HYDROPOWER DAM DEVELOPMENT AND LOCAL COMMUNITIES’ LIVELIHOODS: A CASE OF YALI HYDROPOWER PROJECT, VIETNAM

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LIST OF ABBREVIATIONS

BDC Basin Development Challenge
CPWF Challenge Program on Water and Food
CRES Center for Natural Resources and Environmental studies
FGD Focus group discussion
GWh gigawatt-hours
HPD Hydropower Development
Ha Hectares
kWh Kilowatt hour
MW Megawatts
NIAA National Institute of Agriculture Planning and Projection
VESDI Vietnam Environment Sustainable Development Institute
WSI Water Storage Infrastructure
1. THE CURRENT CONTEXT OF HYDROPOWER DEVELOPMENT AND PLANNING IN VIETNAM

Vietnam's energy industry has made remarkable progress after 25 years of reforms and broad socio-economic development. During 2001-2010, Vietnam's GDP rose on average by 7 percent per annum, with the GDP per capita touching USD 1,150 at the end of 2010, thereby lifting Vietnam out of the “Poor Country” category. Primary energy output increased by 8 percent per year during this period, with the production of clean coal peaking at 44 million tons per annum, the crude oil output rising to 15 million tons, and the natural gas supply increasing to 9 billion cubic meters in 2010. Meanwhile, electricity production stood at 100 billion kWh with hydropower, natural gas-powered thermoelectricity and coal-powered thermoelectricity contributing 27.5 percent, 44.7 percent and 17.5 percent of the total power, respectively. Also in 2010, electricity consumption per capita was 1000 kWh/person (Bui, 2013). In 2012, Vietnam generated a total of 117 billion kWh of electricity to which hydropower contributed 53 billion kWh, coal power 21.2 billion kWh, wind turbine 40.2 billion kWh and oil thermoelectricity 159 million kWh. Its remaining power requirement was met by imports. Electricity produced by hydropower, the cheapest source, dramatically increased by 8 billion kWh in this period, largely due to the power generated by Son La hydroelectric power station, which was inaugurated in December 2012 and has a capacity of 2400 MW with an annual output of 10 billion kWh.

Currently, hydropower accounts for a large proportion of electricity production in Vietnam. Hydropower is a renewable source of energy, and produces very little greenhouse gas as compared to other means of electricity production (Nguyen, 2012). The rapid urbanization, industrialization, and intensification of farming have led to a dramatic rise in the demand for power in Vietnam in the last few decades. The development of water resources for electricity generation, irrigation and flood control has been given much attention by the government (Dao, 2010). As a result, dam building has been accelerated in the last few decades (Ibid.). Up to 2011, the number of dams for hydropower production and irrigation that Vietnam planned to construct was estimated to be 1,114 throughout the country with a total designed hydropower capacity of 25,000 MW (http://www.cand.com.vn/vi-VN/khcn/2012/12/187444.cand).

The total potential hydropower capacity of Vietnam is estimated to be up to 87 billion kWh, of which small-sized hydropower plants account for 12 kWh to 14 kWh (Nguyen, 2012). Hydropower accounts for 30-40 percent of the country’s total electricity generation. Its contribution to power in 2009 and 2011 was 35 percent and 37 percent, respectively, and will remain unchanged until 2015 after which it will decrease to 25 percent in 2025 (Ibid.).

The Power Development Plan from 2011 to 2020 with an eye on 2030 gives priority to the development of hydropower sources, especially projects that bring about multiple benefits, such as flood prevention, water supply, and electricity production. It is estimated that by 2020, the total capacity of hydropower plants will reach around 17,400 MW, accounting for 23.1 percent of the total national electricity sources. But by 2030, the total capacity of electricity plants is expected to touch 146,800 MW, of which hydropower will account for only 11.8 percent.

The development of water resources for electricity generation, which has been accorded high priority, is an indispensable step for developing countries. However, in addition to benefits that dams bring about, such as electricity and water for irrigation, dam-building incurs costs – not only the cost of building dams, but also the cost of displacement (Dao, 2010). Resettlement compensation packages allow local people to build houses for themselves. However, shortcomings and inadequacies during the process of resettlement have led to
severe consequences for the local socio-economic development. It should be noted that this situation is very common in all dam-induced displacement projects. The frequent shortcomings include environmental degradation, biodiversity imbalance, socio-economic uncertainty, loss of cultural identity, and conflicts in natural resource management (Ibid.). In Vietnam, 20,000 ha of primary forest was cleared in the last few decades due to unplanned development of hydropower dams in Central Vietnam and the Central Highlands where forest plays a very important role in the local people’s life, and all rivers are short and sloping (Vu, 2012).

2. HYDROPOWER DEVELOPMENT IN YALI DAM CASE: PARTICULAR CONTEXT, OBJECTIVES AND RATIONALE

Yali Falls Dam hydropower project that became operational in April 2002, is located on the Krong PoKo, a tributary of the Sesan River, which originates from the North of the Central Highlands, Vietnam. The Sesan flows through Cambodia, where it enters the Mekong River. The site of the project is located on the Yali Falls, where water surges are estimated to be 40m high. The dam is situated in Ya Mnong village, Chu Pah district, Gia Lai province, and its other side is located in the Yali commune of Kon Tum province. A total of 1,658 families with 8,475 people were displaced by the project (Dao, 2004). The impacts of the Yali hydropower plant included 6,480 hectares of inundated land of which 1,240 ha was agricultural land, and 1,149 resettled households with 5,381 affected people located in nine villages of Kon Tum and Gia Lai province (SFRI, 2013).

Many people believe that the Resettlement Plan of the Yali Project was very well prepared and could serve as an example for other dam and reservoir projects in Vietnam (VESDI, 2000). More than a decade has passed since the Yali Fall dam resettlement project was implemented, and the resettled people have been facing many challenges, which have been documented by a number of studies. However, these researchers have failed to study the factors that influence the access to and use of natural resources, especially water resources in the resettlement areas.

The CPWF Mekong Basin Project 4 (MK4) on “Water Governance” is a research project that focuses on the governance structures and mechanisms needed to enable, support and maintain efficient and fair management strategies for water storage infrastructure (WSI) in the issue fields of livelihoods, water valuation and dams. It will consider the ways in which WSI is presently being developed, managed or planned to be managed, and what needs to change if the benefits are to be increased, burdens and risks reduced, and allocation to multiple users fairly distributed and decided upon. The research will consider both individual reservoirs and cascades of WSI. It draws on other Mekong basin development challenge (BDC) projects as well as institutional analysis of current water governance for different uses and its associated impacts on farming, land access, and fishing; its formative and innovative structures; stakeholders’ partnership; and rules currently unfolding at certain levels of water governance in the Mekong.

The overall objective of MK4 is to identify and evaluate a range of options that can support stakeholders’ choices and decisions besides linking with Project 5 for stakeholder participation in resource research development and resource management at basin, sub-basin, and project site levels. It will increase benefits, and reduce and fairly share burdens and risks for all. In order to achieve this, water governance and the capacity to negotiate amongst water users (including dam operators) must be improved, paving the way for policy and administrative changes that enable the sharing of benefits among riparian communities, water users, and among nations.
This paper reports on how water needs, benefits, burdens and risks of affected communities, of male and female farmers and fishers have been articulated in the public domain, placed on the agenda of decision-making, and taken into account (or not) in the design, planning and management of dams in one of the three cases under study which comprise the Output 2 of MK4 Project.

In order to gather site-level qualitative data and get appropriate interviews, guides were drawn up for each of the three project sites after a joint field trip. The researcher carried out most of the individual interviews with officials specifically in charge of operations and day-to-day in-situ management of dams in each of three sites in 2012 and 2013. Focus group interviews with people in affected communities, men and women farmers and fishers in each site were also conducted simultaneously.

Further, the designing of interview guides and preliminary findings were closely coordinated with the progress in data gathering and interpretation by MK1 (optimizing WSI management for livelihoods), MK2 (water valuation) and MK3 (optimizing cascades or systems of small reservoirs in catchments) in their respective issue domains. This helped in delineating and highlighting the issue of how the needs and voices of affected communities, and male and female farmers and fisher folks have mattered in the design, planning and management of a particular issue field in the dam operation. Of special importance to Output 2 is the employment of gender analysis to gauge the responsiveness and inclusiveness of current decision-making and management of dams in the three projects – the differentiated access and control rights to water and associated land resources, as well as differences and similarities between the participation of women and men as community stakeholders.

Secondary research was conducted in the form of desk review of pertinent documents on the topics of governance and livelihood concerns, water valuation, and dam cascades implicated in each project. Three project site workshops were organized for further validation and elaboration of findings and conclusions of these themes. These validation workshops also targeted participants who were high-level and middle-level country officials and representatives of Mekong basin-wide organizations.

3. LOCAL ECONOMY, SOCIO-ECONOMIC PROFILE AND POVERTY SITUATION IN THE DAM AREA (RESETTLED PEOPLE)

3.1. The profile of the affected communes

The Yali hydropower plant affected seven communes in Kon Tum province and one commune in Gia Lai province. While four of these communes, namely Sa Binh, Yaxier, Yatang, and Yali fall in Sa Thay district; three communes, namely Ngoc Bay, Kroong and Lachim, are situated in Kon Tum city, and one commune, Yaphi, is in Chu Pah district of Gia Lai province.

A total population of 5,381 people from 1,149 households was relocated due to the dam. The ethnic minority people accounted for 59 percent of the total population that was resettled, of which Gia Rai tribes formed 35 percent, Ro Nga 19 percent, and Ba Na 6 percent.
Table 1. Number of relocated households and land acquired by the Yali Hydropower Company

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relocated households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Number of households</td>
<td>Household</td>
<td>1,149</td>
</tr>
<tr>
<td>- Population</td>
<td>Person</td>
<td>5,384</td>
</tr>
<tr>
<td>Percentage of ethnic minority</td>
<td>%</td>
<td>59%</td>
</tr>
<tr>
<td>groups (Gia Rai, Ro Ngao, Ba Na)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Acquired land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Agricultural land</td>
<td>Ha</td>
<td>1,933</td>
</tr>
<tr>
<td>- Forest land</td>
<td>Ha</td>
<td>3,492</td>
</tr>
<tr>
<td>- Residential land</td>
<td>Ha</td>
<td>85</td>
</tr>
<tr>
<td>- Other land</td>
<td>Ha</td>
<td>940</td>
</tr>
</tbody>
</table>

Source: PECC 1, 1992.

3.2 Compensation scheme and its impact on current livelihoods

The compensation package included housing, cash compensation for loss of crops and fishponds, for moving the house and ancestral tomb, and rice supply. In addition, the resettled people were provided financial support for production activities.

**Housing**

Those households, which were located under the level of 515 m and were flooded when the reservoir was filled, received housing support. The compensation package provided two types of houses—houses built on the ground and houses on stilts. While the Kinh people (Kinh or Viet people make up almost 90 percent of Vietnam’s population) chose houses on the ground, there are both types of houses in the villages of the ethnic people.

According to CRES (2001), houses were provided to all the resettlers whose land was flooded. And the total area of a house (40$m^2$) remained the same for all households, regardless of the number of people in a household. These houses were not only small, but also did not have a separate kitchen, bathroom, latrine, and pig pen. Furthermore, many people found faults with the quality of construction as well. It was observed that many households in the resettled villages had to sell off their land and crops to build kitchens and new houses next to the houses allotted in the compensation package.

According to key informants interviewed during our field survey in 2013, more than 50 percent of the Kinh households in Village 1 and Village 2 of Ngoc Bay commune were able to change the house design since they were either officials of the commune, relatives of officials, or rich people. But no ethnic minority households could change the house design according to their needs. These findings are consistent with the CRES report of 2001.

According to the general secretary of the Communist Party of Kroong commune, the house design and construction was implemented in a top-down manner. He said the Compensation Board for the resettlement of the Yali Hydropower Dam had informed them that a house cost 36 million VND (One USD was VND – in June 2013) during the meetings with the local authorities and with local people without any official documents. He said they just brought builders from outside to build the houses and allotted the completed houses to the resettled people. The ethnic people in Plei Klech village in Ngoc Bay complained that they would...
have preferred houses on the ground. However, the village head and commune leaders did not listen to them. Regarding the toilets, an official in Kroong commune complained that the ethnic minority people were forced to use toilets with two tanks, which was not suited to their culture. The reason is that they have never used night soil for cultivation like the Kinh people. However, they failed to convince the Yali Company and the Compensation Board despite several representations. The Kinh people in Village 1 and Village 2 of Ngoc Bay communes also did not like the toilets provided by the Yali Company, but unlike the ethnic people, they were successful in getting permission for building toilets on their own with the building materials provided by the company. The CRES study in 2001 also found that the Kinh households in Binh Son village, Sa Binh Commune and Phuong Quy village in Vinh Quang Commune received 900,000 VND (USD62) and 2.17 million VND (USD 150) each for the construction of toilets and wells.

In general, even though houses and toilets were built for the resettled people, these had many shortcomings related to design and construction. Further, the research findings show the inequity between the Kinh people and the ethnic minority groups. The Kinh managed to get their voices heard during the construction process, while the ethnic minority people failed to do so.

**Cash compensation for the loss of fishponds and crops**

Those households, which lost their fishponds and crops during the dam construction, received cash compensation. However, the amount of cash received varied from one household to the other. The crops for compensation included perennial fruit trees, sugarcane, and coffee. According to CRES (2001) no ethnic households were given cash compensation for fishponds. In 1996, the Yali Project's Board of Management instructed villagers that they could grow temporary crops but not perennial trees on the land situated in the potential reservoir. However, a number of Kinh people continued to grow sugarcane, and even sowed new crops. Therefore, they were compensated for the crops that were lost. Many of them even converted rice paddies into fishponds as a result of which they received compensation for fishponds that had been constructed just a night before the Yali Project's Board of Management arrived. Many people became rich from the fishpond business.

<table>
<thead>
<tr>
<th>Village</th>
<th>Ethnicity</th>
<th>% households received money/households interviewed</th>
<th>Least cash received/household</th>
<th>Most cash received/household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mang La</td>
<td>Ba Na</td>
<td>25 (2/8)</td>
<td>4,250,000</td>
<td>14,000,000</td>
</tr>
<tr>
<td>Ka Bay</td>
<td>Ba Na</td>
<td>0 (0/9)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Binh Son</td>
<td>Kinh</td>
<td>100 (10/10)</td>
<td>1,200,000</td>
<td>120,000,000</td>
</tr>
<tr>
<td>Kroong Klah/Ktuh Ngao</td>
<td>Ba Na/Ro Ngao</td>
<td>43 (3/7)</td>
<td>600,000</td>
<td>11,700,000</td>
</tr>
<tr>
<td>KonNgoKlah</td>
<td>Ro Ngao</td>
<td>0 (0/5)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Phuong Quy</td>
<td>Kinh/Ba Na</td>
<td>83 (5/6)</td>
<td>172,000</td>
<td>10,500,000</td>
</tr>
</tbody>
</table>

*Source: CRES, 2001.*

The ethnic minority people were honest. They did not grow any crops on the land that the government had asked them not to. Therefore, they received a very small amount of compensation money. In fact, most of the ethnic households didn't receive any compensation for lost crops. A number of Kinh households had leased the ethnic people's land, so the compensation was paid to the owner of the crops, meaning the Kinh people, but not to the owner of the land. On average, the Kinh households received about 20 million VND for lost
crops and fishponds, while the ethnic minority people got only 60,000–70,000 VND (CRES, 2001). According to CRES (2001), all villagers believed that the evaluation of lost crops and the quantum of compensation received was not transparent, fair or satisfactory. Consequently, the compensation process led to many queries and disappointments among the resettled people.

**Rice supply**

The resettled people were also provided rice for six months to two years. According to key informants, each person received 20 kg of rice per month. However, it did not meet their demands. And many people in the resettlement sites were facing rice shortage for three to six months every year (Ibid.).

**Wet rice cultivation land and irrigation scheme**

The ethnic minority people often live in areas close to water sources, such as streams and rivers, and cultivate wet rice. Therefore, they were the first to be affected by the hydropower reservoir. However, they were not provided any compensation for the loss of rice crop and land. Instead, they were given cash compensation for the reclamation fee (300,000 VND per 1,000 m$^2$). So, the Board of Management cleared and converted the area of seasonal inundated land into rice paddies for allocation to resettled households, and did not pay cash to those who lost their cropland.

The irrigation schemes were supposed to be constructed to increase productivity in the flooded area. In reality, the Yali Company and the Compensation Board were not serious in implementing these schemes. Most of the compensation irrigation schemes built in the resettlement sites have not been effective due to faulty technical design and poor management.

**Picture 1. Irrigation system designed for the reclaimed paddy fields in Plei Lech village of Ngoc Bay commune**

The field survey conducted in 2012 in an affected commune demonstrated this lacuna. In Ngoc Bay commune, the resettled people could only plant wet rice on an area of 15 hectares out of 75 hectares of the semi-flooded area that had been designed to be converted into wet rice paddies with the water provided by the pumping and irrigation system. The reasons are three-fold. First, the designing and implementation of the irrigation schemes was done in a top-down manner without consulting the affected people. According to an official from Kroong People’s Committee, the local people wanted to reclaim the wet rice fields by themselves. However, the construction team did not let them do so. Second, there is only one pumping system for such a large area of 75 hectares. Third, the irrigation canals are too small and are located at a lower elevation as compared to the land for cultivation.
Meanwhile in Kroong commune, the Yali company reclaimed an area of 14 hectares and built a pumping station for both the Kroong commune, including Kroong Klah, Kroong Ktuh, and Village 2. The area has only one main canal and no small canal systems, leading to water shortage, following which the local people have now started growing cassava plantation in the reclaimed area.

The resettled villagers in Kroong complained that they felt cheated by the commune People’s Committee and the Compensation Management Board when the People’s Committee approved and took over the project on 10 April, 2002, without informing the villagers though only half of the wet rice fields and irrigated fields had been completed.

The local people and the local authority have raised this issue several times since 2009 during the meetings between the provincial people’s council and the electors, but to no avail. Water shortage continues to be one of the most serious problems plaguing all the resettled villages of Yali hydropower dam for the last several years.

**Shortage of drinking water**

According to the resettlement program, the Yali Company was to dig up wells for resettled households. And a group of six to eight households were to share a common well. However, the resettled people often face drinking water shortage during the dry season from February to April. It is estimated that 80 percent of wells in the resettled communes in Sa Thay district have no water for household consumption (SFRI, 2013). Our field survey in 2012 showed that half of the resettled households in Mang La and Kon Hnong Klah villages living at a higher elevation have often been suffering from lack of water during the dry season. And they are forced to get water from other households located at a lower elevation.

**Agricultural extension support**

Resettled households also received agricultural extension support in the newly resettled villages. According to CRES survey in 2001, on average each household was to receive 3 million VND (US$206) after moving to the resettlement sites. This included seedlings, fertilizers and 1 million VND for animal husbandry. Nevertheless, only 11 out of 45 households from Ka Bay, Binh Son and Kroong Klah were given 1 million VND. No households in Mang La, Phuong Qui, and Konkngo Klah villages received any agricultural extension support. Seedlings of longan, litsea, mango, and orange, and fertilizers, including nitrogen, phosphate, and potassium, too were distributed only among a few households. Villagers complained that the quality of seedlings was not good. According to our survey in 2012, the home gardens were being used for planting cassava. A few resettled households were also growing litsea and longan.

In the first year of resettlement, the Yali Company hired the Kontum Provincial Agricultural Extension Center to grow several models of hybrid maize in the semi-flooded land. However, the resettled people did not continue with this crop since it was not productive. At present, most of the semi-flooded land is used for cassava plantation.

**Poverty situation in the resettled villages**

The CRES study, which was conducted in the resettled villages in 2000, about three to four years after the resettlement, indicated that many families were suffering from severe shortage of food. Only four out of 42 households reported to having sufficient rice. The rest of the households lacked food.
Table 3. Food security of 42 interviewed households in 2000

<table>
<thead>
<tr>
<th>Months in shortage</th>
<th>Number of households</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No shortage</td>
<td>4</td>
<td>9.5</td>
</tr>
<tr>
<td>From 1 – 3 months</td>
<td>9</td>
<td>21.4</td>
</tr>
<tr>
<td>From 4 – 6 months</td>
<td>8</td>
<td>19.1</td>
</tr>
<tr>
<td>From 7 – 9 months</td>
<td>14</td>
<td>33.3</td>
</tr>
<tr>
<td>From 10 – 12 months</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>


To sum up, the immediate livelihood, land compensation and resettlement program has failed to enable livelihood development in the resettlement sites. The program was unsuccessful in meeting both the long-term demands and the immediate needs of the resettled households, such as rice support for two years after moving to the resettlement site, housing, compensation for crop losses and moving costs. Moreover, the compensation and resettlement process was neither transparent nor fair. As a result, it created inequity and gaps between the rich and the poor, and between the Kinh and the ethnic people.

3.3. Current requirements for sustainable livelihoods of affected people

Poverty alleviation in the resettled villages

Based on the recent statistics of Gia Lai and Kon Tum provinces, the poverty rate is still high in the resettlement sites, especially in areas inhabited by the ethnic minority groups. On average, the poverty rate ranges from 35.21 percent to 72.36 percent, and the ethnic households make up for 73.5 percent to 100 percent of the total number of poor households. The poor households in the communes often suffer from lack of food for three to six months in a year (SFRI, 2013).

In general, the food security and the poverty rates have not improved in the resettled sites over the last decade. The poor households are now struggling to meet their daily needs of food due to the loss of the wet rice cultivation land.
The ethnic minority used to have a dominantly self-sufficient economy, with far less linkages to the cash economy and markets outside of their villages compared to their situation now. In this less monetized livelihood conditions in Yali that they had before, they enjoyed far more food security through the production of self-consumed crops. However, the resettlement has made them dependent on the market for food supply, since the new environment and land available were not sufficient to sustain their household food consumption. Some of the resettled people we interviewed, summed up the dominant sentiments when they said:

“In the old villages, although our houses and roads were not as good as in the newly resettleld villages, we used to have enough food to eat. Now the sellers of rice and fish come to our doorsteps in the new villages, but we do not have cash to buy”.

**Land shortage, land purchase, land leasing and land reclamation**

On average, each household in the old village owned 3-5 ha of cultivation land. According to the design of the resettlement plan, each affected household was to get 2.6 ha of production land in the new village. In reality, they were compensated with less than 1 ha per household. Given the limited land resources, land purchase, land leasing and land conflict have been common issues in the resettlement site. This phenomenon was also observed in the CRES study report in 2001. It should be noted that the Kinh households from Binh Son commune used the cash compensation to buy land for cultivation since they had received larger sums of money as compensation for fishponds and banana as compared to the ethnic minority households (See Table 2). Most of the ethnic minority people had to reclaim forest land in neighboring communes and districts. Those who had land at a lower elevation in the Kroong area were again flooded by the Plei Kroong hydropower plant. Those who have reclaimed land at a higher elevation have been in conflict with the Kinh people, who are outsiders but have the support of the state agricultural enterprise.
Our field survey in 2012 showed that land leasing is also common in the resettled sites. The resettled people rent cultivation land in Ho Moong and Sa Binh communes of Sa Thay district and Ngoc Reo commune of Dak Ha district to cultivate cassava. The rentals range from 3 – 5 million VND (USD 150-USD 250) per ha per year. More than 50 percent of the households in Kroong Klah have to rent land in other areas.

**Land conflict**

*Conflict between the Thanh Trung State Rubber Enterprise and the local people*

During 1995–1996, after being informed about the Yali hydropower construction project and its impacts on agricultural land, the people in Kon Hngo Klah, Kon Hngo Ktuh, Mang La villages of Ngoc Bay commune reclaimed the forest in Kroong commune and Sa Thay district and converted it to swidden fields to grow rice, cassava and maize. At that time, the Kroong commune. In 1997, the Kon Tum Provincial People’s Committee and the Thanh Trung State Rubber Enterprise drew up a policy for converting the swidden land to rubber plantation. The enterprise held meetings with the local people to negotiate and take the land for rubber plantation. In addition, the local people were also paid a reclamation fee of 390,000 VND ($18.5)/ha. Subsequently, the province and the enterprise encouraged the locals to collaborate with them to plant rubber under a 40:60 contract, meaning 40 percent of the product value would be given to the locals and 60 percent would be kept by the enterprise. Out of the people having swidden land in the area, about 80 percent of the resettled people agreed to participate in the program, while 20 percent, most of whom were ethnic minorities and female-headed households (43 households of Kon Hngo Klah and Mang La village of Ngoc Bay commune) did not participate. This is due to the fact that the ethnic minority people do not know much about the plantation techniques of industrial crops, such as rubber and coffee. Therefore, around 45.79 ha of their land was allocated to the workers of the enterprise for planting rubber. Since then, the enterprise has not contacted and discussed any details of the arrangement with the local people.

In 2012, the local people who had given their land to the enterprise, sent a request to the Provincial People’s Committee and the state enterprise, seeking compensation for the use of their land. They also demanded that their land be returned to them after the completion of the rubber plantation cycle.
Map 1. Land use in Kon Tum in Ngoc Bay commune

Source: Trung Tran, 2013
Conflict between the outsiders and the local villagers

From 1993 to 1994, people from Mang La Ktuh and Mang La Klah of Ngoc Bay commune went to Dakrode village of Dak Ha district to clear the forest for swidden fields since they knew that the hydropower dam would flood their land. In 1995, the commune People’s Committee rented 27.5 ha land of these people to 17 Kinh households from Kon Tum city to plant coffee. Soon afterward, these 17 households were allocated the land with land use certificates. On average, the area of land allocated to them ranges from 0.3 ha/household to 3 ha/household. In December 2012, 37 households of Mang Lang Ktuh and Mang La Klah of Ngoc Bay commune requested the provincial People’s Committee to return their land to them, but till now there is no resolution in sight.

The officials from the provincial, district and commune People’s Committees highlighted the issue of land conflict and land purchase during the key informant interviews. Based on the report of Ngoc Bay commune’s People’s Committee, 42 complaint forms regarding the land conflict were submitted to the committee in 2012. Out of the 42, 37 forms had complaints that could not be resolved through the powers vested in the commune. These have therefore been submitted to the higher level for redressal. Our informants said since there was no resolution in sight to the land conflicts between the native people and the state agricultural and state forest enterprises, the locals have started destroying rubber trees of the company, and selling rubber latex to small dealers in Ngoc Bay commune.

The rapid rise in population accompanied by increasingly scarce land and forest resources in the resettlement sites, has made the life of the resettled people more miserable than ever. Five years ago, Kroong Klah village in Kroong commune submitted a proposal to the local authorities, seeking permission to move to an area with available land and forest in Mo Ray commune of Sa Thay district. For them, living near the road and the city is not as important as living in a remote village with plentiful water, land, and forest resources. Experience has shown that ethnic minorities don’t want to be very visible, and tend to live closer to the forest land for sustenance.

Although the Government and province have policies prohibiting land purchase and land use right transfer, illegal land purchase between the native people and the outsiders in the Central Highlands is still happening.

Semi-flooded land management and water manipulation of the reservoir

The semi-flooded land is very important for the resettled people. But this area is the under the management of the Yali Hydropower Company. And since the company has already given compensation for the loss of crops such as sugar and cassava to the resettled people, the villagers consider the semi-flooded land a “common property”. The resettled villagers plant cassava on the land to earn additional income. Consequently, there have been conflicts between the households in Ngoc Bay commune and between Ngoc Bay and Doan Ket communes. The People’s Committee of Ngoc Bay commune has requested the provincial People’s Committee to temporarily allocate the land to resettled households, but this proposal has not been approved to date. However, according to Decision 34/2010-Ttg of the Prime Minister dated 8 April, 2010, the Regulations of Compensation, Support and Resettlement for Hydropower and Irrigation Projects stipulate that semi-flooded land caused by the reservoir should be allocated to the commune People’s Committee for management and use.
Cultivation in this area is dependent on the reservoir water manipulation and the weather. The production land is only found in the semi-flooded areas near the reservoir and is estimated to be over 500 ha in the three communes in Kon Tum city, including Ngoc Bay, Kroong and Lachim communes. Six pumping stations built by the Yali Hydropower Company irrigate this area. The water comes from the Krong PoKo River and also belongs to the reservoir (See Map 1). However, the pumping stations are always out of order. Given the limited number of these stations and the inadequate quantity of water provided, the resettled villagers have to scramble for water for their fields during the dry season. In the case of Kon Hngo Klah, the village head has to coordinate the water distribution among the households for their fields. The villagers also have to sleep on the fields to take care of the water-pumping machine.

Table 5. Semi-flooded area of the affected communes of Yali Hydropower

<table>
<thead>
<tr>
<th>Communes</th>
<th>Flooded area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kon Tum city</strong></td>
<td></td>
</tr>
<tr>
<td>Ngoc Bay commune</td>
<td>350.0</td>
</tr>
<tr>
<td>Kroong commune</td>
<td>140.0</td>
</tr>
<tr>
<td><strong>Sa Thay district</strong></td>
<td></td>
</tr>
<tr>
<td>Sa Binh commune</td>
<td>390.1</td>
</tr>
<tr>
<td>Yali commune</td>
<td>930.5</td>
</tr>
<tr>
<td>Yaxier commune</td>
<td>156.2</td>
</tr>
<tr>
<td>Ya Tang commune</td>
<td>519.4</td>
</tr>
</tbody>
</table>

*Source: MK1 report and Kroong and Ngoc Bay communes’ people committee, 2012.*
In short, in order to use the semi-flooded land more effectively, thus contributing to poverty alleviation in an already poor area, there is an urgent need for close collaboration and coordination among the Yali Company, the local authorities, and the affected communities.

Picture 3. Lack of water for cultivation in the semi-flooded fields in Kon Hngo Klah village of Ngoc Bay commune

_Wage labor_

Wage labor has become a main source of income for many households, especially the poor households in the resettlement sites. About 40-50 percent of the households in ethnic villages work as hired laborers. This activity now accounts for 30–50 percent of the total household income. The villagers normally work in the area and other neighboring districts, such as Sa Thay and Dak Ha. They are engaged in simple work, such as weeding, preparing the soil, harvesting coffee, rubber and cassava for farm owners on a daily wage of 80,000-100,000 VND (USD 4-5/day).

3.4.  Significant changes in local livelihoods and requirements for improvement

Our field survey in 2012 and 2013 revealed that the affected people in the resettlement sites have gone through significant changes, such as decreased access to forest, land and water resources, change in social relationships and loss of traditional customs. The following paragraphs will analyze these changes.

*From diversity of crops to monoculture farming - cassava and rubber*

Since 2005, the area under rubber and cassava plantation has increased significantly. The total area under rubber plantations in the affected communes has increased from 50.9 ha in 2005 to 1,284 ha in 2010.
The increase in area under rubber has caused soil degradation, since no soil conservation or traditional techniques were applied. As a consequence, large tracts of land in the high mountainous zone have become bare and degraded. Soil degradation caused by poor soil conservation has made it more difficult if not impossible to support local people’s livelihood activities (SFRI, 2013).

Another challenge is that the high price of land cultivation and land accumulation in the resettled area has made it more difficult for the poor households to get access to and control over land. As mentioned earlier, rich people from outside of the resettled area, such as Kon Tum city, own large areas under rubber and coffee. It is reported that less than 5 percent of the resettled households in Ngoc Bay and Kroong communes own and plant rubber.

Overall, the resettlement sites have experienced a remarkable shift to main industrial crops, such as cassava and rubber. The rich and the Kinh earn the most from this shift, simply because they have more land, capital sources or management and technical skills. Meanwhile, the poor who do not have either land and capital sources or management and technical skills have been excluded from the process and do not benefit from the shift at all.
**Forest loss and exclusion from the forest products**

The forest cover of Kon Tum province has declined remarkably over the last decades. Although the forest cover has been restored to an extent, the quality has declined. The area under natural forest has fallen from 602,000 ha in 1999 to 590,454 ha in 2011 (See Table 6).

**Table 6. Natural area and forest types in Kon Tum province in 2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total natural area</th>
<th>Area with forest</th>
<th>Natural forest</th>
<th>Planted forest</th>
<th>Forest cover (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999**</td>
<td>612.489</td>
<td>602,000</td>
<td>9.959</td>
<td>63.7</td>
<td></td>
</tr>
<tr>
<td>2011***</td>
<td>968.961</td>
<td>631,952</td>
<td>590,454</td>
<td>41,498</td>
<td>64.6</td>
</tr>
</tbody>
</table>

Source: ***MARD, 2012; **FPD, 1999; *.

Before 1990, the forest played a very important role in the local people’s household economy in Sa Thay district and Kon Tum city. They could collect many kinds of forest products for their household consumption, such as timber, firewood, bamboo shoots, besides wild animals and medicinal plants. However, the area has experienced serious loss of forest after 1990. Thousands of hectares of forest were cleared and converted to cultivation land from 1995 to 1996. It was reported that during 1995–2000, after hearing that the Yali project would flood their cultivation land, the villagers started to clear the forest in the Kroong commune of Kon Tum city and Sa Thay district (See Map 1). Thus, no forest was left in the resettled areas of Kroong and Ngoc Bay communes.

Since the area under natural forest has shunk, the locals now have to collect dry branches and dead rubber trees from rubber plantations owed by the Thanh Trung company and the rich people who have capital sources and plant bamboo for their own consumption. It should be noted that the rubber plantation policy of the Government since 1990 has only worsened the situation. According to the Kon Tum People’s Committee (2011), an area of 31,603.5 ha of forest land was converted into rubber plantation between 2007 and 2011, of which the natural forest land, land without forest, and barren hills was estimated to be 23,264.5 ha, 122.3 ha, and 8,216.7 ha, respectively. It was reported that 100 percent of the households in the affected communes now purchase western medicines from pharmacy shops when they fall sick. In general, the resettled people have been totally excluded from forest. Their livelihoods have changed from forest-based subsistence economy to monoculture-based production economy.

**Picture 4. Barren hills around Ngoc Bay commune**

Source: *Field survey, December 2013.*
Loss of traditional, cultural and social relationships

The cultural life of the ethnic people in Central Highlands is closely related to the swidden cultivation, the forest, and the water. Kon Tum province is no exception. However, the degradation of natural resources, including water, forest and land, and the change from the upland rice cultivation to industrial crops, such as cassava and rubber, has affected not only the material life of the people, but also their cultural life at the resettlement sites. The traditional festivals, such as prayer rituals for new rice crops and water sources of Ba Na and Ro Ngao people in the resettled sites, are no longer celebrated. In the past, a man was supposed to make Gùi (bamboo basket) before getting married. As a result, many bamboos were planted in the area near the communal house to make Gùi. A number of Vietnamese scholars have researched the relationship between forest resources and local people’s culture in Vietnam. Among them are Dang Nghiem Van (1988); Le Trong Cuc, Dao Trong Hung and Chu Huu Quy (2001); Vu Dinh Loi, Bui Minh Dao and Vu Thi Hong (2000). All of them have concluded that resource degradation, land purchase and leasing, expansion of industrial crops have made the lives of people, especially ethnic people, more miserable. Nguyen Ngoc (2010) says the Central Highlands is like a body that has lost its capacity for resistance, and has therefore become more vulnerable.

Another striking feature of Kon Tum district is that it has the highest number of people who have converted to Christianity (Protestants) in the central highland (Nguyen Ngoc, 2010). The Protestant households account for 90-100 percent of the resettled villages. They go to church every Sunday, and according to a key informant, ever since they have become Protestants, they no longer practice traditional rituals, thereby eroding their traditional culture. However, this is not the focus of the study, and therefore there is no concrete evidence to prove any linkages between the introduction of a religion and loss of traditional culture.

From forest-based subsistence to industrial life in companies

The main compensation strategy of the Yali hydropower project as well as any other hydropower project in Vietnam is “land for land” approach. Nevertheless, due to limited access to land, young people work in the Thanh Trung Rubber Company and Kon Tum Sugar Company in Kroong and Ngoc Bay communes, in an environment totally different from what they were born and brought up in.

Table 7. Number of local people working for the rubber and sugar companies

<table>
<thead>
<tr>
<th>The resettled villages</th>
<th>Ethnicity</th>
<th>No. of poor HHs/Total HHs</th>
<th>No. of local workers in the companies</th>
<th>No. of HHs having contracts to plant rubber with the company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plei Lech</td>
<td>Ba Na</td>
<td>32/203 (15.76%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kon Hngo Kltu</td>
<td>Ba Na</td>
<td>No data</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Kon Hngo Klah</td>
<td>Ro Ngao</td>
<td>40/226 (17.69%)</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Mang La Klah</td>
<td>Ba Na</td>
<td>17/94 (18.08%)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Kroong Klah</td>
<td>Ba Na</td>
<td>175/223 (78.47%)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Kroong Ktuh</td>
<td>Ba Na</td>
<td>89/121 (73.55%)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Trung Nghia Dong</td>
<td>Kinh</td>
<td>43/250 (17.2%)</td>
<td>8-9</td>
<td>80-90</td>
</tr>
<tr>
<td>Trung Nghia Tay</td>
<td>Kinh</td>
<td>31/232 (13.36%)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Thon 2</td>
<td>Kinh</td>
<td>32/224 (14.28%)</td>
<td>20</td>
<td>No data</td>
</tr>
</tbody>
</table>

The Thanh Trung Rubber Company and Kon Tum Sugar Company are located in Kroong and Ngoc Bay communes. The results from the focus group discussion show that the number of villagers working for these companies is very small, especially among the ethnic minority people (See Table 7 below). The number of Kinh workers from the resettled villages is larger. However, the percentage of young people who are unemployed in the resettled communes is still high. In the villages of Kinh people, such as Village 1, Village 2, Trung Nghia Dong and Trung Nghia Tay, many young people have gone to bigger cities, such as Ho Chi Minh city and Da Nang city to work in the industrial zone. But no ethnic minority people in the surveyed households work far from home.

Therefore, the government and province should develop appropriate policies to promote vocational training and job opportunities besides developing new economic zones, especially for youngsters and the ethnic people. According to key informants, local people in Kroong and Ngoc Bay communes have requested the provincial and district People’s Committee to allow their children and newly-married couples to take part in the “New Economic Zone Development” plans. It means they can settle down in any areas designated and planned by the province. However, the young ethnic minority people have not been accepted for these plans on the ground that they are from the communes located in Kon Tum city.

4. PROCESS OF ACTUAL PARTICIPATION OF PEOPLE IN RELATION TO LIVELIHOOD AGENDA IN THE HYDROPOWER DEVELOPMENT PLANNING

Based on the interviews with key informants, the resettlement planning and implementation process can be divided into the following main steps:

1. Announcement of Yali project and resettlement planning.
2. Design of the resettlement layouts and houses
3. Loss assessment for compensation
4. Implementation of compensation
5. Construction of the resettlement area, including the house, latrine and related infrastructure
6. Moving people
7. Rehabilitation of production conditions

Announcement of the project and project plan

There was lack of the information about the project among the affected people. The information concerning the Yali Hydropower Project was disseminated only to the local authorities, not to the affected people; consequently there was no public participation at the grass-root level in the Yali Hydropower Project (VESDI, 2000). According to the Office for Compensation and Resettlement of Yali Project, in 1995, five years after the beginning of the dam’s construction, local people still lacked information and knowledge about the project (YPMB, 1995, p.1 in VESDI 2000).

Design of resettlement villages

This is an important part of the process. Issues such as distribution of land for households, design of the dwellings, the common house, roads, irrigation system, water distribution, and classroom construction were discussed with the affected people. According to VESDI (2000), there was intensive public participation.
According to the people interviewed in the resettled villages in Ngoc Bay and Kroong communes, their representatives were taken to visit resettlement houses in Yasir commune in Sa Thay district to choose houses on ground or stilts. This was the first village that had resettlers. However, they were given no chance for changing the house design after this. They had to follow the same standard design with its many shortcomings as mentioned earlier in Section 3.1.

In order to improve the living conditions of the resettled people, it is important to take into account production conditions and development. This requires many intensive discussions and exchange of ideas among the affected people, local authorities, the consultative institution such as National Institute of Agricultural Planning and Projection (NIAA), the Compensation Board, and the Yali Hydropower Company. It is reported that many meetings were held. According to the VESDI study in 2000, a few public discussions were held to provide information about agricultural development after resettlement, but people had no clear vision about it.

Although discussions and consultations were held, there was no mechanism to take into account feedback from the local authorities and the affected people. According to an agricultural official of the Kroong commune, who was the local representative in the compensation team, he and local people of Kroong requested the Compensation Board to let them level the reclaimed wet rice field by themselves in order to keep the good surface cultivation soil instead of using bulldozer. But the board and the construction company did not listen to them, and used the bulldozer, taking away the good soil. Moreover, the company prepared the wet rice field in a way that was not compatible with the irrigation system. Thus, only a part of the field near the pumping station was irrigated. The head of Village 2 mocked: “It is the only irrigation project of its kind in the world. Nobody has ever designed like this.” The other resettled villages also shared the same problems in the preparation of wet rice fields.

**Loss assessment for compensation conducted**

Loss assessment for compensation was conducted. This activity often led to queries and doubts from the affected people. A team that included four representatives from the commune, district, village, and bank was established to conduct the loss assessment in the affected villages. An official of Kroong commune said that one of the problems was the language barrier. Sometimes, it was difficult for the ethnic minority people to communicate with the members of the team. It should be noted that the level of illiteracy in the villages is still high. There was also lack of participation by household heads during the assessment, especially among the ethnic minority people, who often worked on swidden fields far from home. Consequently, the ethnic minorities often faced several disadvantages.

**Construction of houses, latrines houses and infrastructure in resettled villages**

Opinions are divided on this issue. VESDI study (2000) concluded that the resettled people had the right to control the construction quality of houses and infrastructure, and contribute ideas for improving the design to make them appropriate to the specific conditions of the households and the village. However, the CRES study in 2001 found differences in terms of actual participation, the rights of control and contribution of ideas for changing the design of the house. Our recent survey conducted in 2012 again confirmed that the local people just follow the house design imposed upon them by the compensation and resettlement board. The local people said: “We just take what they give”. In addition, most of the resettled people, especially the ethnic minorities, had no voice during the house design and construction, while
the Kinh people and staff members working for the commune People’s Committee could change the house design and build latrines by themselves.

In 2004, Hung Dao et al. conducted a survey on the quality of the houses on ground and stilts, and indicated that many houses were in a poor condition. This is a reflection on the quality of participation and the rights of the affected people to monitor the design and construction of houses.

Table 8. Housing in resettled villages – houses built on the ground

<table>
<thead>
<tr>
<th>Villages</th>
<th>Number of houses surveyed</th>
<th>Number of houses with broken parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Floor</td>
</tr>
<tr>
<td>Kroong Klah</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Kroong Ktu</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Ka Bay</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>32</td>
</tr>
</tbody>
</table>


Table 9. Housing condition in resettled villages – stilt houses

<table>
<thead>
<tr>
<th>Villages</th>
<th>Number of houses surveyed</th>
<th>Number of houses with broken parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Floor</td>
</tr>
<tr>
<td>Mang La</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Konkngo Klah</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>14</td>
</tr>
</tbody>
</table>


With regards to the latrines, 57 percent of the surveyed households in Kroong Klah and Kroong Ktu villages responded that their latrines were not used for many reasons. The tanks were built on the ground with a height of 40 cm. And there was only one hole on the top, with no back door for taking the solid out like in other regular latrines.

Table 10. Latrine condition in resettled villages

<table>
<thead>
<tr>
<th>Village</th>
<th>Number of families surveyed</th>
<th>Latrine conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Underuse</td>
</tr>
<tr>
<td>Kroong Klah</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Konkngo Klah</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>16</td>
</tr>
</tbody>
</table>

Rehabilitation and improvement of living and production conditions in the resettlement areas

Activities concerning agricultural extension, technical knowledge dissemination, pilot demonstration models for production development, and improving living conditions of people in the resettled areas were carried out, but the results are limited (VESDI, 2000). The CRES survey in 2001, Hung Dao et al. in 2004, and our recent survey in 2012 confirmed that the agricultural extension services for the resettled villages and communes have not been effective. For instance, many pilot models were developed in the flooded land areas and can no longer be used now. The villagers now do not use the hybrid maize developed for them.

Regarding the preparation of fields for rice paddies in Kroong, Sa Binh, Ngoc Bay communes, all these construction projects have either been delayed, have proven ineffective or are out of use. The affected people were moved to the new villages from 1994 to 1999. However, the irrigation and wet rice field construction projects were not completed until 2002 or after that. Given the quality of the projects, Dao et al. (2004) found that the people did not have land for growing wet rice as expected. When asked, villagers and local authorities said it was due to lack of consultation with them about the location, construction and monitoring of the fields. It has, therefore, led to design failure, wrong location, and poor implementation. According to the Mekong Secretariat (1992), the proposed cost of the irrigation scheme and land preparation for all the affected communes by the Yali dam was USD 530,204.

In sum, actual participation requires active discussion, exchanges, feedback between and among different stakeholders. In addition, the voices of the affected people, including the poor and ethnic minorities, must be heard. As a matter of fact, the table detailing the number and percentage of the affected men and women participating in the resettlement process in this report does not tell the full story of their participation. In addition to the number, it is necessary to listen to and take into account the affected and native people’s needs in the decision-making process, simply because they are the ones who understand their needs, their natural, and social living conditions the best.

5. DESCRIPTION AND ANALYSIS OF OMISSIONS IN THE PLANNING DOCUMENTS

As discussed earlier in Section 3 and also according to key informants, the issue of cultivated land was either not discussed at all or only limited discussion was carried out on it during the resettlement planning process. According to the plan, each house was supposed to have at least 2 ha of forest and swidden field. However, since discussions on agricultural development after resettlement were limited, the affected people had no clear vision about how to develop agricultural production after their resettlement.

The major and common stresses and shocks affecting the current livelihoods of the resettled people include (a) land; (b) water resources for drinking and production purposes; and (c) job creation. The following paragraphs will further analyze these stresses.

a. There are two issues related to land, including cultivated land and pasture land. Cultivated land that had belonged to the state enterprises was not withdrawn before being allocated to resettled households. In fact, this land still belongs to Thanh Trung state enterprises, although resettled households are farming on it. According to the CRES report in 2001, all households which were interviewed during the field survey said that they did not receive any land. Our field survey in 2012 and 2013 showed that the majority of households interviewed complained that they were not provided sufficient land. The other issue is pasture land. According to a commune leader, the resettled people have to raise livestock on land that is either privately owned or belongs to the state enterprises. As a result, this has led to conflicts in land
management, an issue that has not been resolved. All of this has made it more difficult than ever for resettlers to make ends meet, thus contributing to poverty in the already poor region in HPD.

b. It has been reported that the quality of water in the Dakbla River has deteriorated. Therefore, local people can neither use the water for domestic purposes nor swim in the river as they did in the past.

According to CRES (2001) on average, six to eight households shared a common well, which was constructed by the Yali Project. However, villagers suffered from lack of water because the well was shallow and located at a high elevation. Water is especially scarce during the period toward the end of the dry season (February through April). In 2006, a clean water program was initiated and jointly funded for Kroong commune (Kon Tum City) by the Ministry of Natural Resources and Environment and the Geology and Mineral Agency. As per this program, a borehole and a water storage tank were built next to the communal house so that everyone in the community could get access to water. Nevertheless, no pipeline was laid to connect the water storage tank to households. Therefore, villagers have to go all the way to the tank to get the water. Further, no one is willing to pay for the electricity to run the pumping machine. As a result, the villagers in the resettlement site could not use the project ([http://www.kontumcity.vn/cms/tong-hop/feed/dien-dan-cu-tri-nong-truong-cao-su-can-quan-tam-den-quyen-loi-cua-nguoi-dan.html](http://www.kontumcity.vn/cms/tong-hop/feed/dien-dan-cu-tri-nong-truong-cao-su-can-quan-tam-den-quyen-loi-cua-nguoi-dan.html)). Consequently, each household has recently dug a well on its own, which costs USD150. Households that are located at a high elevation have to share water with their neighbors at lower elevation during the dry season.

In 2002, the Yali Company built eight pumping stations for the resettlement site. The stations were designed to provide irrigated water for the cultivated land area. But on ground, these irrigation projects in resettlement sites can’t be used or are not effective. As a consequence, the fields are dry and people suffer from food shortage.

**Picture 5. The clean water program in Kroong Klah village, Kroong commune**

[Image]

*Source: Field survey (January, 2013).*

c. Job creation: The planning document does not mention jobs for resettled people. There was also no compensation for occupational change like elsewhere in Vietnam. Only a small number of young people (5-10 youngsters per commune) have been recruited to work in the Thanh Trung Rubber and the Kon Tum Sugarcane companies. Ethnic people do not fit in the industrial environment, which is totally different from their traditional upbringing. People are also engaging in wage labor, such as weed removal; harvesting of coffee and cassava; and gold panning.
Key informants at the study sites highlighted that since 2010, hundreds of ethnic people from Kroong Klah and Kroong Ktuh, including women and young girls, have been engaged in gold panning along the Po Ko River in Sa Thay district as well as in Cambodia. This is a type of work that women and young girls would never do in the past. Now it is commonplace for locals to start gold panning when the reservoir is closed. From the evening to 4am, the dam is opened and releases water. It is reported that if they are lucky they could earn USD 5 a day. If they are not, they return empty-handed. Many couples bring their children along and leave them on the riverbank while they are engaged in this activity. In 2010, a child of 6 was drowned and his body was not found (http://vietbao.vn/Xa-hoi/Vo-tu-dai-vang-trai-phep-tren-dong-Po-Ko/1735097189/157/). According to key informants, although people know that it is a very dangerous trade, they continue to engage in it for want of land and jobs.

According to key informants, in the past women worked harder than men as they had to get up earlier to pound the rice. Now fish and rice are sold at the doorstep, but they do not have the cash to buy food. It is of great urgency to earn cash these days to not only pay for food, but also for medical bills, children’s schooling, and other expenses.

6. THE ROLE OF INTERMEDIARY ORGANIZATIONS IN ENGAGEMENT AND REPRESENTATION OF LOCAL PEOPLE’S LIVELIHOOD AND INTERESTS IN DIALOGUE AND ENGAGEMENT MEETINGS

Institutional arrangements involved in sustainable livelihoods of affected people

The diagram below describes the institutional arrangements involved in sustainable livelihoods of affected people.

Diagram 1. Institutional arrangements involved in sustainable livelihoods of affected people

Source: MK1 Report, 2013
As the diagram demonstrates, there are various institutions involved in ensuring the livelihoods of affected people. The functions and tasks of each institution are described in the following Table.

### Table 11: Mandates of institutions involved in livelihoods of affected people

<table>
<thead>
<tr>
<th>No</th>
<th>Institutions</th>
<th>Functions and Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provincial level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Department of Agriculture and Rural Development (DARD)</td>
<td>Provincial DARD is responsible for advising the People’s Committee on agricultural, forestry and fisheries development. It is responsible for disaster and damage control besides recovery from pestilence and epidemics. It is also in charge of dike protection, irrigation, aquaculture, water supply, and drainage system; besides undertaking activities to control storms and floods.</td>
</tr>
<tr>
<td>2</td>
<td>Ethnic Minority Department (EMD)</td>
<td>Provincial EMD is responsible for improvements in ethnic minority people’s material and spiritual lives as well as their knowledge. It is also in charge of research into the historical origins and development of ethnic groups as well as their characteristics, socio-economic development and traditional customs. EMD collaborates with other relevant local departments, offices and institutions to enforce policies/regulations as well as programs, projects and pilot models related to ethnic minorities. EMD is responsible for giving guidance on and monitoring of the Fixed Cultivation and Permanent Settlement Program for ethnic minorities in the province.</td>
</tr>
<tr>
<td>3</td>
<td>Branch of Agriculture and Rural Development Bank</td>
<td>It provides credit for agricultural activities in the rural areas.</td>
</tr>
<tr>
<td><strong>District level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Agriculture and rural development</td>
<td>District DARD is in charge of agricultural, forestry, and fishery development. It is also responsible for prevention and control of floods, inundation, storms, landslides, droughts, waterlogging and epidemics in the district. It helps the people in recovering from these disasters as well. - Implements Program 134, 135, 163 ... - Builds demonstration models for rice, maize, rubber, pig feeding, and fishing.</td>
</tr>
<tr>
<td>5</td>
<td>Extension Service Division</td>
<td>It organizes training courses on cultivation technologies for farmers and implements the related programs.</td>
</tr>
<tr>
<td>6</td>
<td>Veterinary Service Division</td>
<td>It is responsible for animal disease prevention and protection, such as blue ear, bird flu, and treatment of diseases of cattle and poultry. It is also in charge of organizing courses for prevention of diseases among animals.</td>
</tr>
<tr>
<td>7</td>
<td>Plan Protection Division</td>
<td>It is responsible for providing training to farmers on integrated pest management (IPM) and on safe pesticide use. It is also responsible for crop pest and disease control.</td>
</tr>
<tr>
<td>8</td>
<td>Ethnic Minority Office</td>
<td>It is responsible for ethnic minority policies and implementation of programs and projects relating to ethnic minorities, such as Program No 168, 147.</td>
</tr>
<tr>
<td>No</td>
<td>Institutions</td>
<td>Functions and Tasks</td>
</tr>
<tr>
<td>----</td>
<td>--------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>9</td>
<td>Branch of Agriculture and rural development Bank</td>
<td>It provides credit for economic activities</td>
</tr>
<tr>
<td>10</td>
<td>Branch of Bank for social policies</td>
<td>It provides credit for agricultural activities in rural areas.</td>
</tr>
<tr>
<td>11</td>
<td>Farmers’ Association</td>
<td>It secures farmers’ access to credit sources through the Vietnam Bank for Social Policies. It is usually responsible for technology transfer of seedlings and animals to help villagers recover from damage caused by extreme events. It encourages farmers to change the cropping pattern.</td>
</tr>
<tr>
<td>12</td>
<td>Women’s Union</td>
<td>It is responsible for family planning/population control. It secures women’s access to credit sources and helps villagers purchase seedlings and livestock besides encouraging early harvest of rice before storms. It helps to deal with domestic violence.</td>
</tr>
<tr>
<td>13</td>
<td>Youth Union</td>
<td>It organizes activities for young people. It often mobilizes young people to save dikes and control floods when needed through labor work. It also helps farmers during natural disasters. It helps to eliminate social evils and organizes young people for participating in economic activities.</td>
</tr>
<tr>
<td>14</td>
<td>Elderly Union</td>
<td>It organizes activities for elders in the commune and participates in poverty reduction.</td>
</tr>
<tr>
<td>15</td>
<td>Fatherland Front</td>
<td>It delivers the Government’s policies to farmers. It helps farmers improve their life and reduce poverty.</td>
</tr>
<tr>
<td>16</td>
<td>Veterans Association</td>
<td>It participates in the Party activities. It is responsible for maintaining a residential unit during a natural disaster.</td>
</tr>
<tr>
<td>17</td>
<td>Irrigation unit</td>
<td>It is responsible for irrigation water control.</td>
</tr>
<tr>
<td>18</td>
<td>Forestry Bureau</td>
<td>It is responsible for forest protection and implements projects related to forest conservation and reforestation.</td>
</tr>
<tr>
<td>19</td>
<td>KonTum Cassava processing Company</td>
<td>It buys cassava tubes from farmers for processing. It attracts local laborers to non-farm jobs. It also financially supports the commune in building its infrastructure.</td>
</tr>
<tr>
<td>20</td>
<td>Thanh Trung State Rubber Enterprise</td>
<td>It creates jobs for local affected households, although very few.</td>
</tr>
<tr>
<td>21</td>
<td>Kon Tum Sugar Cane Factory</td>
<td>It buys raw sugarcane from farmers for processing and creates jobs for affected households, although very few.</td>
</tr>
<tr>
<td>22</td>
<td>Mining stone Company</td>
<td>It produces construction materials and attracts local laborers to non-farm jobs.</td>
</tr>
<tr>
<td>23</td>
<td>InnovGreen Kon Tum Co., Ltd</td>
<td>It is responsible for reforestation and attracts local laborers to non-farm jobs.</td>
</tr>
<tr>
<td>24</td>
<td>Yali Hydropower Company</td>
<td>It is responsible for water management in the reservoir connected to semi-flood land area.</td>
</tr>
</tbody>
</table>

*Source: Modified from the MK1 Report, 2013.*
The following paragraph illustrates an example of cooperation among the Yali Hydropower Company, the Kontum Provincial Department of Agriculture and Rural Development, affected districts and communes with regard to the water manipulation schedules of the Yali reservoir. Before 2009, the Yali Hydropower Company often stored water in the reservoir without any prior announcement. Therefore, the semi-flooded land was flooded without warning, thus causing heavy damage to the villagers.

Lately, the Yali Hydropower Company has been closely collaborating with the Kontum Provincial Department of Agriculture and Rural Development, affected districts and communes to ensure that the resettled people can utilize a part of the semi-flooded land for cultivation, and minimize the risks. Annually, the company sends its official announcements to the Provincial People’s Committee, related provincial departments, including DARD, affected districts and communes in Kon Tum about the opening and closing schedule of the dam. According to the announcements, the reservoir stores water at a level of 512 m from 1 July to 31 August, 514 m from 1 September to 30 September, and at 515 m from 1 October to 30 November. Accordingly, villagers are informed of the water regulation schedule of the reservoir. The Yali Hydropower Company has committed that the water level of the reservoir would not rise during the dry season from December to March every year.

The company also regularly discusses the possibility of flooding in the semi-flooded area with the local authorities. However, key informants said that once in a while, the water levels in the reservoir rise all of a sudden even when the dam is supposed to be open, thereby damaging the crops. In early 2012, the resettled people grew cassava and maize since the water level was low. However, due to the poor rainfall in 2012 the Yali Hydropower Company broke their contract and closed the dam in order to make profit. This sudden closure of the reservoir damaged a large area under cassava and sugarcane, thus causing great loss to resettled people.

According to key informants, since the cultivation time on the semi-flooded land is very short, resettled, villagers depend on short-stint crops, such as corn and cassava that can be cultivated and harvested between March and August annually, as their survival strategy. This shows how resettled people have been coping with the difficult situation.

7. OUTCOMES AND STATUS OF RESOLUTION – OR NON-RESOLUTION/NEGLECT – OF ISSUES PERTAINING TO LIVELIHOODS AND POVERTY IN DIALOGUE AND DECISION-MAKING EVENTS BETWEEN AND AMONG MAJOR STAKEHOLDERS

As mentioned above, the main challenges that the resettlement area is facing include poverty, loss of forest, land and water. Over the last few years, the Government and provinces have introduced several policies and programs to deal with these challenges. Many efforts have been made by the Government as well as the provinces to improve the living conditions of the local people, especially the ethnic minorities, thus reducing poverty in the resettlement areas. But in reality, the results have been contrary to expectations due to many reasons.

The following section discusses the important programs/policies that aim to help the affected people alleviate poverty sustainably to get a better view of how livelihood issues and concerns have actually been addressed by HPD, and what is still missing on the ground.

7.1 The small-scale rubber plantation program (2009-2011)

The provincial People’s Committee of Kon Tum issued Decision No. 14/2009/QD-UBND dated 11 February 2009 to support the poor ethnic minority households to plant rubber in the
planned rubber development zones of the province. The main objective of the decision was to support and increase the capacity of the poor ethnic minority households to produce goods for the market. The final aim was to change the cropping system of the province so that by 2015 there would be 70,000 ha of rubber plantation in Kon Tum province, of which 26,000 ha would be small-scale rubber plantations. In addition, the decision aimed to contribute to developing concentrated zones of production of goods, and to boost the processing industry. The program aimed to target 9,090 poor ethnic minority households who were expected to bring 9,000 ha under rubber plantation. Kon Tum city, districts of Sa Thay, Dak Ha, Dak To, Kon Ray, Ngoc Hoi and three communes of Dak Glei district came under the program. The principal investor was the Management Board of the Agricultural Diversification Project, while the implementing agency was the Agricultural and Fishery Extension Center of the Department of Agriculture and Rural Development (DARD), Kon Tum province.

As planned, each household was to be provided financial support to grow rubber plants on 0.5 to 1 ha. The households could borrow money (a maximum amount of 20 million VND or USD 1,000/household/year) from the branch of Bank for Social Policies for a period of six years. In addition, every household would pay 50 percent of the interest rate. The loan was to be used for the purchase of rubber seedlings, fertilizers, and related materials during the first years of plantation. The households were expected to contribute their labor for plantation and take care of the rubber trees.

The evaluation report on the program in 2012 revealed that the program did not meet the proposed objectives and had many shortcomings. The number of participating households that were able to get access to the program and borrow money from the bank was too low (248 households), accounting for only 2.5 percent of the proposed number of beneficiary households for the period of 2009-2011.

The main reasons for this program’s failures were fourfold. First, many poor households did not have enough land. Our recent survey carried out in 2012 found that the criteria for participating in the program were ill suited for the poor ethnic minority people. According to the decision, a household was supposed to own 0.5 to 1 ha of land with the land use right certificate (LUC). In fact, most poor ethnic households had used their LUC as collateral for other loans they had taken from the bank. Second, the Bank for Social Policies declared that each poor household could borrow a maximum amount of 20 million VND from the bank. Many poor households, which had taken loans from the bank before this program was conceived, found that they had already reached the limit set by the bank. Those that could borrow could take a very small loan, which was not sufficient for them to invest in rubber plantation.

Furthermore, the procedure of borrowing money from the bank was too complicated. Third, the market price of seedlings and fertilizers had been increasing. The loan from the bank was not sufficient for purchasing rubber seedlings and fertilizer. Fourth, the rubber tree is new to ethnic farmers, especially the poor. In fact, households were not provided any training in rubber tree planting or caring techniques. On the other hand, the management fees provided to the main investor was not sufficient for the operation (only 8 percent of total budget of the program). In general, the program ended up benefiting the rich.

As the case of the small-scale rubber plantation program shows, the objectives of the proposed program were appropriate in that it would help the poor come out of poverty in a sustainable manner. However, lack of land and access to capital and absence of planting or caring techniques were formidable barriers to entry that the program had simply not anticipated in its planning process. All of this contributed to the failure of the program. This case also shows that surveys should have been conducted before launching this program. In
In addition, there should be a feedback mechanism to allow people to give comments/opinions from the grass-root level all the way up to the provincial level. The program should be designed in such a way that it is open to adjustments during its entire lifetime.

### 7.2 Announcement of the dam closing/opening schedule

Prior to 2009, sudden large water releases were reported from the Yali dam. As a result, the semi-flooded area of land was flooded all of a sudden. This caused great damage to people who grew crops, such as rice and cassava, on the land. Recently, dialogues have been taking place among the Yali Hydropower Company, the Provincial Department of Agriculture and Rural Development, affected districts and communes. Consequently, the company sends its official announcements to related communes in Kon Tum about the schedule of closing and opening the dam so that locals do not grow crops on the semi-flooded land during the time the dam is closed to avoid losses. From March to August when the water levels go down, local people can grow crops there again. The Yali Hydropower Company has committed that the water levels of the reservoir would not go up during the dry season from December to March. In addition, the company also regularly discusses the possibility of flooding of the semi-flooded area with the local authorities every year.

### 7.3 Responses of the government and the provincial People’s Committee to the irrigation scheme in the resettlement sites

Most of the irrigation projects in the resettled villages of Kroong and Ngoc Bay communes were built and handed over to the Management Board of Irrigation Projects of Kon Tum Province by the Yali Company in 2002. The board manages the pumping stations and the main canals, while the secondary canals of the interior fields, which have been reclaimed for wet rice cultivation, are managed by the villagers. But both the systems have been either ineffective or out of order. Since 2009, the local people and the representatives of the communes have raised this issue at the “Flag Saluting Ceremony”, which is conducted every Monday, and serves as a weekly staff meeting at the commune level. However, no decision or resolution has been made so far. Consequently, the villagers have either started growing cassava in the area or have left the land fallow.

The reasons are fourfold. First, the Management Board argued that they had merely taken over the irrigation projects from the Yali company in 2002, and therefore, they were not responsible for the quality of these projects. Second, according to key informants, the members of the community management of the secondary canals are not capable of doing the job well. Third, the villagers complained that the commune People’s Committee approved and took over the projects even though they were still not complete.

In brief, irrigation projects, which were expected to assist affected people in the resettlement sites improve their livelihoods, were not successful for want of a sound monitoring and evaluation mechanism during and after the construction process, and lack of grassroots participation during the decision–making process at the district and provincial level.
8. CONCLUSIONS AND RECOMMENDATIONS

As the case of Yali Hydropower project illustrates, affected people in the resettlement sites received some compensation, such as housing, seedlings, and fertilizers, cash for moving the old house, cash for lost crops, 1 million VND for agricultural extension, and supply of six months of rice right after they were resettled. However, compensation was not paid to all households in different villages. Many households were not satisfied with the quantity and quality of compensation. Also, they complained that the compensation regime was not transparent and equitable.

Though houses were provided to each resettled household, the total area of the house remained the same regardless of the number of people in a household. Many people also complained about the poor quality of construction.

Most of the resettled people interviewed have yet to receive any cultivatable land. Presently, almost all households, of which the majority are ethnic people, lack adequate food. They are suffering from hunger, and worry about their future. They also have to cope with shortage of clean drinking water and firewood.

More than a decade has passed since the last groups of people were moved when the water levels reached the height of 515m-518m. Nevertheless, local people’s life in resettled villages is not only unstable, but is steadily getting worse. The poverty rate is very high. Inequity and gaps between the rich and the poor and between the Kinh and ethnic people have only become wider with time. The majority of the resettled people do not have any regular source of income. The poor households have problems making ends meet. Loss of the wet rice cultivation land and natural forest coupled with illegal land purchase, land leasing, reclamation, land conflicts, and lack of income generation activities have marginalized the poor, especially the ethnic minorities who have limited access to education and also face the language barrier. Women and girls have been hit the hardest.

In order to address these challenges, a number of programs/policies have been formulated by the local province, districts and the Yali Hydropower Company to help the affected people develop their farming systems, improve their living standards and generate income. However, in reality the results have been counter-productive, and most of the programs have failed mainly due to lack of local people’s participation in the decision-making process leading up to the program.

Experience shows that if projects/programs are to benefit the locals, they (locals) need to actively participate in decisions that affect their life. In order to implement projects successfully, the agencies must ensure the participation of the local people in the planning and implementation stages of these projects. The affected people best know what they want, and they are also able to manage natural resources more effectively through local or traditional forms of access than the state or distant corporate managers.

In order to address the affected people’s urgent needs and concerns and improve their living standards, thus contributing to poverty alleviation in an already poor area, the following steps should be taken:

- The productivity of the flooded and semi-flooded areas should be increased. Irrigation schemes and pumping stations should be put back into operation. Pumping machines should be upgraded. There is an urgent need to establish a close collaboration and coordination between the Yali Company and the local authorities at the provincial and district level. Further, a clear mandate is needed between the district, provincial and the central levels.
• Local people should be given a voice in the decision-making process, and should actively participate in all the projects related to their livelihoods. Consultation with local authorities and villagers is needed when a project/program is developed. In other words, local people’s needs and concerns should be taken into consideration. There should also be a feedback mechanism to allow people at the grass roots to give comments/opinions about the project/program during the entire lifetime of the project/program. Further, monitoring and evaluation should be carried out at all stages of the project/program so that adjustments can be made along the way.

• Job creation and vocational training for young people, especially the ethnic minorities, is much needed at this juncture. There should be appropriate policies to allow newly married couples in the resettled sites to take part in the “New Economic Zone Development” plans as elsewhere in the country, thus lessening the pressure on the already poor resettled area.

• In the long run, it is necessary to redistribute the Yali Hydropower Company’s tax among the resettled communes. It should be noted that every year the Yali Hydropower Company pays a remarkable amount of money in taxes, including water resources tax and payment for forest environmental services to Gia Lai and Kon Tum provinces. In 2012, the company paid 70 billion VND ($3346000) as the water resources tax and 74 billion VND ($3537000) as the payment for forest environment service (Report on risk and benefit sharing of hydropower development – MK4). If this is the case, the affected people must be able to benefit a bit from their sacrifice.
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