

REALITIES ON LIVELIHOOD RESOURCES OF POOR HOUSEHOLDS LIVING ALONG TIEN RIVER AFFECTED BY LANDSLIDE IN TAN BINH AND TAN QUOI COMMUNE, THANH BINH DISTRICT, DONG THAP PROVINCE

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Abstract

On the realities of increasingly serious impacts of landslides on poor households along Tien River, it is necessary to do research about their livelihood resources, thereby proposing solutions to improve their living conditions. Research is conducted by direct survey questionnaire method of 135 households at the poverty level (poor, near-poor households and those with difficult circumstances) affected by landslides in Tan Binh and Tan Quoi Commune, Thanh Binh District, Dong Thap Province. The research result shows that most of their livelihood resources are deficient and mainly reliant on human capital, financial and social capital. To improve adaptive capacity of these households, the improvement of human, financial and social capital is an urgent solution to be invested and supported to them.

Keywords: *Landslide, livelihood resources, poor households, Tan Quoi Commune, Tan Binh Commune.*

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THỰC TRẠNG NGUỒN LỰC SINH KẾ CỦA CÁC HỘ GIA ĐÌNH NGHÈO VEN SÔNG TIỀN BỊ ẢNH HƯỞNG BỞI TÌNH TRẠNG SẠT LỖ TẠI XÃ TÂN BÌNH VÀ TÂN QUỚI, HUYỆN THANH BÌNH, TỈNH ĐỒNG THÁP

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Tóm tắt

Trong bối cảnh ảnh hưởng của sạt lở đến hoạt động sinh kế của các hộ gia đình nghèo ven sông Tiền ngày càng nghiêm trọng, nghiên cứu về thực trạng các nguồn lực sinh kế, từ đó đề xuất giải pháp cải thiện nguồn vốn sinh kế cho các hộ gia đình nghèo là rất cần thiết. Nghiên cứu được thực hiện bằng phương pháp điều tra phiếu khảo sát trực tiếp 135 hộ gia đình nghèo (hộ nghèo, hộ cận nghèo và hộ có hoàn cảnh khó khăn) bị ảnh hưởng bởi tình trạng sạt lở tại xã Tân Bình và Tân Quới, huyện Thanh Bình, tỉnh Đồng Tháp. Kết quả nghiên cứu cho thấy, đa phần các nguồn lực sinh kế của các hộ gia đình nghèo đều bị thiếu hụt, trong đó chủ yếu là vốn con người, vốn tài chính và vốn xã hội. Để nâng cao năng lực thích ứng cho các hộ gia đình nghèo thì việc cải thiện các nguồn vốn con người, vốn tài chính và vốn xã hội là giải pháp cấp thiết cần được đầu tư hỗ trợ đối với họ.

Từ khóa: Hộ gia đình nghèo, nguồn lực sinh kế, sạt lở, xã Tân Quới, xã Tân Bình.

1. Introduction

Livelihood consists of activities, assets, and access to these that together support individual's or household's lives (Ellis, 2000). In other words, livelihood consists of capabilities, capital source assets, and activities required for a means of living (DFID, 1999). A livelihood activity is considered as being sustainable when it can deal with or be able to recover from stress, crisis, and incidents, maintain or enhance capabilities and adaptive resources, create sustainable livelihood opportunities for future generation and bring net benefits for other livelihoods both at local and global level, both in short-term and long-term (Chambers & Conway, 1992). The increase of risks from natural conditions (natural calamity, drought, flood...) will increase the vulnerability to livelihood activities of community living on natural resources Le et al., 2014a; Le et al., 2014b. It is very important and necessary that this requires strategy of using livelihood capital source in order to enhance adaptive capacity of vulnerable residential community (Nguyen, 2019).

In recent years, in Mekong River Delta, climate change has caused remarkable impact on people's livelihood Le et al., 2014a; Nguyen & Nguyen, 2014; Nguyen & Vo, 2019. Particularly, landslide occurs increasingly in river and canal system of this area. The reason of landslide is due to many objective and subject factors, from natural conditions to impacts from human activities Anthony et al., 2015; Trinh, 2025; Huynh et al, 2019. Currently, landslide problem has been occurring alarmingly in An Giang and Dong Thap Province which requires urgent measures to prevent and reduce the impacts on livelihoods of people affected in the area (Thanh, 2019).

In Dong Thap Province, the context of serious landslide has caused great changes and impacts on the lives of people who are living around the riverside area at the place with high risk of landslide, especially poor households need urgent supports. This is shown by the fact that many families are worried and wanted to move to other places, but they cannot afford to. Meanwhile, some families were supported by local authority to access resettlement policy in residential clusters but then ultimately found it very difficult for them to adapt to new living conditions. In other words, they are facing some limitations of livelihood

resources and not really adapting actively to changes due to landslide impacts.

However, there has not been any research analyzing the actual situation of livelihood resources of poor households affected by landslide comprehensively in all aspects (human capital, natural capital, financial capital, material capital) in Dong Thap Province. Originated from the above situation, the objective of this research is to analyze the actual situation of livelihood of poor households living along Tien River affected by landslide in Tan Binh and Tan Quoi Commune, Dong Thap Province, then proposing the solution to improve livelihood to enhance the adaptive capacity of poor households.

2. Methods and data

2.1. Research area

This research is conducted at Tan Binh and Tan Quoi Commune, Thanh Binh District, Dong Thap Province. These are two seriously affected and most damaged communes in the landslide area, Tan Quoi Commune with total length of landslide is 5700m, encroaching averagely to the shore of 1.4m, total landslide area of 7,970m², 08 households moved their houses, 01 house was collapsed (03 households moved to residential cluster), continue to move 335 households, damage value of 1,594 million VND; Tan Binh Commune with total landslide area of 6500m, encroaching to the shore of 1.6m, total landslide area of 10,500m², 11 households moved (6 households moved to residential cluster), continue to relocate 102 households with damage value of 2,100 million VND (Thanh Binh District People's Committee, 2019).

2.2. Research methodology

This research uses framework of sustainable livelihoods of the Department for International Development (DFID, 1999) to analyze actual situation of livelihood resources of 135 poor households affected by landslide in Tan Binh and Tan Quoi Commune, Thanh Binh District, Dong Thap Province (in which, 79 households was surveyed in Tan Binh, 56 households in Tan Quoi Commune). We carried out a questionnaire survey and used descriptive statistical tool to analyze livelihood resources, factors affecting on livelihood of poor households. From that, the solutions to improve livelihood in order to enhance their adaptive capacities are proposed.

3. Results and discussions

3.1. Livelihood activities of poor households affected by landslide in Tan Binh and Tan Quoi Commune, Thanh Binh District, Dong Thap Province

Livelihood activities of poor households in the research area are very diversified with different professions and with typical characteristics of Cu Lao Tay Island, Thanh Binh District, Dong Thap Province. The survey results showed that current main economic activities of poor family are hired labor (*mostly in the field of agriculture and non-agriculture with 93 households*), other activities do not account for high rate such as: Rice cultivation (*16 households*), trading (*14 households*), fishing (*5 households*) and members of some other households are workers at garment enterprises and catfish production company in Thanh Binh Industrial Zone or go to work at a distance place (*50 households*). In summary, though livelihood activities of poor household in research area are diversified with many different professions, however, just it is mainly concentrated on the group of manual labor or blue-collar worker.

When being asked “*After moving to the resettlement area due to landslide, will your life be affected?*” “*If yes, how does it affect you?*” Many households told that “*The government has still supported resettlement policy and a part of relocation costs, hired work is not affected, they do any work that people hire them*”, when surveying the reality, few households have still earned living by breeding after being supported resettlement, they still did not relocate and built bamboo house to continue raising cow, pig (*they built barns on their family’s remaining location of landslide*), this caused a lot of potential safety risks. However, they said that “*they cannot raise livestock at the new place*”, they also cannot change other job because most of them are old, and their children have worked far away.

The survey results showed that household’s incomes are too low to support their daily life. Obviously, with low and unstable income, it is relatively difficult for poor households to meet their daily living expenses. However, depending on different demands of each household, finding additional sources for those deficiencies are entirely different. Specifically, when being asked “*Without enough money to spend for any item, how can you make up for this deficiency?*”, most of them said that they would borrow money (without interest from their

relatives), borrowed money with interest to cover their respective expenditures.

From the reality of survey, we can confirm that livelihood activities of poor household before and after being relocated due to landslide in the research area have not changed remarkably. The causes of poor household’s difficulties are mainly due to the lack of production capital, cultivation land, unstable job, private and bank debt, lack of means of production,...

3.2. Actual situation of livelihood resources of poor households affected by landslide in Tan Binh and Tan Quoi Commune, Thanh Binh District, Dong Thap Province

3.2.1. Human capital

Size of the number of household members and major breadwinners: According to the study results, 58.5% of households has 4-6 people, 1-3 member households account for 36.3%, 5.2% of households has 7-9 people (*Table 1*), meanwhile, the number of household major breadwinners is only 1-2 people, accounting for 72.6%. Therefore, the number of major breadwinners bearing the burden from the number of dependents (elderly people, disabled people, school-age children) is quite large, which causes difficulties and hinders livelihood activities of households (*Table 2*).

Table 1. Demographics of poor households in the study area

No. of members	Frequency	Percent (%)
From 1-3 people	49	36.3
From 4-6 people	79	58.5
From 7-9 people	7	5.2
Total	135	100

Table 2. Major breadwinner of poor households in the study area

No. of major breadwinners	Frequency	Percent (%)
From 1-2 people	98	72.6
From 3-4 people	32	23.7
From 5-6 people	5	3.7
Total	135	100

Regarding the education level of the household head: According to the study results in Figure 2, up to 57% the households in the surveyed poor households is only at the primary school level, 29.6% and 9.6% for

secondary school and high school levels, respectively. Especially, there are still illiterate households. This shows that with low education level plus pressure from dependent members, it will cause many difficulties for households, especially in the context of coping with landslides and relocation due to resettlement.

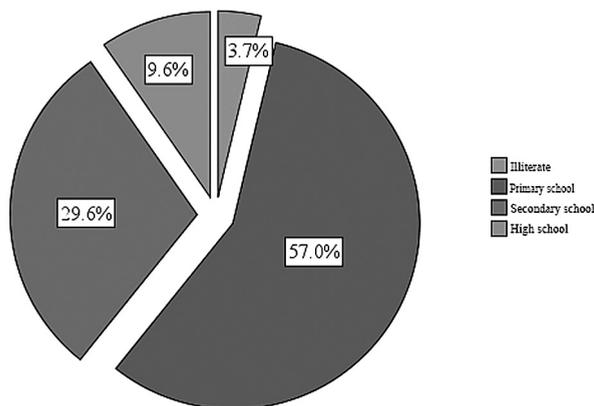


Figure 2. Education levels of surveyed household heads in the study area

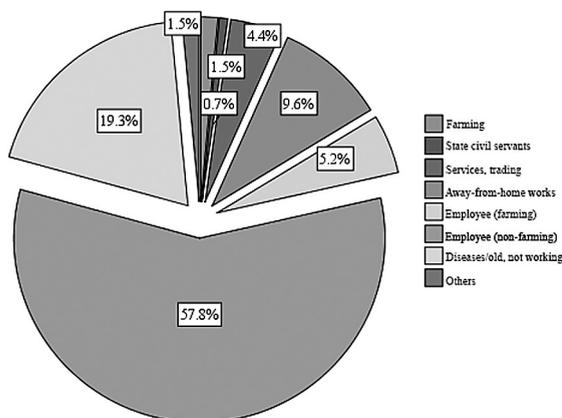


Figure 3. Current occupation of households in the study area

3.2.2. Financial capital

From the survey results in Table 3, it is shown that the main income generating livelihood activities of households are concentrated in 04 main groups of occupations: non-farming work (86 households), away-from-home workers (50 households) %, rice farming (16 households), small-scale traders (14 households), other occupations account for a negligible proportion.

Table 3. Main source of income from livelihood activities of poor households

Livelihoods activities	Responses
	N
Rice farming	16

Fish raising	1
Breeding	5
Subsidiary crops	1
Fruit trees	7
Trading	14
Exploiting from nature (fishing,...)	5
Farming employment	7
Non-farming employment	86
Away-from-home workers	50
Assisting relatives	5
Support from Government	7
Others	1
Total	205

The average income of households from these employments is low, specifically, with 48.1% income below 02 millions VND and the employments are often seasonal and unstable (Figure 4). Most of the households do not have enough funding for production activities, accounting for 92.6%. Although the local government has supported by loans from policy banks, through the study results, only 77/135 households have been supported to borrow loans from social policy banks, while the loan amount is not much, from 15-20 millions VND (accounting for 41.5%), the loan amount is insignificant for other cases, ranging from 5-10 million VND. The majority of households' borrowing purposes are for house repair due to resettlement or repair of houses damaged by landslides (accounting for 36.9%), loan for daily life needs accounts for 25.5%, loan for the purpose of disease treatment accounts for 15.3% and loan for children's schooling accounts for 12.7%.

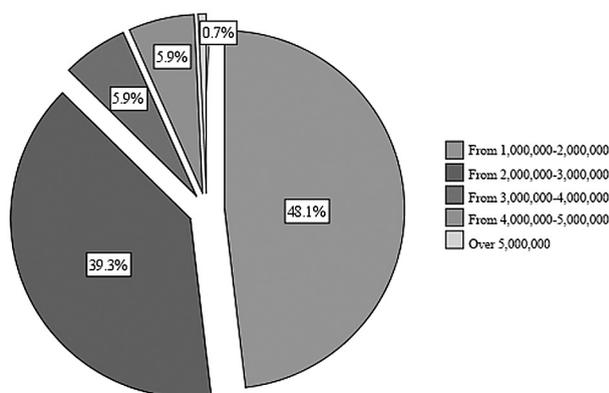


Figure 4. Average income (household/month) of households in the study area

3.2.3. *Natural resource capital*

Land area owned by households: This is an important resource that greatly affects the livelihoods of poor households. However, through the survey results, only 58/135 households own residential land or arable land, and the self-owned land is not much, and some households even have self-owned land of 20m².

Rice farming is the most common livelihood strategy of households owning land, accounting for 61.5%, some households have land for perennial crops and fruit trees such as mango, jackfruit,...The few remaining mainly grow short-term crops such as peppers, corn, beans, etc. In general, the arable land area of the households is almost unchanged compared to prior and post relocation, only 05 households have the area of arable land reduced, mainly resulting from the allocation to children and mortgages. This proves that local landslides do not have much impact on the change of arable land of poor households. Therefore, most of the surveyed poor households, including those who are relocated to the resettlement area, do not change the type of farming before and after relocation.

3.2.4. *Material capital*

Housing characteristics: Among 135 surveyed households, 110 households have semi-solid houses, accounting for 81.5% and 11.9% of households have temporary and solid houses, accounting for 6.7% (Figure 5). The number of houses in need of repair due to severe damage is 07, accounting for 5.2%, damaged, but according to households, not in need of repair, is 38 households, accounting for 28.1% (Figure 6).

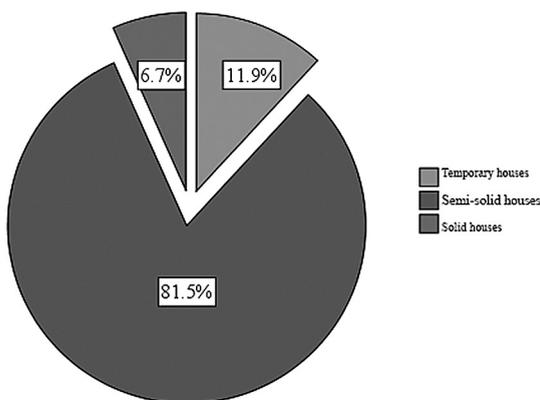


Figure 5. Housing characteristics of poor households in the study area

The survey data show that the housing characteristics of households are at relatively moderate level, the percentage of temporary and severely damaged houses that need repair still exists, but not significant, mainly in poor households with extremely hard lives, do not have sufficient funds to relocate, or are not eligible to enjoy resettlement policy from the State, forced to live temporarily along the riverbank in the landslide area.

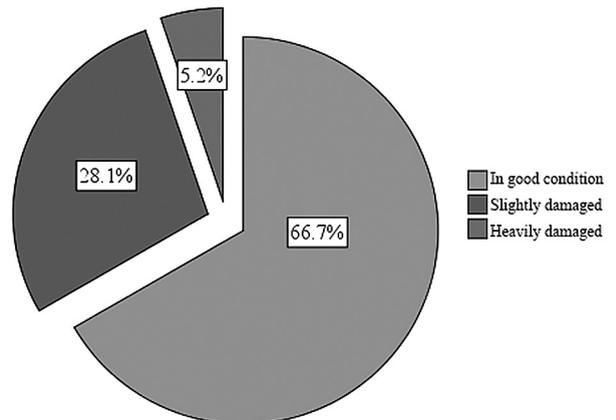


Figure 6. Housing actual situation of poor households in the study area

Means of living and production: Most of the surveyed poor households mainly own asset items for minimum daily needs such as, 94.1% have a rice cookers, 85.9% have gas kitchens, 93.3% have TV. However, the means for livelihood and breadwinning are quite few: 06 households have pumps, 03 households have spray cans, 03 households have fishing nets, 02 households have boats. This proves that they only focus on investing in household items, but almost no investment in means of livelihood and breadwinning.

3.2.5. *Social capital*

The survey results show that most of the households have very little participation in activities of socio-political organizations and mass organizations in the locality, only 10/135 (7.4%) surveyed households participate in socio-political agencies/organizations and mass organizations such as the Women's Union, Farmers' Union, Elderly Association. The main activities that households participate in is following the State's guidelines and policies. For the causes of not participating in mass activities, 66.7% of households say they do not have time to participate, and 8.1% say that they do not know how to participate.

We realize that social capital is considered as one of the important resources contributing to disseminating, propagating as well as mobilizing people to participate in the Party's guidelines, the State's policies and laws in improving the livelihood and develop the capacity to escape from poverty. However, the data proves that poor households do not care for or understand the benefits of participating in local activities of socio-political organizations and mass organizations. On the other hand, it is partly because the way of local dissemination, propaganda has not attracted people to participate, many cases want to participate but do not know how to participate, for what purpose.

3.2.6. Causes affecting livelihoods of poor households affected by landslides in Tan Binh and Tan Quoi Communes, Thanh Binh District, Dong Thap Province

The survey results from Table 4 show that the livelihood activities of poor households are affected by many different causes, which mainly focus on a number of main reasons such as shortage of manufacturing capital (112 households), shortage of arable land (103 households), unstable job (103 households), private debt, debts to banks (61 households), impacted by Covid-19 diseases (42 households), shortage of means of farming (21 households). According to the results of the survey on the current situation of the analyzed resources, poor households believe that shortage of capital, shortage of arable land, and unstable employment are the main causes affecting their livelihoods, which completely matches the shortage of resource capital.

Table 4. Causes affecting livelihoods of poor households affected by landslides in the study area

Causes	Responses
Shortage of production capital	112
Shortage of arable land	103
Shortage of means of production	21
Shortage of labor	17
Large family	7
Unemployment	5
Shortage of skills in working and finding out ways for breadwinning	15
Severe illness	13
Lazy	2

Engaging in social evils	2
Considerable number of dependents	7
Unstable job	103
Impacted by diseases	42
Private debts, debts to bank	61
High expenses on schooling for children	47
Others	3
Total	560

3.2.7. Solutions to stabilize the livelihoods of poor households affected by landslides in Tan Binh and Tan Quoi Communes, Thanh Binh District, Dong Thap Province

To stabilize and improve livelihoods for poor households in the study area, we propose the following solutions:

Firstly, for human capital: It is necessary to focus on improving the quality of human resources. For school-age children of poor households, it is necessary for them to receive the care from local authorities to accompany and support them in the learning process, so that they do not leave school early; strengthen appropriate vocational training for young people and idle women without stable jobs; give training to improve farming techniques for households still engaged in agricultural production, create favorable conditions for households to participate in model cooperatives, club houses, agricultural extension clubs, etc. in the locality; research, propose and implement community development projects that contribute to poverty reduction and hunger eradication, in adaptation to specific local conditions and contexts.

Secondly, for financial capital: It is necessary to diversify forms of support, expand the scale of those who getting credit support, increase loan limits and create favorable conditions for preferential loan procedures and terms for with households that need loans for reproduction, small scale trading, contributing to hunger eradication and poverty alleviation; search for output connections for agricultural products for households.

Thirdly, for natural capital: Households with arable land should receive the supportive survey consultancy from technicians in the improvement of infertile, low-yielding soils, with crop converting orientation in adaptation to the actual local conditions.

For households with arable land in the landslide area, it is necessary to care about safety factors, the cultivation scope with the safety corridor if there is a phenomenon of landslide or subsidence near the cultivation area and should only grow short-term crops in locations with high risk of landslides. In case the poor households do not have arable land, it is necessary to consider in the actual local conditions to refer them to farming land rent if they have demand (the local government connect to the land owners for a reasonable price).

Fourthly, for material capital: Propaganda and mobilization for households to see the necessity in equipping tools and means for production activities to contribute to improving labor productivity. Meanwhile, poor households near each other may make capital contribution to buy for mutual use.

Fifthly, for social capital: Strengthen propaganda and mobilization in many appropriate methods so that households fully participate in activities of disseminating and implementing the Party's guidelines, the State's laws and policies and important local issues that directly affect the legitimate rights and interests of households. The local authorities should consider implementing or connecting poor households with community development programs and projects to contribute to sustainable poverty reduction as well as stabilizing livelihoods for households. Typically, the projects for savings credit, projects for livestock production, small trading support, projects of opening rural vocational training classes for the youth, women and idle workers in households, contributing to increase income to stabilize their lives.

4. Conclusions

Tan Binh and Tan Quoi Communes, Thanh Binh District, Dong Thap Province are two localities that are heavily affected every year by landslides and the livelihoods of many households living in the landslide area are more or less affected. Research findings show that poor and disadvantaged households are affected the most compared to other households. Many poor households have been relocated to resettlement areas. However, due to unstable employment and income, some households left the assigned areas and returned to their former living area (landslide area), living in the temporarily covered housing to continue

livelihood activities that they used to do (mainly for raising cows, pigs, fishing, etc. in the landslide area along the river). This comes from the general actual situation for poor households, who have low education level, large number members, large number of dependent members, unstable employment of the major breadwinner, no or very little land for cultivation, no support in loan for farming and trading, if there is loan support, the loan limit is very low. Although the local government has provided support for poor and near-poor households, there are still no other supports to contribute to creating sustainability for people to get out of poverty. The support does not have coverage on subjects, many households do not know how to access services and programs implemented by the locality.

To improve the adaptive capacity of poor households affected by landslides in the study area, local authorities need to create favorable conditions for residents to effectively use available livelihood resources, to pay special care to the resources in shortage. Specifically, for human resources, the development of the labor force has the potential to change the poverty of households, contributing to raising awareness and changing mindsets to overcome poverty. Proper assessment of the needs and capacity of households to escape from poverty is one of the key tasks to improve and stabilize sustainable livelihoods.

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