite sex partner within one's ethnic group	(3) Conformity
V ₁₀	Grateful	Being honest and loyal to others	
V ₁₁	Polite/humble	Being polite, humble, and having good manners	
V ₁₂	Responsible	Knowing one's duties, responsibilities, and being on time	

Table 6-1: Modification of values by category used in this Ph.D. dissertation (continued)

Coding	Value	Explanation	Category
V ₁₃	Happiness/inner harmony	Being satisfied in what one has and is, having a calm and peaceful mind	(4) Hedonism
V ₁₄	Pleasure	Having happiness, fun, and recreations with comfort in life	
V ₁₅	Contented	Accepting one's true status and satisfy with what one has	
V ₁₆	Calm-cautious	Being calm, restrain emotion, and discreet	
V ₁₇	Fun-loving, humorous	Appreciating fun, being witty, humorous, having a cheerful and relaxed life	
V ₁₈	Social recognition	Being popular, respected, and highly regarded in the society	(5) Power
V ₁₉	Community/village security	Being in a peaceful world that has no conflict; living in a community that is advanced, secure, and free from invasion	(6) Security
V ₂₀	Family happiness/security	Having a warm, peaceful, loving close and secure family life	
V ₂₁	Clean/neat	Appreciating cleanliness and tidiness	
V ₂₂	Self-esteem	Having one's pride; being proud and maintaining self-values	(7) Self-direction
V ₂₃	Freedom/independence	Having freedom in all matters, being oneself, depending on oneself	
V ₂₄	Self-controlled, tolerant/restrained	Being self-disciplined and tolerant in all matters	
V ₂₅	Believe in oneself and Independence	Believing in oneself, having self-dependence	
V ₂₆	Responsive to situations/opportunities	Being flexible, clever, adjusted to situations and opportunities	
V ₂₇	Ambitious/hard working	Being ambitious and hard working	
V ₂₈	Imaginative/creative	Being imaginative and artful	
V ₂₉	Courageous	Standing for one's opinions and beliefs	(8) Stimulation
V ₃₀	An exciting life	Having a colorful, exciting and adventurous life	

Table 6-1: Modification of values by category used in this Ph.D. dissertation (continued)

Coding	Value	Explanation	Category
V ₃₁	Religious/spiritual life to guide in a living	Having high moral standard and religiously grounded mind	(9) Tradition
V ₃₂	Obedient/respectful	Respecting and listening to the elders and seniors who have more power	
V ₃₃	A beauty and abundance of nature	Being a nature appreciator	(10) Universalism
V ₃₄	Knowledge/wisdom	Being satisfied with wisdom and knowledge	
V ₃₅	Equality	Being in a society that has equality and justice	
V ₃₆	Broadminded, open/minded one's own	Being opened to others' opinions and beliefs	

Source: Author, 2012 (based on Komin, 1991; Ros, Schwartz, & Surkiss, 1999; and Schwartz, 1994)

6.2.2 Social adaptation measurement

Social adaptation refers to interaction and communication among community members in both host and resettlement villages. In this chapter, the same data set from Chapter V is utilized (see Chapter V).

6.2.3 Data collections and analyses

Data on livelihood adaptations and values were collected by structured interview with 74 households (Phong ethnic: 16 households; Hmong ethnic: 29 households; and Pao ethnic: 29 households), sampled at random from 91 households in major ethnic group's population as resettled households (see Chapter III Methodology).

Multiple regression analysis is applied to achieve the objective mentioned above. Total sum of the scores of 36 values is the extent of culture for Model 1 with the Stepwise method. For Model 2 with the Enter method, the scores of the 36 values are categorized on the basis of universal 10 categories of values (Table 6-1): achievement, benevolence,

conformity, hedonism, power, security, self-direction, stimulation, tradition, and universalism. Difference between Model 1 and Model 2 is that Model 1 was applied to examine influence of culture to social adaptation in *overall view of culture*, while Model 2 was applied to examine influence of *each category of culture* (Table 6-1) to social adaptation (Figure 6-3).

$$Y = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \beta_4\chi_4 + \beta_5\chi_5 + \beta_6\chi_6 + \varepsilon \quad (\text{Model 1})$$

$$Y = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \beta_4\chi_4 + \beta_5\chi_5 + \beta_7\chi_7 \dots \beta_{16}\chi_{16} + \varepsilon \quad (\text{Model 2})$$

Where

Y : level of social adaptation, x_i : gender (x_1), age (x_2), belief (x_3), education (x_4), household size (x_5), culture (x_6), achievement (x_7), benevolence (x_8), conformity (x_9), hedonism (x_{10}), power (x_{11}), security (x_{12}), self-direction (x_{13}), stimulation (x_{14}), tradition (x_{15}), and universalism (x_{16}); β_1 : Coefficients of the independent variables; ε : error terms

Table 6-2: List of variables and its measurement used in Model 1

Variable			Measurement
Name	Coding	Definition	
Social adaptation	Y	Level of social adaptation	Interval
Gender	x_1	Sex of respondents	Nominal 0= Female 1= Male
Age	x_2		Interval
Belief	x_3	Trust, faith, or confidence in something as spiritual guidance	Nominal 1=Animism 2=Animism and Buddhism 3= Christianity
Education	x_4	Year of schooling	Interval
Household size	x_5	Numbers of people living in a house	Interval
Culture	x_6		Interval (Total sum of scores of the 36 values)

Source: Author, 2012

Table 6-3: List of variables and its measurement used in Model 2

Variable			Measurement
Name	Coding	Definition	
Social adaptation	Y	Level of social adaptation	Interval
Gender	x_1	Sex of respondents	Nominal 0= Female 1= Male
Age	x_2		Interval
Belief	x_3	Trust, faith, or confidence in something as spiritual guidance	Nominal 1=Animism 2=Animism and Buddhism 3= Christianity
Education	x_4	Year of schooling	Interval
Household size	x_5	Numbers of people living in a house	Interval
<i>Culture</i>			
Achievement	x_7	Category 1	Interval (Sum of scores of the two values)
Benevolence	x_8	Category 2	Interval (Sum of scores of the six values)
Conformity	x_9	Category 3	Interval (Sum of scores of the four values)
Hedonism	x_{10}	Category 4	Interval (Sum of scores of the five values)
Power	x_{11}	Category 5	Interval (Score of the one value)
Security	x_{12}	Category 6	Interval (Sum of scores of the three values)
Self-direction	x_{13}	Category 7	Interval (Sum of scores of the seven values)
Stimulation	x_{14}	Category 8	Interval (Sum of scores of the two values)
Tradition	x_{15}	Category 9	Interval (Sum of scores of the two values)
Universalism	x_{16}	Category 10	Interval (Sum of scores of the four values)

Source: Author, 2012

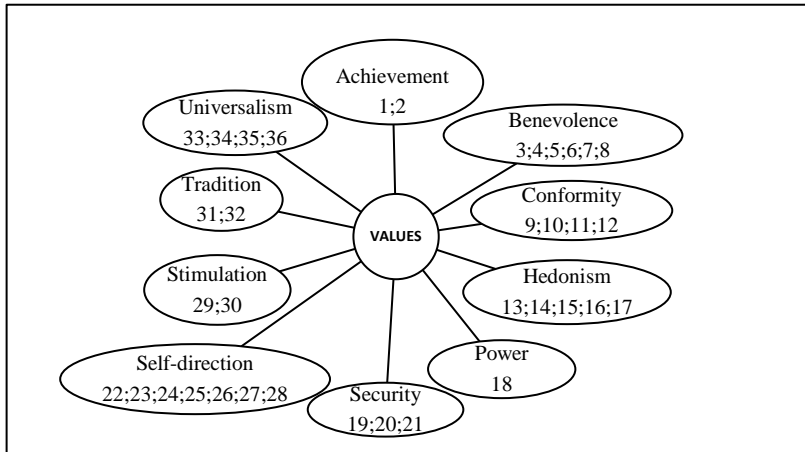


Figure 6-1: Influences of culture (values) on social adaptation

Source: Author, 2012

Note: The numbers in each category of values indicate the values in Table 6-1:“Coding”

6.2.4 Conceptual framework

Culture and social adaptation have a complicated relationship. Culture is complex. Knowledge, belief, art, morals, law, custom, capabilities, and habits are parts of this complexity (Vivelo, 1978). Cultural anthropologists cite two major views of culture: the totalist view and the mentalist view. This Ph.D. dissertation focuses on the totalist view because it refers to people’s way of live as a whole. In this view, Levine’s work in 1975 (Vivelo, 1978) claims that culture is composed of energy systems of a population and its method of taking advantage of them. Energy systems refer to organization of social, political, and economic relations, of language, customs, beliefs, rules, and arts of everything that is learned from the society (Vivelo, 1978). Furthermore, social psychologist Rokeach (1973) defines values (the core of culture) as a main component in conducting of people’s behavior.

6.3 Results and discussions

6.3.1 Influences of culture on social adaptation

Table 6-3 shows level of influences of culture (sum of the score from 36 values), on level of social adaptation. Social adaptation is dependent variable, while culture and other

variables such as gender, age, beliefs, education, and household size are independent variables. A main objective of multiple regression analysis (Table 6-4) is to see only the extent of relationship of each independent variable or each independent variable's influences to the social adaptation individually. There is no interest to compare extent of relationship of each independent variable and social adaptation or its influences to the social adaptation. Therefore, unstandardized coefficients data are used in Table 6-4. According to results of stepwise multiple regression analysis (see Model 1), three factors: culture ($p < 0.001$), household size ($p < 0.1$), and years of schooling ($p < 0.1$) were significant with adjusted $R^2 = 0.210$ (Table 6-4). This result indicates that culture, in combination with household size and education, prohibits PAP's social adaptation. The results in Table 6-4 also show that culture, with a negative correlation, is the strongest factor in explaining or it is a variable of social adaptation. This suggests that at every unit of variance in the culture, social adaptation is influenced by 0.17% in the opposite way.

Table 6-4: The relationship and influences of culture on social adaptation

Variables	Unstandardized Coefficients	<i>P</i> -values
Constant	50.631	0.000
Culture	-0.175	0.009
Household size	-0.887	0.051
Education	0.695	0.052

Adjusted R²: 0.210; F-Statistics: 7.041; P-value: 0.000

Source: Author, 2012

Household size also has a negative correlation and is the second strongest factor in explaining variance of social adaptation. In this study, size of household is determined by members who live in the same house including dependent children of all ages. A member of household is viewed as social capital or social stock. Thus, one could expect that the larger household should have the greatest effect on level of social adaptation. Conversely, the result

from this case study contradicts this expectation. Results in Table 6-4 show that when household members increase by one person, social adaptation decreases by 0.88%. It is assumed that (1) young teenagers have commuted from village to work in town, and some of them return to their original village for fishing and stay there, but they regularly come back to visit their family; and (2) having children in large households does not contribute to the level of social adaptation. Instead, having them in larger a house limits people to interact with others resulting in a lower level of social adaptation due to their daily life, and uneasiness about earning a living when their children are too little with mainly relying on self-sufficient farming.

In contrast, education has a positive correlation and is the weakest factor explaining variance of social adaptation. With more opportunities in interacting with others (students) at school, people tend to have more communication skills and be able to interact with others habitually. Education enables people to comparatively and easily settle in and adapt to their new environment. When the years of schooling increases by one year, respondents will increase their social adaptation by 0.69%. It means that the higher the educational attainment people have, the greater the social adaptation people could gain.

6.3.2 Influences of culture on social adaptation by category of values

Using the *Enter Method* (see Model 2), the result as of a significant model emerged ($F_{15, 53} = 2.70, p < 0.004, \text{adjusted } R^2 = 0.273$). Table 6-5 shows level of influences of culture by category (achievement, benevolence, conformity, hedonism, power, security, self-direction, stimulation, tradition, and universalism) as an independent variable. A main objective of this test is to compare extent of relationship of each category of culture/values and social adaptation. So, standardized coefficients data are used in Table 6-5.

Table 6-5: Influences of culture on social adaptation by category of values

Variables	Standardized Coefficients	P-Values
Constant	52.764	0.000
Gender	0.198	0.110
Age	-0.093	0.464
Belief	-0.079	0.522
Education	0.520	0.691
Household size	-0.189	0.126
Achievement	-0.084	0.565
Benevolence	0.344	0.062
Conformity	0.238	0.071
Hedonism	-0.140	0.405
Power	-0.005	0.970
Security	-0.270	0.080
Self-direction	0.104	0.496
Stimulation	-0.076	0.646
Tradition	-0.013	0.916
Universalism	-0.460	0.014

Adjusted R²:0.273; F-Statistics:2.700; P- value:0.004

Source: Author, 2012

It is shown in Table 6-5 that universalism and security have a negative correlation with social adaptation and are statistically significant at $p < 0.05$ and $p < 0.01$ respectively. In contrast, benevolence and conformity have a positive correlation with social adaptation and are statistically significant at $p < 0.01$. Both benevolence ($p < 0.01$) and conformity ($p < 0.01$) refer to the act of willingness to help each other and appreciate mutual assistance. The result (Table 6-5) indicates that these categories of culture enhance resettlers to gain and build social adaptation since they have traditions and customs of helping and communicating with each other in earning a living. The values related to benevolence include a spirit of brotherhood, interdependence, mutual assistance, kindness, true friendship, social relations, caring-consideration, forgivingness, and honest-sincerity. Values related to conformity include

having mature love with someone in the same ethnic group, as well as being grateful, polite-humble, and responsible.

Meanwhile, universalism ($p<0.05$) and security ($p<0.1$) are likely to limit people to build and gain social adaptation. Under universalism, values are related to senses of appreciation for nature, especially forest, having wisdom/knowledge as being equal and broadminded. Under security, values are related to senses of community/village security, family happiness/security, and clean/neat. The results suggest that the more people appreciate nature and forest, the lower social adaptation respondents can gain. It is because respondents rely their livelihood on forest where they can find food, medicines, fuel, and other necessary living stuff, and enjoy nature. Therefore, people may feel having no eagerness to make new friends at the resettlement site.

6.3.3 Interactions and communications among community members

Currently resettlers are living in a peaceful resettlement community. But building trust among community members would take years. Table 6-6 shows details of interactions and communications among community members. Through interactions and communications, PAP would form their social adaptation at resettlement site where they need to rebuild social networks and gain social capital to support their livelihoods.

1) Quantity of new friends

On average, members of the Hmong and the Pao ethnic groups have new friends within their own ethnic groups more than with different ethnic groups, while members of the Phong ethnic group have new friends from other ethnic groups more than new friends within their ethnic groups. One of many reasons enabling them to communicate with other groups, especially the Pao ethnic group, is that the Phong ethnic group in the study area can also speak Lao. In addition, due to the economic hardship of the Phong ethnic group compared to

the Pao and the Hmong ethnic groups, the Phong ethnic group works for other ethnic groups as day-labourers helping with farming activities such as land clearance and harvesting.

2) Communications among community members

On average, the Phong ethnic group visits their new different ethnic group friends' houses and their friends visit them (64 times/month) more often than their new same-ethnic group friends' houses (56 times/month). This is opposite to the Hmong and the Pao ethnic groups who visit their newly same-ethnic group friends' houses more often than newly different-ethnic group friends' houses.

In terms of food exchange, Table 6-6 shows that the Phong and the Hmong ethnic groups mainly exchange their food with their new different-ethnic group friends (23times/month & 25times/month respectively), while the Pao ethnic group exchanges food mainly with their friends within their own ethnic group.

Regarding spending time with their friends in going to collect non-timber forest products (NTFPs) in a month, three ethnic groups all have different characteristics. The Pao ethnic group goes with their new same-ethnic group friends as often as with their new different-ethnic group friends. The Phong ethnic group goes more often with their friends from their own ethnic group, as opposite to the Hmong ethnic group which does with their friends from other ethnic groups more often.

In going to a market together, the Hmong ethnic group goes out with their friends from both ethnic groups, the same and the different, on average 17 times/month, while the Phong and the Pao ethnic groups almost never go out with their friends. In entertainment activities such as home parties at various ceremonies and having dinner together, three ethnic groups share their time within and with other ethnic groups with different frequencies. The Phong, the Hmong, and the Pao ethnic groups do so with their friends (within and other ethnic

groups) on average 22 times/month, 41times/month, and 43times/month respectively.

3) Trust and experiences in having conflicts with community members

Regarding to trust, Table 6-6 shows that, in all three ethnic groups, majority of them reported that they do not think their friends will lend them money when they need it. However, they reported that their friends would lend them rice when they need some. Nevertheless, approximately more than 93% of respondents in all three ethnic groups reported that they have never had any conflicts either with other resettled villagers or host villagers.

Table 6-6: Interactions and communications among community members

Social adaptation		Ethnic groups																	
		Phong						Hmong						Pao					
1)	① Average of new same ethnic friends	4.13						1.48						13.41					
	② Average of new different ethnic friends	5.75						0.17						3.86					
2)	③ Composition of communication with new same ethnic friends in a month by activities (Times)	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
		56	14	16	1	5	8	73	4	4	4	9	6	44	33	7	1	7	8
2)	④ Composition of communication with new different ethnic friends in a month by activities (Times)	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
		64	23	3	1	4	5	24	25	13	13	13	13	40	25	7	0	10	18
3)	⑤ Trust in new same ethnic friends in terms of borrowing money (%)	Yes			No			Yes			No			Yes			No		
		31			68.7			34.5			65.6			51.7			48.7		
	⑥ Trust in new different ethnic friends in terms of borrowing money (%)	Yes			No			Yes			No			Yes			No		
		19			81.1			34			96.6			37.9			62.1		
3)	⑦ Experiencing of conflicts with host villagers (%)	Yes			No			Yes			No			Yes			No		
		0			100			0			100			0			100		
3)	⑧ Experiencing of conflicts with resettled villagers (%)	Yes			No			Yes			No			Yes			No		
		6			93.7			0			100			6.3			93.7		

Source: Field survey, 2012

Note: A= Visiting each other's house; B= Exchanging food; C= Going to collect NTFPs together

D = Going to market together; E= Having a drinking party together; F = Dining together

6.4 Conclusions

Findings on interactions and communications among community members show how different ethnic groups build up their social capital and relationship at resettlement site. Results indicate that different ethnic groups have different patterns of social adaptation; i.e. the average of the Hmong and the Pao ethnic groups have new friends within their own ethnic groups more than difference ones, while the Phong ethnic group has new friends from other ethnic groups more than new friends from their own ethnic group. In terms of food exchange, the Phong and the Hmong ethnic groups mainly exchange their food with their new different-ethnic group friends, while the Pao ethnic group exchanges food mainly with their friends within their own ethnic group.

In addition, findings clarified extent of cultural influences to social adaptation of resettlers. Culture in association with household size and education prohibits PAP to gain social adaptation. Particular, universalism and security category of culture are likely to limit people to build and gain social adaptation. On the other hand, findings suggest that benevolence and conformity category of culture enhance people's ability to gain and build social adaptation since they have traditions and customs of helping and communicating with each other in earning a living, thus building up a sense of cooperation with each other in which they help when someone is in need as it has discussed above (section 6.3.3). Results suggest that culture makes differences in PAP's livelihood adaptation levels. Therefore, it should be acknowledged that when building a new community with different ethnic groups, cultural difference should be taken into consideration. Livelihood reconstruction programs should concern socioeconomic aspect as well as PAP's cultural difference which do have influence on livelihood restorations and development.

CHAPTER VII SUMMARY AND CONCLUSIONS

7.1 Roles of culture in resettlement project implementation

Figure 7-1 shows a summary of findings from Chapters IV, V, and VI. Culture at different levels of depth has certain important roles to processes of resettlement project. Culture helps to facilitate and enhance planning and consultations (process I) and physical relocation (process II). It reduces psychological damage to project-affected people (PAP) when compensation they received for displacement took their culture into account. For instance, house layout options are designed to cater to different ethnic groups. In livelihood restorations (process III), culture influences PAP's livelihood adaptations in various ways, particularly their social adaptation. For instance, the sample three ethnic groups have different forms of interaction and communication in food exchange.

Results of this Ph.D. dissertation suggest that all stakeholders must be more aware of impacts caused by dam constructions not only on the social, economic, and environment impacts, but also cultural impact. The results from Chapter IV suggest that it should be recognized that in some particular rural communities of Laos, a certain belief or tradition of PAP is directly linked to the effective implementation and plays an important role in resettlement projects. By comprehending PAP's culture, we can predict likely impact on them. In other words, we could mitigate undesired and negative impacts the PAP and prepare and implement resettlements properly if we recognize their culture.

Resettlement processes by activity		
Processes	Activities	
I	Planning	1) Information gathering and dissemination; 2) Various types of consultation such as cultural preferences, resettlement site selection, village layout design, etc.
	Consultation	
II	Physical relocation	3) Actual activities such as design of village layout and house structure, and physical relocation
III	Livelihood restoration	

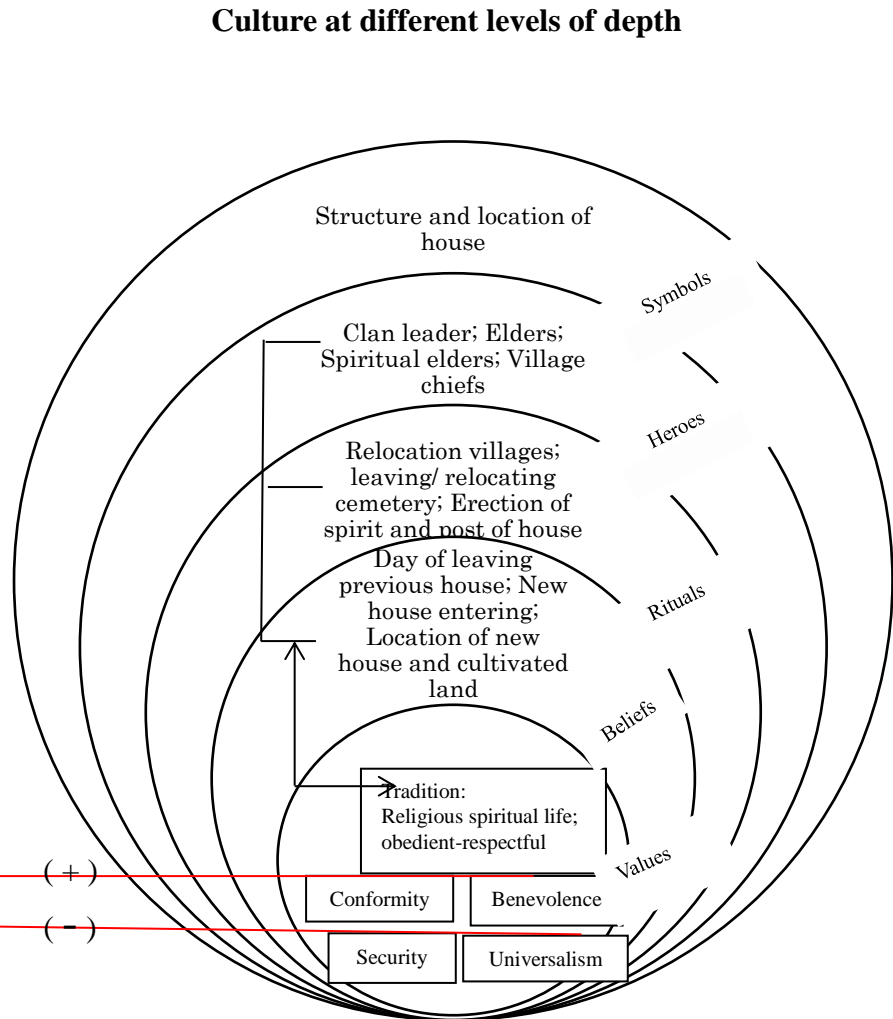


Figure 7-1: Roles of culture in a rural resettlement project
Source: Author, 2013

As Cernea and McDowell (2000) argue in their impoverishment, risks, and reconstruction (IRR) model that to reduce negative impacts of project-induced resettlement on PAP, the concept of reversing IRR model of the *self-destroying prophecy* is a key safeguarding tool for all stakeholders.

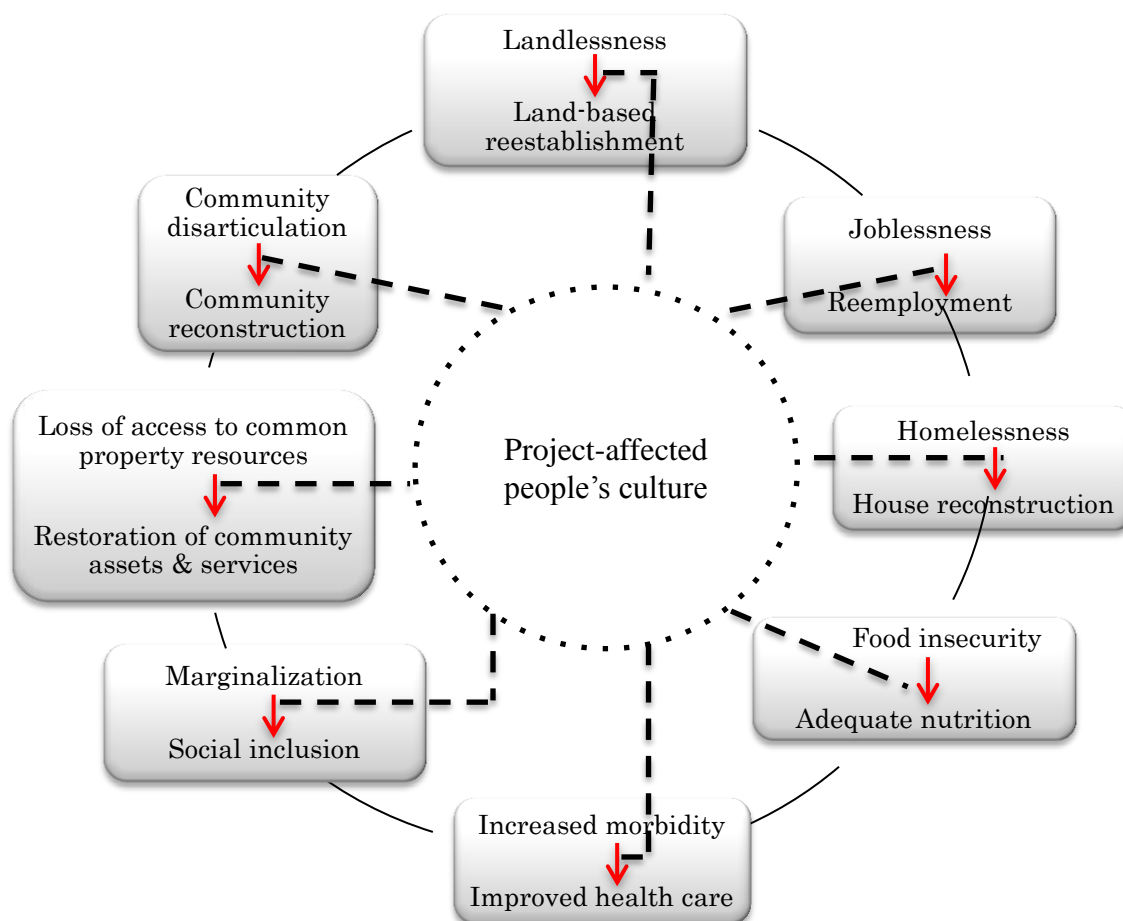


Figure 7-2: Roles of culture in IRR and cultural risk during *self-reversing prophecy*
Source: Author, 2013

Note: - - - refers to cultural risk during self-reversing prophecy;
↓ refers to self-reversing prophecy processes

Based on IRR model, Figure 7-2 illuminates roles of PAP's culture in rural resettlement projects in Laos. Taking the IRR model as a foundation (Figure 7.2), three key roles of culture in rural resettlement projects relating to land-based reestablishment, house reconstruction, and community reconstruction are described as following:

(1) Culture in land-based reestablishment

Land-based reestablishment is a proper strategy as it is proven by the empirical results from other countries that the success of livelihood restoration tends to be brought about by passing compensatory recovery lands into production, crop intensification to shift to more profitable cropping. In terms of land-based reestablishment for the sample three ethnic groups, being compensated with land that poses a conflict with their beliefs is unacceptable. Consequently, the allocation of compensatory land to PAP becomes more challenging in Laos because of its culture. Recognizing roles of culture in this context would help project planners to create better resettlement action plans.

(2) Culture in house reconstruction

The provision of compensatory houses to PAP is important both as “houses” to stay in and as “homes” where they can live happily in psychological satisfaction. Results of this Ph.D. dissertation argue that between ethnic groups, house building tradition varies from one to another, with differing levels of importance related to various rituals and beliefs of PAP.

(3) Culture in community reconstruction

Restoration of societies, networks, and re-establishment of community solidity are needed after physical relocation (Cernea & McDowell, 2000). Evidence from this Ph.D. dissertation shows that culture and their sense of values related to security and universalism thwart people from adapting socially to their new environment. However, some particular aspects of culture such as benevolence and conformity do enhance people to adapt to new environment socially. In order for reconstruction of communities to be successful, consideration of how different ethnic groups form their new networks and interact with each other are critical.

The IRR model is a necessary guideline for future rural resettlements to mitigate

future impoverishments. Consequently, necessary modifications of the IRR model should be taken into account. The existing IRR model is not directly applicable to Laos. It needs some modifications to be applied as a means of improving government policy formulation, project planning, and project implementation. Moreover, acknowledgment of aforementioned three key roles of PAP's culture in the context of (involuntary) resettlement projects in Laos is valuable because it can facilitate project implementations effectively.

7.2 Academic contribution and further research

7.2.1 Academic contribution

Table 7-1 shows selected previous studies and justification for the claims on academic contributions by Ph.D. dissertation of Sinavong, 2015. This Ph.D. dissertation is systematic study on the whole process of rural resettlement and culture to comprehend the "Roles of Culture in Rural Resettlement in Laos" in a practical and detailed manner. Overall, this Ph.D. dissertation can contribute to improving the policy improvement on (involuntary) resettlement and improving rural resettlement implementation in Laos where the culture is diversified.

Compared to existing literature on *rural resettlement in Laos*, this Ph.D. dissertation is unique for two reasons: (1) in terms of methodology and (2) supplementing previous studies. In Chapter VI, it applies statistical analyses in order to provide a clearer picture of characteristics of relationships or forms of relationships between people's culture and their livelihood adaptations for a particular aspect, e.g. social adaptation. In Chapter IV, methodology on measuring culture enriches body of knowledge on how culture is important in context of rural resettlements, particularly in processes of planning & consultation and physical relocation. This finding supplements two previous studies: (1) Alton and

Rattavong, (2004) on how heroes are important from viewpoint of development intervention; and (2) Cernea and McDowell (2000) on how culture is important from viewpoint of mitigating risk and impoverishment to PAP and ensuring livelihood reconstructions for them.

Compared to existing *literature on involuntary resettlement worldwide*, this Ph.D. dissertation is unique for one reason. Results from this Ph.D. dissertation supplement the IRR model from the viewpoint of PAP's culture. In other words, the results suggest that, from the viewpoint of culture, 'cultural risks' could be identified from eight common risks given by Cernea and McDowell (2000) in the IRR model.

Table 7-1: Justification for the claims on academic contributions by Ph.D. dissertation of Sinavong, 2015

Author Description	Cernea and McDowell, 2000	Alton and Rattnavong, 2004	Heggelund, 2006	Sinavong, 2015
Title	Impoverishment, Risks, and Reconstruction Model (IRR Model)	Service Delivery and Resettlement: Options for Development Planning (Final Report Livelihood Study)	Resettlement Programmes and Environmental Capacity in the Three Gorges Dam Project	Roles of Culture in Rural Resettlements in Laos -A Case Study of Nongxong Village-
Country of study	Worldwide	Laos	China	Laos
Characteristics of study/case study	Lesson learnt from the involuntary resettlement implementation	Resettlement associated with state policy	Resettlement associated with development-induced resettlement	Resettlement associated with state policy and development-induced resettlement
Main methodology	Qualitative	Qualitative	Qualitative	Qualitative and Quantitative
Main focus of study/ objectives	To identify possible risks, impoverishment, and how to reconstruct livelihood of project-affected people	To analyze and describe the existing livelihood systems; To examine livelihood activities including socio-cultural foundations of the particular ethnic group, gender issues, migration, resource use and culture change	To examine resettlement programme in relation to the environmental capacity in the reservoir area; To assess the existence of a risk consciousness and a reconstruction strategy of IRR model	To examine importance of culture of project-affected people and their livelihood adaptations in relation to resettlement project implementations; to examine extent of relationship between culture and livelihood adaptation
Key findings	Eight common risks and impoverishments; A tool(IRR model) to mitigate the negative impact of project-induced resettlement on project-affected people	The traditional belief systems and customs (elders/clan leaders, rituals and ceremonies) of ethnic groups are deep rooted and still mostly respect and any interventions should be built on them.	The IRR model could be useful in the context of focusing more on the social costs of resettlement	Culture helps in resettlement project implementations; 'Cultural risks' could be identified from the eight common in IRR model and mitigate such risks and impoverishment.

Source: Author, 2015

7.2.2 Further research

1) Livelihood adaptation of new generation

This Ph.D. dissertation does not cover the livelihood adaptation of the younger generation (such as children), though it is a necessary aspect, due to a number of limitations. Further research for the improvement of involuntary or rural resettlement implementation in Laos is called for. Scudder (2012) argues that only the improvement of livelihoods of PAP is sustainable for at least the second generation could be considered as a successful resettlement process. Previous study explains that where arable land is limited, resettlers and host population (particularly of second generation) battle for land, natural resources, and development opportunities and service (Scudder, 2012).

2) Cultural risks within the self-destroying prophecy of IRR model

Results from this Ph.D. dissertation argue that one of many important aspects of consideration of PAP's culture in resettlements is that it helps in identifying risks in project planning and implementations. Cernea and McDowell (2000) argue that reversing IRR model would be a good tool to minimize risks of impoverishments in involuntary resettlements. Similarly, when this model is reversed, during the reversing process, risk identifications in livelihood reconstruction (evidence from this Ph.D. dissertation) have identified five cultural risks during the IRR model reversing processes (cultural risk during land-based reestablishment, cultural risk during house reconstruction, cultural risk during improved health care, cultural risk during social inclusion, and cultural risk during community reconstruction reversing processes) which should be researched in details (Figure 7-2).

3) Integration of RwD concept into national policy

Results from this Ph.D. dissertation suggest that for a better outcome from involuntary resettlements, integration of Resettlement with Development (RwD) (resettlement

with development) concept into the national policy is needed. The World Bank advises that every involuntary resettlement project must be perceived as an opportunity for development, especially of people's livelihoods. Nevertheless, literature on this concern is lacking. So, unfortunately, is this Ph.D. dissertation. Through literature in Chapter II, this Ph.D. dissertation is unable to establish how other countries apply the RWD concept into their national policy and translate it into practice, except for a study of Chinese cases such as *Involuntary Resettlement as an Opportunity for Development: The Case of Urban Resellers of the Three Gorges Project, China* by McDonald, Webber, and Yuefang (2008). Therefore, the further research on how to integrate the RWD concept into Laos' national policy is a must.

4) Translation of RWD concept into practice in resettlement implementation

Applying RWD concept to the national policy of Laos is not an end in itself. Experiences have proven that translating the RWD concept into action is challenging as China experienced this. China has the longest running national policy on resettlement among developing countries. It was formally applied the RWD concept to the national project of the Three Gorges Project on the Yangtze river (McDonald, Webber, & Yuefang, 2008).

The World Bank suggests that success of involuntary resettlement depends on political commitment of borrowers. This commitment is in form of resource allocation, policies, and laws. Therefore, the Government of Laos (GoL) have a duty to play a proactive role and promote these four areas of further research because they are necessary for better outcomes of involuntary resettlement implementations.

7.3 Policy implications

Concept of RWD does not exist in Laos's national policy. Detailed procedures and comprehensive guidelines are not currently available in contents of relevant national policy

(No. 561/CPI) of Laos. However, it is actually in current practice through e.g. the livelihood restoration/ development plans of the Resettlement Action Plan of the Nam Theun 2 (NT2) and Theun Hinbou Expansion Projects. It is important that role of culture discussed above (Figure 7-1) must be taken into consideration when the GoL as well as Asian Development Bank and the World Bank want to amend necessary involuntary resettlement policy for Laos.

Moreover, it should be noted that current national policy No. 561/CPI of Laos is mainly based on the policies of Asian Development Bank and the World Bank, and lesson learnt from NT 2 project experiences. Therefore, it is necessary for policy makers to consider other cases of resettlement implementation in Laos. For instance, the case study in this Ph.D. dissertation should be reviewed and learnt, and to comprehend how projects involve PAP in resettlement processes through their own culture, especially in process I and process II (indicating that Article 2: *Project-affected people* and Article 4: *Consultation* of Laos' National Policy No. 561/CPI are being implemented properly).

Nonetheless, the national policy No. 561/CPI of Laos should be improved with the strong will of the GoL to fill the gap of differences in perceiving involuntary resettlement that the World Bank perceives. The content of the GoL's policy on involuntary resettlement shows that economic improvement or livelihood restoration of PAP gains much attention. The imbalance of this policy calls for reconsideration of its amendment, especially from the view point of social rehabilitation, policy on gender, and development of Asian Development Bank involuntary resettlement. Moreover, recognizing role of culture in (involuntary) resettlement projects, such amendment should establish a suitable balance between sociocultural, economic, and environmental sustainability.

From experiences worldwide, contents of policy on involuntary resettlement by all stakeholders are improved with concerns on social, economic, and environmental aspects and

become a requirement for borrower countries to follow. But still results from resettlement implementations are criticized. In this regard, it enforces all project owners to cooperate, follow regulations and rules, and share their responsibilities when implementing any resettlement projects.

Resettlement policies of both lenders such as the World Bank and Asian Development Bank and borrower countries are sensible. But implementations do not always guarantee the aims of those policies. Therefore, considering all angles and perceiving resettlement by GoL call for policy amendments. In other words, viewing (involuntary) resettlements from all angles is a must. Since 1989, this “angle of livelihood adaptation” is lacking. When the GoL implements resettlements and initially aims to achieve five objectives (access and service delivery, opium eradication, reduction of security concerns, eradication of widen farming, and cultural integration and national building), the angle of livelihood adaptation is overlooked.

Based on results from this Ph.D. research, it shows that this angle of livelihood adaptation of PAP have to be considered. Inclusion of this angle into policy on (involuntary) resettlements of Laos would help in delivering and securing sociocultural and economic benefits of state development to both present PAP and coming generations.

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APPENDIX A

1 Social characteristics

- 1.1 Name:
- 1.2 Sex
- 1.2.1 Male
- 1.2.2 Female
- 1.3 Age: Years old
- 1.4 Ethnic group
- 1.4.1 Phong
- 1.4.2 Hmong
- 1.4.3 Pao
- 1.4.4 Other:
- 1.5 Number of HH members
- 1.6 Dialects spoken within family members
- 1.5.1 Phong
- 1.5.2 Hmong
- 1.5.3 Pao
- 1.5.4 Other:
- 1.7 Beliefs
- 1.6.1 Buddhism
- 1.6.2 Animism
- 1.6.3 Christianity
- 1.6.4 Buddhism & animism
- 1.6.5 Christianity & animism
- 1.6.6 Other:

1.8

Educational attainment (number of years)				
1.7.1	None		<input type="checkbox"/>	
1.7.2	Primary schooling		<input type="checkbox"/>	
1.7.3	Secondary		<input type="checkbox"/>	
1.7.4	High schooling		<input type="checkbox"/>	
1.7.5	Upper high schooling		<input type="checkbox"/>	
1.7.6	Other:		<input type="checkbox"/>	

2 Economic characteristics

- 2.1 Previous economic activities (before moving to Nongxong Village)
- 2.1.1 Collecting NTFPs and selling
- 2.1.2 Working as laborer inside the village
- 2.1.3 Working as laborer in the near village
- 2.1.4 Working as laborer in the town/city
- 2.1.5 Selling handicraft products
- 2.1.6 Other:

2.2 Source of income in (2008 before moving to Nongxong Village)

2.2.1 Selling NTFPs _____

2.2.2 Working as laborer inside the village _____

2.2.3 Working as laborer in the near village _____

2.2.4 Working as laborer in the town/city _____

2.2.5 Selling handicraft products _____

2.2.6 Selling cultivated crops _____

2.2.7 Selling fed animals _____

2.2.8 Other: _____

2.3 Current economic activities (after moving to Nongxong Village)

2.3.1 Collecting and selling NTFPs

2.3.2 Working as laborer inside the village

2.3.3 Working as laborer in the near village

2.3.4 Working as laborer in the town/city

2.3.5 Selling handicraft products

2.3.6 Other:

2.4 Source of income in 2010 (after moving to Nongxong Village)

2.4.1 Selling NTFPs

2.4.2 Working as laborer inside the village

2.4.3 Working as laborer in the near village

2.4.4 Working as laborer in the town/city

2.4.5 Selling handicraft products

2.4.6 Selling cultivated crops

2.4.7 Selling animals

2.4.8 Other:

2.5 Expenditures in 2011

2.5.1 Food and drinks

2.5.1.1 Rice _____

2.5.1.2 Meat _____

2.5.1.3 Fish _____

2.5.1.4 Vegetables _____

2.5.1.5 Fruits _____

2.5.1.6 Oil _____

2.5.1.7 Sugar _____

2.5.1.8 Salt _____

2.5.1.9 Seasoning(Ajinomoto) _____

2.5.1.10 Alcohol _____

2.5.1.11 Soft drink _____

2.5.1.12 Others _____

2.5.2 Clothes and personal healthcare

2.5.2.1 Sinh _____

2.5.2.2 Shirt _____

- 2.5.2.3 Shoes _____
- 2.5.2.4 Inner wears _____
- 2.5.2.5 Hat _____
- 2.5.2.6 Soap _____
- 2.5.2.7 Shampoo _____
- 2.5.2.8 Toothpaste _____
- 2.5.2.9 Detergent _____
- 2.5.2.10 Others _____

- 2.5.3 Energy, lighting and water
- 2.5.3.1 Gasoline _____
- 2.5.3.2 Water fees _____
- 2.5.3.3 Electricity fees _____
- 2.5.3.4 Others _____

- 2.5.4 Agricultural tools/inputs
- 2.5.4.1 Crop seeds _____
- 2.5.4.2 Fertilizers _____
- 2.5.4.3 Pesticide _____
- 2.5.4.4 hand tools _____
- 2.5.4.5 Others _____

- 2.5.5 Social events
- 2.5.5.1 Wedding party _____
- 2.5.5.2 House warming ceremony _____
- 2.5.5.3 Lao new year party _____
- 2.5.5.4 Others _____

- 2.5.6 Machinery
- 2.5.6.1 CD prayer _____
- 2.5.6.2 Speakers _____
- 2.5.6.3 Television _____
- 2.5.6.4 Refrigerators _____
- 2.5.6.5 Mobile phone _____
- 2.5.6.6 Rice cooker _____
- 2.5.6.7 Fan _____
- 2.5.6.8 Others _____

3 Living environment at original village

- 3.1 Construction of house(Wall & Floor)
- 3.1.1 Bamboo
- 3.1.2 Wooden
- 3.1.3 Cement
- 3.1.4 Other:

- 3.2 Construction of house (Roof)
Specific:
- 3.3 Type of house and size
- 3.3.1 Size of house
- 3.3.2 With toilet inside
- 3.3.3 With toilet outside
- 3.3.4 With no toilet
- 3.4 Number of rooms in total
- 3.5 Lighting
- 3.5.1 None
- 3.5.2 Lamp
- 3.5.3 Electric
- 3.5.4 Gasoline
- 3.6 Source of drinking water
- 3.6.1 River or brook
- 3.6.2 Public fount/pump
- 3.6.3 Backyard well
- 3.6.4 Other:
- 3.7 Place of taking a bath in general
- 3.7.1 At river
- 3.7.2 At house
- 3.8 Fruit Trees
- 3.8.1 Mango
- 3.8.2 Coconut
- 3.8.3 Papaya
- 3.8.4 Banana
- 3.8.5 Jackfruit
- 3.8.6 Other:

APPENDIX B

Value survey

Code	Item	Rating				
		1	2	3	4	5
V ₁	Brotherhood spirit & Interdependence, mutually helpfulness, Kind-helpfulness (Being kind and helping others without expecting anything in return; Depending on each other, being helpful to each other; Being kind, empathizing, and ready to help others; Being nurturing, kind, and gentle to others)					
V ₂	Social recognition (Being popular, respected, and highly regarded in society)					
V ₃	Exciting life (Having a colorful, exciting and adventurous life)					
V ₄	Comfortable life & status-wealth (Being rich, having wealth and helpers obtained through money; Being successful in one's job; Having a job, money, sufficient wealth, and good health)					
V ₅	True friendship (Having true and loyal friends who understand us)					
V ₆	Mature love with the same ethnic group (Having true love and true understanding with an opposite sex partner with the same ethnic group)					
V ₇	Religious-spiritual life to guide in living (Having high moral standards and religiously-grounded mind)					
V ₈	Social relation (Having good human relations and being accepted in social work)					
V ₉	Beauty and abundance of nature (Being an appreciator of nature)					
V ₁₀	Wisdom-knowledge (Being satisfied with knowledge, experience, and wisdom)					
V ₁₁	Self-esteem (Having one's pride; being proud and maintaining self-values)					
V ₁₂	Community/village security (Being in a peaceful world that has no conflict; Living in a community that is advanced, secure, and free from invasion)					
V ₁₃	Freedom-independence (Having freedom in all matters, being oneself, depending on oneself)					
V ₁₄	Happiness-inner harmony (Being satisfied in what one has and is, having a calm and peaceful mind)					
V ₁₅	Equality (Being in a society that has equality and justice.)					
V ₁₆	Family happiness-security (Having a warm, smooth, loving closed and secure family life.)					

V ₁₇	Pleasure (Having happiness, fun, and recreations with comfort life.)					
V ₁₈	Being self-controlled, tolerant-restrained (Self-disciplined, tolerant in all matters)					
V ₁₉	Believing in oneself and independence					
V ₂₀	Being responsive to situations-opportunities (Being flexible, clever, adjusting to situations and opportunities)					
V ₂₁	Contented (Accepting one's true status and being satisfied with what one has)					
V ₂₂	Educated & Capable (Searching for higher education because education is wealth; possessing capability; being determined and having skills in works)					
V ₂₃	Calm-cautious (Being calm, restrain emotion, and discreet)					
V ₂₄	Caring-considerate (Refraining from acting aggressively, keeping relationship and friendship)					
V ₂₅	Forgiving and non-vengeful (Being forgiving)					
V ₂₆	Grateful (Being honest and loyal to others)					
V ₂₇	Ambitious-hardworking (Setting high goals and work hard towards those goals)					
V ₂₈	Polite-humble (Being polite and humble. Having good manners)					
V ₂₉	Obedient-respectful (Respecting and listening to the elders who are more experienced. Being obedient)					
V ₃₀	Courageous (Standing for one's opinions and beliefs)					
V ₃₁	Honest-sincere (Being truthful and sincere)					
V ₃₂	Responsible (Knowing one's duties, responsibilities, and being on time)					
V ₃₃	Fun-loving, humorous (Appreciating fun, being witty, humorous. Having a cheerful and relaxed life)					
V ₃₄	Imaginative, creative (Being imaginative and artful)					
V ₃₅	Clean-neat (Appreciating cleanliness and tidiness)					
V ₃₆	Broadminded, open-minded (Being open to opinions and beliefs that are different from one's own)					

Source: Author, 2011

Note: 1= Not important at all; 2= Little important; 3= Moderate important; 4= Very important; & 5= Utmost important

APPENDIX C

Livelihood adaptation survey

<i>Social aspect</i>				
1	In this village, how many host households do you know?			
2	In this village, how many resettled households do you know?			
3	Households that you have known, how many of them are your new friends?			
4	Communication with new friends in a month (with same ethnic)			
	How many times do you go to your new friends' house?			
	How many times do your new friends come to your house?			
	How many times do you give your new friends such as food, drink, rice, and vegetables?			
	How many times do you receive from your new friends such as food, drink, rice, and vegetables?			
	If you friend want to borrow your money, will you lend them some money?			
	If you want some money, do you think your new friends will lend you some money?			
	How many times do you go to collect NTFPs together with your new friends?			
	How many times do you go to market together with your new friends?			
	How many times do you have drinking party together with your new friends?			
	How many times do you have dinner together with your new friends?			
5	Communication with new friends in a month (with other ethnics)			
	How many times do you go to your new friends' house?			
	How many times do your new friends come to your house?			
	How many times do you give your new friends such as food, drink, rice, and vegetables?			
	How many times do you receive from your new friends such as food, drink, rice, and vegetables?			
	If you friend want to borrow your money, will you lend them some money?			
	If you want some money, do you think your new friends will lend you some money?			
	How many times do you go to collect NTFPs together with your new friends?			
	How many times do you go to market together with your new friends?			
	How many times do you have drinking party together with your new friends?			
	How many times do you have dinner together with your new friends?			
6	How much do you agree with the rule on paying water fees every month?			
	1=Strongly disagree	<input type="checkbox"/>	4= Agree	<input type="checkbox"/>
	2=Disagree	<input type="checkbox"/>	5= Strongly agree	<input type="checkbox"/>
	3=Neutral	<input type="checkbox"/>		
7	Are you still practicing these livelihood restoration activities?			
	Catfish raising	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Yang bong planting	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Vegetables gardening	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Weaving	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Peanuts gardening	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Mushroom cultivating	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
	Cassava planting	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
8	How often do you participate in meeting of these activities?			
	1=Never; 2=Seldom; 3=Often; 4= Always; 5= Every times			

		1	2	3	4	5		
	Catfish raising							
	Yang bong planting							
	Vegetables gardening							
	Weaving							
	Peanuts gardening							
	Mushroom cultivating							
	Cassava planting							
<i>Economic/financial aspect</i>								
9	What are you doing recently to earn a living? (Please tick -multiple answers)							
	Rice farming <input type="checkbox"/>	Planting cassava <input type="checkbox"/>	Gardening <input type="checkbox"/>	Trading <input type="checkbox"/>	General shop <input type="checkbox"/>	Rice milling Service <input type="checkbox"/>	Collect NTFPs <input type="checkbox"/>	Laborer <input type="checkbox"/>
	Are you saving some money now?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	Are you in debt now?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	Do you have any type of economic activities starting in this village, which is new to you?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	How is your financial condition compared to the past (before resettlement)?				Worse <input type="checkbox"/>	Same <input type="checkbox"/>	Better <input type="checkbox"/>	
10	What were the two main problems with earning a living in 2011 for you? And how did you deal with those problems?							
11	Are there members of your family who go to other places for working? Where does she/he go? And what does she/he do?							
<i>Physical and natural aspect</i>								
12	How much are you feeling comfortable and familiar with using such facilities? 1=Do not comfortable at all; 2= Little comfortable; 3= Moderate comfortable; 4= Comfortable; & 5= Utmost comfortable							
		1	2	3	4	5		
	House							
	Tap/Tank water							
	Electricity							
	Roads							
	Toilets							
13	How much do you know about the village?							
	Do you know where the grassy land is?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	Do you know where the health center is?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	Do you know where the cemetery is?				No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	(Details)	
	Does the forest in this village have the same NTFPs as the forest at your mother village?			Don't know <input type="checkbox"/>	Somewhat <input type="checkbox"/>	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>	
14	Approximately, how many times did you go to collect NTFPs in this forest since you moved into here?							
15	Approximately, how many times did you go back to your mother village to find food?							

<i>Human aspect</i>			
16	Approximately, how many times did you become sick since you moved into here?		
17	Skills/knowledge you have gained so far		
	Do you think you have gained new skills/knowledge from participating in vegetables gardening?	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>
	Do you think you have gained new skills/knowledge from participating in catfish rising?	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>
	Do you think you have gained new skills/knowledge from participating in yang pong planting?	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>
	Since you moved here, are there any new skills/knowledge that you feel you have gained so far?	No. <input type="checkbox"/>	Yes. <input type="checkbox"/>

APPENDIX D

Frequency distribution of value's importance degree by ethnic group (with no significant differences)

Code	Value	Ethnic group	Low	Medium	High	<i>p</i> -value
V ₄	A comfortable life & status-wealth	Hmong	0	1	28	0.066
		Pao	0	7	22	
		Phong	0	3	13	
V ₆	A beauty and abundance of nature	Hmong	14	10	5	0.220
		Pao	11	12	6	
		Phong	12	3	1	
V ₇	Mature love with the same ethnic group	Hmong	0	6	23	0.160
		Pao	0	9	20	
		Phong	0	1	15	
V ₁₀	Wisdom-knowledge	Hmong	0	2	27	0.361
		Pao	0	2	27	
		Phong	1	2	13	
V ₁₁	Self-esteem	Hmong	0	6	23	0.426
		Pao	3	7	19	
		Phong	1	5	10	
V ₁₅	Equality	Hmong	0	4	25	0.386
		Pao	0	7	22	
		Phong	0	5	11	
V ₁₆	Family happiness-security	Hmong	0	0	29	0.158
		Pao	1	4	24	
		Phong	0	2	14	
V ₁₇	Pleasure	Hmong	0	7	22	0.117
		Pao	4	9	16	
		Phong	0	5	11	
V ₁₈	Self-controlled, tolerant-restrained	Hmong	0	9	20	0.950
		Pao	0	10	19	
		Phong	0	6	10	
V ₂₂	Educated & Capable	Hmong	0	3	29	0.58
		Pao	0	6	23	
		Phong	2	3	11	
V ₂₅	Forgiving and non-vengeful	Hmong	0	9	20	0.166
		Pao	3	12	14	
		Phong	0	6	11	
V ₂₆	Grateful	Hmong	0	2	27	0.881
		Pao	0	3	26	
		Phong	0	2	14	
V ₂₉	Obedient-respectful	Hmong	0	3	26	0.457
		Pao	0	6	23	
		Phong	0	4	12	
V ₃₀	Courageous	Hmong	0	2	27	0.249
		Pao	0	6	23	
		Phong	0	4	12	

V ₃₁	Honest-sincere	Hmong	0	3	26	0.425
		Pao	0	6	23	
		Phong	0	1	15	
V ₃₂	Responsible	Hmong	0	2	27	0.310
		Pao	1	6	22	
		Phong	0	4	12	
V ₃₃	Fun-loving, humorous	Hmong	0	8	21	1.000
		Pao	1	8	20	
		Phong	0	4	12	
V ₃₆	Broadminded, open-minded	Hmong	0	4	25	0.170
		Pao	2	9	18	
		Phong	0	4	12	

Source: Author's computation, 2012