



PLANNED RELOCATION IN THE CONTEXT OF ENVIRONMENTAL CHANGE IN HOA BINH PROVINCE, NORTHERN VIET NAM

An analysis of household decision-making and relocation outcomes



International Organization for Migration (IOM)
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ABBREVIATIONS

ADB	Asian Development Bank
IDMC	Internal Displacement Monitoring Centre
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
NTPNRD	National Target Program for New Rural Development
NPSPR	National Target Program for Sustainable Poverty Reduction (Program 135)
UNDP	United Nations Development Programme
USD	US dollar
VND	Vietnamese Dong

EXECUTIVE SUMMARY

Viet Nam faces widespread, significant risk of natural hazards, with risks expected to increase in the context of climate change. As well as threats to human safety and significant damage to homes, assets, and livelihoods, natural disaster can cause widespread displacement, with several thousand people at risk of displacement in Viet Nam every year. Natural disasters and slow-onset environmental changes are also one of multiple drivers affecting voluntary migration, as it forms one of a range of adaptive strategies adopted by households in response to the physical and economic impacts of environmental change.

Planned relocation of communities at risk, which provides support and infrastructure for communities to relocate, has the potential to contribute to increase resilience to environmental change and reduce disaster risk. Well-planned relocation can also support improvements in quality of life in rural areas and further rural development goals. As such, planned relocation forms part of the policy response to natural disaster risks in Viet Nam, with a focus on advancing rural development and quality of life for relocated communities. However, migration decisions and relocation outcomes are complex, and influenced by a range of interacting factors. To understand the benefits and challenges of planned relocation as an adaptive response to changing environments, it is critical to understand how the planning and implementation relocation projects can support successful outcomes. It is also crucial to understand household decision-making and adaptation processes, to identify how planned relocation can better support increased resilience for affected communities.

This study assesses the implementation and outcomes of planned relocation in the Hoa Binh Relocation Project, which aims to relocate 1,200 households from two remote communes in the Northwest region that face high natural disaster risks. The study explored project implementation, household decision-making processes and relocation outcomes with 406 households, including those who have relocated, those who wish to move, and those who have chosen to remain or are undecided. The research identified key themes in household decisions, along with enabling practices which support successful relocation, key challenges, and potential responses to enhance relocation policies in Viet Nam.

Key issues in relocation decisions

- **High levels of risk awareness and disaster experience:** The majority of households targeted for relocation have been affected by disaster and are aware of disaster risks. A majority of both relocated and non-relocated households agree that relocation is an appropriate response to these risks.
- **Disaster risk is one of multiple factors influencing migration decisions:** Some households have chosen to remain despite awareness of risks and recognition of potential safety benefits. Ethnicity, social networks, and income status are among the factors which influence household decisions to remain, with concerns about livelihood impacts and social dislocation being key issues in migration discussions.
- **Uncertainty around livelihood opportunities, timing and conditions of relocation affects household decisions:** Within households and among social networks, both women and men discuss potential impacts and challenges of relocation, with a strong emphasis on access to productive land, income opportunities, and livelihood changes. Uncertainty around when or where they might be relocated, or the viability of livelihoods after relocation, has a significant impact on migration decisions.
- **Improved infrastructure and social networks are important pull factors:** While risk reduction was the key motivation for households who moved, improved health, education, transport, and market infrastructure offer important positives which encourage relocation. In addition, having social networks plays a role in easing concerns and facilitating relocation.

Implementation and relocation outcomes

- **High awareness of project objectives, with limited understanding of processes:** Awareness of, and agreement with, the broad aims of the project were high among relocated and targeted communities. A comprehensive range of support mechanisms, including land, housing, and livelihood support are outlined in the relocation plan, however, understanding of the support available and the process for accessing assistance was limited among those yet to relocate. This may affect household decisions, given concerns about livelihood impacts.
- **Limited participation of commune authorities and communities in planning and implementation:** Low awareness of support policies and significant uncertainties around relocation issues may relate to limited opportunities for active participation in the planning and implementation of the project. Communication efforts have achieved high awareness of the project overall, but have not achieved strong understanding of relocation options and processes. Improving communications and increasing participation of commune authorities would likely help households make better informed decisions about key issues of concern.
- **Relocation has delivered reduced disaster risk and improved infrastructure access for most households, and improved health and livelihoods for some.** Almost all households reported improvements in their exposure to environmental risks and access to health, education, transport, markets and communications, which were seen as positive outcomes. Approximately one third of relocated households reported improved incomes and health outcomes after relocation.
- **Significant challenges for livelihood development remain:** Approximately 40 per cent of households reported reduced incomes after relocation. Key challenges were low quality of land allocated for agricultural production, and lack of sufficient water access, which has severely limited livelihoods for a significant number of households. While almost all households have received land and housing packages under the relocation scheme, significantly fewer households have accessed training, agricultural inputs, and extension to support livelihood restoration. Many have encountered challenges adapting their livelihoods to the new context due to changes in conditions and resource access.

These results demonstrate the potential for relocation to contribute to improved quality of life and new opportunities for relocated communities. Existing policy provides for important support that can help relocated households transition successfully to new, safer locations. However, the implementation of the current project demonstrates the complex nature of household decisions on relocation and the challenges encountered in practice in supporting households to address the multiple factors which impact relocation outcomes. Some potential responses are identified to support identified good practices and address these challenges:

Relocation planning and communication

1. Existing policies have ensured the provision of housing, residential land, and agricultural land in sufficient quantities, as well as provision of improved electricity, transport, and service access. These have contributed to positive outcomes, and should receive continued focus.
2. Identification and design of relocation sites should be assessed in more detail, and in close consultation with source and host communities to ensure destination sites can meet the needs of relocated communities, and should include clear criteria and guidelines for the selection and allocation of agricultural land.

Participation and communication

3. Consultation and coordination with the commune-level authorities, especially those at relocation site, could be improved to enhance the design of effective relocation plans provision of long-term, follow-up support to resettled households.
4. Local meetings on relocation plan should facilitate the active involvement all targeted households as well as host communities, including women, elderly people, and other householders.
5. Social integration of host communities and relocated households has been generally high and shown positive outcomes, suggesting effective facilitation by local authorities and project coordinators. This is positive for host and relocated communities and should continue to be a focus.
6. More specific and detailed relocation information should also be made more widely available, including reliable timing and location information, in order to enable households to make fully informed decisions on their relocation options.

Livelihood development

7. Relocation policy identifies a comprehensive range of support mechanisms which may be provided for livelihood development such as input subsidies, vocational training, and the development of production infrastructure, which is an important positive aspect of current policy. However, engagement efforts and effective coordination of services and financing are also needed to ensure households access this support, including accessing training and planning assistance.
8. It is necessary to incorporate appropriate support policies for relocated households to increase their access to non-farm occupations.
9. Existing provisions allowing relocated households to maintain their agricultural land at their place of origin are positive for livelihood adaptation, and should be maintained. Relocation plans should recognize and facilitate the potential for temporary and circular migration by households as part of their adaptive strategy.

Monitoring and evaluation

10. Monitoring and assessment of the economic, social and environmental impacts should be regular, transparent, and responsive to the concerns raised by households, and include clear and accessible complaint mechanisms for relocated households and host communities.
11. Coordination and integration with programmes under NTPNRD should be continued and supported, and include sharing of lessons learned across the two programmes to further improve outcomes.

01

INTRODUCTION



A relocation site in Hoa Binh Province
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Viet Nam faces widespread, significant risk of natural hazards including storms, flooding, and landslides, which affect livelihoods and community safety. Planned relocation of communities at risk forms part of the response by the Government of Viet Nam to reduce communities' disaster risk and increase resilience and quality of life in rural areas. In the context of climate change and expected increases in the frequency and severity of extreme events, it is important to explore and understand the benefits and challenges of adaptive responses, including migration and planned relocation.

The Hoa Binh Relocation Project, which began in 2010, aims to relocate 1,200 households from two remote communes in the Northwest region that are identified as facing high risks of landslides, as well as flooding and storm damage. The project plans to relocate 300 households into newly built relocation sites and facilitate the permanent relocation of a further 900 households into existing residential areas. To date, more than 246 households have moved to relocation sites. There is relatively limited research to date on the outcomes of planned relocation for disaster risk reduction in Viet Nam, with most work focused on planned relocation to reduce flood risk in the Mekong Delta. There is also a lack of research to understand household decision making on migration in the context of climate change and disaster risk. Migration decisions and outcomes are complex and influenced by multiple drivers. It is important to understand how households navigate these complex decisions in order to develop policies which facilitate effective adaptation and risk reduction. The International Organization for Migration and the Institute of Sociology, Viet Nam Academy of Social Science conducted research in communes of origin and relocation sites of the Hoa Binh Relocation Project to assess the perceptions, implementation, and outcomes of the project. The research aims to improve understanding of the drivers and outcomes of relocation to support improvements in policy and practice for disaster risk reduction and climate change adaptation.

1.1. Natural disasters, displacement and migration

Natural disasters have played a role in human migration throughout the history of human development. The impacts of climate change and changing patterns of natural disasters, have affected migration dynamics globally, with migration projected to increase in response to changing environments (IPCC, 2012). Changes in frequency and intensity of natural disasters can seriously affect human security and livelihoods, in some cases leading to forced migration (ADB, 2012). Displacement by natural disasters can be difficult to measure due to lack of comprehensive data however, the Internal Displacement Monitoring Centre (IDMC) estimates that an average of 26.4 million people per year have been displaced by natural disasters since 2008 (IDMC, 2015). Growing population densities in disaster-prone regions and the expected increase in frequency of natural disasters mean that increasing numbers of people will be at risk of displacement (IPCC, 2012).

In addition to physical displacement, extreme events and environmental change also influence more voluntary forms of migration. Migration dynamics are complex, affected by a range of interacting drivers that can be difficult to quantify. While economic factors are often a direct driver of migration decisions, environmental degradation and natural disasters often have an indirect influence on the migration decision through their impacts on rural livelihoods, which may exacerbate economic stressors that contribute to migration. Decisions about whether, when, and where to migrate are also influenced by a range of other factors including social networks, access to services such as health and education, and household demographics (Black et al., 2011).

1.2. Migration and environmental change in Viet Nam

Viet Nam is highly exposed to natural disasters, and several regions experience frequent flooding, landslides, and cyclones, with significant impacts on human security, livelihoods, and assets. According to the Central Steering Committee for Disaster Prevention (2017), natural disasters left 264 people dead or missing in 2016, destroyed 5,431 houses, and damaged a further 364,997 houses, along with 828,661

hectares of cropland, and extensive damage to road and irrigation systems. However, it is worth noting that these figures could be higher. Total economic losses from disaster impacts in 2016 were estimated at VND 39,726 billion (USD 1.7 billion). According to the IDMC, from June 2013 to the end of 2015, Viet Nam experienced 16 typhoons and major floods, causing the evacuation or relocation of approximately 1.1 million people (IDMC, 2017). The risk of displacement is significant, as noted by Lavell and Ginnetti (2014), who estimate that approximately 365,000 people per year were at risk of displacement by natural disasters in the period 2015–2018. Beyond direct displacement due to natural disasters, several studies in Viet Nam have highlighted that livelihood stress caused by environmental change and extreme events are also a driver of spontaneous migration as households seek to diversify incomes and reduce risk (Chun and Sang, 2012; Hai, 2012; Ha, 2012).

1.3. Planned relocation

Households experiencing or at risk of natural disasters may adopt a variety of strategies to mitigate adverse impacts on their assets, livelihoods, and security. While this may include in situ adaptation, temporary and permanent migration is also a common strategy to minimize damage, maintain livelihoods and improve security.

Migration can increase households' resilience to disasters and other shocks, by diversifying livelihoods, increasing access to infrastructure and services, and reducing disaster risks. However, when unplanned, migration can also increase vulnerability, especially while households seek to re-establish livelihoods, access to resources, and social networks at their destination. Further, while spontaneous migration is an adaptive strategy for many households, the most vulnerable may lack the resources to move.

Planned relocation refers to permanent, voluntary migration that is supported by governments and other actors through policy and organized projects, and which includes the reconstruction of communities' housing, infrastructure, and livelihoods. Planned relocation has the potential to reduce vulnerability as households are supported to relocate to more secure areas while challenges of the migration process are mitigated. However, relocation is complex and challenging, particularly where large numbers of households are at risk. Planned relocation schemes globally have shown mixed outcomes, and in many cases, well-being of households has declined and socioeconomic vulnerability increased as a result of relocation. If not implemented carefully, relocation can also create or exacerbate environmental stressors and risks in destination areas, leading to increased vulnerability. There is a growing body of research, which seeks to draw lessons from past experiences and contribute to improving relocation policy and practice. This report seeks to provide evidence from the Vietnamese context, which will assist policy makers and planners to implement comprehensive relocation schemes that ensure reduced vulnerability and improved well-being of affected communities.

1.4. Literature review

1.4.1. Environmental change, disaster risk, and migration

A recent assessment found that the risk of displacement due to natural disasters in South-East Asia and China is high, given the increasing density of populations in these areas. It is noteworthy that there are significant differences among countries in the region. Risk of displacement also depends on vulnerability of exposed populations, risk mitigation infrastructure, and capacity to respond to extreme events. This is demonstrated in the varying levels of risk in the region: risk of displacement is lowest in Singapore despite high population density, with one person per million at risk of displacement, and highest in Lao People's Democratic Republic (7,016 people per million). Viet Nam has the fourth-highest risk of population displacement in the region, at 4,030 people per million, a product of both high exposure to extreme events and vulnerability of exposed populations (Lavell and Ginnetti, 2014). The effectiveness of relocation as a risk mitigation measure therefore depends on the extent to which it reduces vulnera-

bility to disaster impacts as well as exposure to extreme events. The following sections review available evidence on migration drivers, relocation outcomes, and approaches to relocation in Viet Nam and the region.

1.4.2. Environmental change and migration in Viet Nam

Several studies in Viet Nam have demonstrated the role of environmental factors, including natural disaster and environmental degradation, in the decision to migrate. A review by the International Organization for Migration found that natural disasters as well as slow-onset environmental changes in Viet Nam have a significant impact on livelihoods, health, and human security which are contributing to migration and urbanization as households seek to diversify incomes and reduce risks (Dang Nguyen Anh et al., 2016)

In Dong Thap, van der Geest et al. (2012) identified that poverty status affects capacities to cope with environmental change, finding that poor households with little land were most affected by environmental stressors. With limited capacity to cope locally, migration is one strategy used by these households to respond to economic impacts of climate change (van der Geest et al., 2012). This is echoed by two studies in the Mekong Delta, which show that while economic drivers are often the cited reason for migration, environmental stressors on livelihoods are one of multiple indirect drivers that affect the decision to migrate (Dun, 2011; IOM, 2016).

Migration decisions are also mediated by perceptions of risk and ability to cope with disasters. A study in Ha Tay province, which is frequently affected by flooding, found that most respondents did not want to relocate to a lower-risk area, despite government support (Dao and Takara, 2003). Respondents said that they were accustomed to coping with the impacts of flooding, and saw benefits in the annual floods, which increased soil fertility. Residents preferred to remain and developed strategies to cope with flooding. By contrast, in the Living with Floods program, Danh and Mushtaq (2011) found that households who wanted to relocate cited the impacts of repeated flooding on livelihoods and risks to their safety as key reasons to join the relocation programme, while households who were reluctant were concerned about livelihood impacts, lack of infrastructure, and living conditions at destinations. These studies highlight how the capacity to adapt to environmental risks, as well as concerns about perceived risks of migration, affect migration decisions.

Other factors also play a role in migration dynamics. In Southern Viet Nam, Koubi et al. (2016) found that households may be constrained by lack of resources to migrate, while the desire to maintain social networks and community relationships in their place of origin also influences households to remain. The costs of migration and the loss of social networks may increase vulnerability for some households, highlighting that in situ adaptation may be preferable where it is possible. It should be noted however, that adaptation may be more feasible in response to slow-onset changes like drought or salinity, while extreme events and rapid-onset changes may force people to move under adverse conditions (Koubi et al., 2016).

1.4.3. Relocation experiences in South-East Asia

Several studies have assessed the outcomes of planned relocation in terms of livelihoods and household vulnerability. Development-induced relocation over recent decades has demonstrated the importance of a strong focus on livelihood development and community participation for successful relocation. Drawing on these lessons, environmental relocation projects have seen an increased emphasis on these areas. Research on outcomes of relocation projects in recent years related to both environmental and development-related relocation suggest that key issues for livelihood development include ensuring sufficient access to land and natural resources, and supporting adaptation of households to new, unfamiliar environmental conditions (Tan, 2017; Wilmsen, Webber and Duan, 2011; Rogers and Xue, 2015). In the context of climate change, assessing the environmental sustainability of destination sites and long-term capacity to support increased populations is also important (Fan et al., 2015).

Kura et al. (2017) highlight that households' relocation outcomes depended on how households could adapt their various forms of capital – natural, physical, human, social and financial – to develop new livelihoods based on opportunities at their destination (Kura et al., 2017). This research shows that households rarely 'restore' their livelihoods, but undertake a complex process of livelihood adaptation. It emphasizes that relocation support should focus on providing assistance tailored to local opportunities and households' adaptive strategies, rather than a 'one-size-fits-all' livelihood restoration approach (Kura et al., 2017).

Outcomes of relocation projects in Viet Nam also demonstrate that access to sufficient resources and infrastructure is critical (Bui et al., 2013). Relocation projects in the Mekong Delta have seen reduced risk and damage from flooding and erosion, and improved access to transport, services, as well as new income opportunities for some households (Entzinger and Scholten, 2016; Danh and Mushtaq, 2011; Chun, 2014). Ensuring adequate infrastructure, facilitating opportunities for wage labour, and ensuring access to resources for agricultural livelihoods have been identified as key issues to support livelihood development (Danh and Mushtaq, 2011). Livelihood resources in at places of origin may also remain important sources of income during the adaptation period, although this may involve trade-offs in time and transport costs (Entzinger and Scholten, 2016). Access to credit can be an important means of developing livelihoods, but can also be a source of vulnerability if households cannot repay debts (Chun, 2014). The research in Viet Nam supports conclusions of other studies in the region, which emphasize that effective relocation support requires attention to the range of potential impacts of relocation on households' economic, social, and environmental resilience in order to develop targeted, integrated solutions.

Development-induced relocations have been widespread in the South-East Asian region for decades, while planned relocation in response to environmental conditions is growing more common. The literature exploring the outcomes of these projects has shown that relocation can reduce exposure to hazards, particularly for those who may be unable to move independently, but that well-planned and targeted relocation support is critical to ensure that households can adapt their livelihoods and increase their overall resilience (Weerasinghe, 2014, Entzinger and Scholten, 2016). This calls for attention to a range of economic, social, environmental, and political processes, with full participation of affected communities, to ensure that relocation reduces vulnerability to environmental or economic risks.

1.4.4. Approaches to planned relocation

Lessons learned from relocation projects in recent decades, whether triggered by development or environmental change, have demonstrated the importance of building sustainable communities and livelihoods for successful relocation, as well as the critical role of community participation for effective planning (ADB, 2012; Elliott, 2012; Katus et al., 2016; Thapa and Weber, 1988).

Tadgell et al. (2015) review relocation research and summarize five key principles for successful relocation in the context of environmental change:

1. Proactive: identify risks and prepare communities for resettlement before adverse impacts intensify to enable adaptation.
2. Communication and participation: provide clear, accessible information for relevant audiences; establish dialogue with community at the outset and throughout the process and ensure community perspectives are incorporated into planning.
3. Permanence: plan and provide for present and future needs; planning should ensure that destinations are safe from future risks, and that relocation will be sustainable in the long-term; authorities are accountable to communities for their long-term well-being and ensure long-term, impartial monitoring of outcomes.
4. Compensation: adopt a range of compensation strategies as appropriate for community needs, including intangible assets/losses, and ensure full payment.

5. Livelihoods protection: create short-term and long-term opportunities, preferably enabling households to move away from activities dependent on at-risk resources, and incorporate environmental sustainability into livelihood planning to reduce future environmental degradation and hazards.

These principles capture the themes emerging from the extensive body of relocation research and guidance on best practice, which emphasizes the need for genuine community participation and choice, access to clear information, adequate planning and financing to ensure sufficient and timely access to resources and services, and attention to the complexity of livelihood restoration (cf. de Sherbini et al., 2011; Barnett and Webber, 2010; Ferris, 2010).

It is increasingly recognized that establishing sustainable livelihoods is both critical to success and highly complex. Recent research highlights that attempts to restore livelihoods to their previous levels or activities are rarely successful (Wilmsen and Webber, 2015; Kura et al., 2017). Rather, resettlement projects should focus on livelihood programmes that enable relocated communities to adapt successfully to new locations. Ensuring access to adequate infrastructure, land and resources is critical, but rarely sufficient, to achieve this, as households' livelihood strategies and land management approaches may not be applicable at their destination. Successful relocation therefore requires careful analysis to identify the range of ways that relocation may impact households' use of social, natural, financial, human, and physical capital, along with the development of short- and long-term strategies to support their adaptation (Kura et al., 2017; Rogers and Xue 2015). In the context of climate change, sound environmental analysis and risk assessment is also needed to ensure that relocated households will not be exposed to, or exacerbate, environmental risks or degradation at their destination (Rogers and Xue, 2015). While this complexity is challenging, these studies argue that a focus on these issues will enable relocation programmes to better integrate with goals of rural development and adaptation to climate change, by supporting relocated people to develop sustainable, resilient livelihoods.

02

POLICY CONTEXT



Focus group discussion with community members at a relocation site
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Planned, government-supported relocation of communities at risk of natural disaster forms part of Viet Nam’s disaster risk management policy. It aims to reduce the exposure of communities in areas at persistent risk of significant impacts from natural disaster. This includes ‘collective’ or ‘concentrated’ relocation, in which a community is relocated as a group to a single, newly developed relocation site, and ‘dispersed’ relocation, in which households are settled among communities in existing residential areas. Current policies specify that relocation programmes should provide infrastructure, livelihood assistance, and social support for relocated households, with an emphasis on developing local economies to improve livelihoods.

2.1. Relocation in natural disaster policy

Current policy frameworks reflect the recognition among policy makers that Viet Nam faces significant impacts from natural disaster, particularly in the context of climate change. The National Strategies on natural disasters and climate change identify planned relocation as a key climate adaptation strategy to reduce impacts on affected populations (Dang et al., 2016).

2.1.1. National Strategy on Natural Disaster Prevention, Response and Mitigation to 2020

At the national level, the National Strategy on Natural Disaster Prevention, Response and Mitigation to 2020 emphasizes relocating communities out of high-risk areas. The Strategy will aim to “accomplish the relocation and stabilization of people in areas frequently affected by natural disasters, as planned by competent state agencies... [The] Strategy will strive to complete the relocation of all people out of high risk areas for flash floods and landslides and from dangerous areas to safe places” (Government of Viet Nam, 2007).

2.1.2. The National Target Program to Respond to Climate Change

The National Target Program to Respond to Climate Change includes an objective to develop plans for migration and relocation for residents in the most vulnerable areas as part of mainstreaming natural disaster risk reduction and mitigation into development planning (Government of Viet Nam, 2008b).

2.1.3. Other policies

Relocation has also been part of development planning and flood mitigation strategies in the Mekong Delta since the 1990s through an approach known as ‘Living with Floods’. Under this approach, communities have been relocated to areas with lower exposure and dyke systems to mitigate flooding (Government of Viet Nam, 1995, 1996, 1999). The current program aims to provide relocation areas and stabilize livelihoods of households in high-risk areas through the construction of ‘resettlement clusters’ (Government of Viet Nam, 2008c). The programme remains part of the regional development master plan for the region’s socioeconomic development to 2030 (Government of Viet Nam, 2014).

2.2. Relocation in rural development and poverty reduction policy

Rural development and poverty reduction programmes in Viet Nam have included relocation of disaster-affected communities among strategies to stabilize and improve rural livelihoods since the 1990s.

2.2.1. The National Target Program for Sustainable Poverty Reduction

The National Target Program for Sustainable Poverty Reduction (NPSPR or “Program 135”) was introduced in 1998 to accelerate development in remote areas. In 1999, NPSPR was expanded to target poverty reduction more broadly across Viet Nam. Now in its third phase (2015–2020), the programme encompasses 2,275 communes and 3,423 villages facing significant disadvantages (Government of Viet Nam, 2013). The programme provides infrastructure investment, credit, and human resource development initiatives to remote or disadvantaged communities. It originally included resident relocation

programmes and ‘sedentarization’ projects for the permanent settlement of nomadic and landless households as part of the development strategy for remote areas (Government of Viet Nam, 1998, 2012b).

The current NPSPR programme no longer implements sedentarization or relocation projects. However, according to Government’s Resolution No. 80/NQ-CP on Sustainable Poverty Reduction Orientation for the period 2011–2020, relocation projects remain part of poverty reduction strategies, and funding from NPSPR may be mobilized for livelihood development in relocation projects (Government of Viet Nam, 2011).

2.2.2. The National Target Program for New Rural Development

The National Target Program for New Rural Development (NTPNRD), adopted in 2010, provides a framework for the development of rural areas throughout Viet Nam, addressing economic, social, and environmental goals. Among the key objectives of the programme are the following goals:

- a) Build new rural areas with modern socioeconomic infrastructure;
- b) Develop appropriate economic structures and modes of production, combining agriculture with industrial and service sector development;
- c) Link rural development to urban planning;
- d) Protect the environment (Government of Viet Nam, 2010).

The programme sets 19 criteria for development of rural regions, with a target of 20 per cent of communes reaching these standards by 2015, and 50 per cent of communes attaining the criteria by 2020.

Specifically, the programme aims to:

- a) Deliver the essential conditions for rural development including transport infrastructure, electricity, clean water, schools, and health clinic;
- b) Improve quality of life for rural communities;
- c) Foster economic development which provides stable employment;
- d) Increase incomes by at least 80 per cent compared to 2015.

As such, in some cases, central government’s funding for the NTPNRD can be used to supplement efforts by the local authorities in providing the necessary infrastructure services to relocated communities. Moreover, a recent review by the government noted that addressing environmental degradation, particularly in areas affected by climate change particularly needs greater attention (Government of Viet Nam, 2016).

2.3. Government Orders on relocation

The national strategies for disaster prevention, poverty-reduction and rural development provide a framework that links relocation projects to both risk reduction and rural development goals. Detailed policies for implementing relocation projects in line with these frameworks were outlined in two government decisions. In 2006, the Government issued Decision No. 193/2006/QĐ-TTg approving a national population relocation programme for areas affected by natural disaster or particular development challenges... The specific objective of this Program was to relocate 150,000 households between 2006 and 2015, including 30,000 households in disaster areas and areas facing challenging development conditions. The Program specifies a concentrated relocation approach and emphasizes that relocation should also provide improved living conditions in relocation areas through investment in infrastructure, vocational training, and economic development (Government of Viet Nam, 2006).

In 2008, Prime Minister’s Decision No. 78/2008/QĐ-TTg mandated support for relocated households, including provision of land and livelihood support and assistance with relocation costs, housing, and food, as well as development essential infrastructure and economic development activities (Government of Viet Nam, 2008d). The support package was updated in Decision No. 1776/2012/QĐ-TTg. Under this decision, relocated households are entitled to receive:

- VND 8 or 15 million (USD 350 or 660) per hectare for the clearing of uncleared land for agricultural use. The amount of support depends on the state of the land before clearing and/or the use of land.
- VND 20 – 25 million (USD 880 – 1,100) per household, depending on relocation distance, for expenses such as dismantling buildings and transport of people, assets, and building materials to relocation sites.
- Residential and productive land, according to allocations determined by each relocation project.
- 12 months of food, equivalent to 30 kg of rice/ person/ month if households lost their houses, residential land or production land due to natural disasters.
- Vocational training, livelihood supports and credit from the national Social Policy Bank, implemented through planned relocation schemes as well as through local rural development and poverty-reduction programmes.

Unlike development-induced relocation projects, policies for environmentally induced relocation do not mention land acquisition or compensation for loss of land at the area of origin. Therefore, in many cases, households continue using their land in their commune of origin after relocation.

In 2012, following the development of the NTPNRD, this decision was replaced by Decision No. 1776/2012/QĐ-TTg, which updated the national relocation programme for the period 2013–2020. The new Decision aimed to resettle 160,000 households in the period of 2013–2020. Of the 55,900 households targeted for relocation in the period 2013–2015, 32,100 households were in areas at risk of natural disaster. Decision 1776 retains the focus on increasing incomes, service access, and economic productivity as intended outcomes of relocation. It explicitly links relocation policy to the National Target Program on New Rural Development (NTPNRD), stating that development of relocation sites should also be oriented towards meeting targets under the NTPNRD.

The new decision also set benchmarks for relocation outcomes in line with NTPNRD targets, namely:

- To reduce the per centage of poor households in the project area by 1.5–2 per cent per year;
- To ensure clean water for 70–80 per cent of households;
- To ensure electricity use for 90–95 per cent of households;
- To ensure no more than 20–30 per cent of households in temporary housing.

The budget for the national relocation programme is VND 16,774 billion (USD 738 million,) comprising VND 10,064 billion (USD 443 million) from the national budget and VND 6,710 billion (USD 295 million) drawn from local government budgets and other sources (Government of Viet Nam, 2012a).

2.4. Roles and responsibilities in relocation policy

The Ministry of Agriculture and Rural Development (MARD) is the lead agency for the implementation of relocation projects, with responsibility for developing relocation plans, coordinating budgets, and implementing training and support programmes for livelihood development.

The Ministry of Planning and Investment (MPI) is responsible for coordination with the Ministry of Finance to plan and allocate funding for relocation projects, and to guide integration of relocation funding with other infrastructure investment and poverty reduction programmes.

Provincial People's Committees review and approve relocation projects, in coordination with the Ministry of Planning and Investment, Ministry of Finance and Ministry of Agriculture and Rural Development, in line overall objectives, solutions and budget as agreed upon with the aforementioned central agencies; provide overall guidance; and ensure that adequate formal mechanism and human resources are in place to undertake project implementation.

A Project Management Committee is established for each project, comprised of provincial departments of MARD, MPI, and other relevant agencies, and Provincial and District People's Committee representatives. The Project Management Committee assesses relocation sites, develops implementation plans for relocation and infrastructure projects, and coordinates responsibilities and budgets with district-level governments and relevant ministry departments to carry out the relocation and subsequent support programmes. Commune-level authorities have a limited role in the process and are involved mainly in facilitating communication between the Project Management Committee and community members.

2.5. Policy implementation

The majority of provinces and cities have formulated master plans identifying populations for relocation away from natural disaster areas in line with these policies. However, environmentally induced relocation programmes implemented to date have encountered obstacles in achieving the aims of improving living conditions and sustainable livelihoods. A key challenge has been ensuring the timely development of infrastructure and implementation of support programmes at destination areas. Due to funding constraints and coordination issues between implementing agencies, several relocation projects have seen delays in providing the housing, services, and assistance programmes needed to support relocated households (see Huong Giang, 2011; UNDP, 2014:4). A second challenge lies in addressing the concerns of households and communities who may be hesitant to leave their place of origin despite disaster risks. Strong community participation and risk communication, as well as clear information about the relocation process, have been found to be important in addressing this issue (cf. Dao and Takara, 2003).

03

THE HOA BINH PROVINCE RELOCATION PROJECT



A newly built kindergarten for relocated communities
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Hoa Binh is a province in the northwest of Viet Nam. It is a mountainous region where heavy seasonal rainfall and steep slopes give rise to risks of river flooding, flash floods, and landslides. Damage from recent events in Hoa Binh has been high (Huu Trung, 2016). Based on the national relocation policy and natural disaster risks in Hoa Binh province, Decision No. 1588/QĐ-TTg, October 9 2009 approved “The project on population stabilization and socioeconomic development in the Da river resettlement area, Hoa Binh province in the period 2009–2015”. The project aims to relocate the population living around Hoa Binh Lake due to high risks of landslides and flash floods. The initial project planned to relocate 250 to 300 households into newly established relocation villages, and 1,000 households into existing villages.

In early 2015, the Government Decision No. 84/QĐ-TTg extended the project implementation period to 2020 and finalized the project scope to relocate 300 households into newly established collective relocation sites, and 900 households into existing residential areas. The new decision also increased the budget significantly from almost VND 900 billion (USD 39.6 million) to more than VND 4,053 billion (USD 178.4 million) (Government of Viet Nam, 2015).

Under the relocation plan, each relocated household is eligible to receive:

- VND 15 million (USD 660) for households relocated in 2010, or VND 23 million (USD 1,010) for households relocated in 2014, for relocation expenses and house construction
- 300–500 square meters residential land
- 5,000 square meters of agricultural land

Depending on the timing of relocation or the destination, households may also be eligible for additional support including:

- VND 3 million (USD 130) for a water storage tank
- VND 900,000 (USD 40) for a septic toilet
- Support to purchase livestock
- Food support for low-income households
- Training and agricultural extension

Relocated households can continue using their existing agricultural land in their commune of origin.

While more than half of the households targeted for concentrated relocation have already moved, the project has also seen significant delays, and a number of households who registered for voluntary relocation in 2010 have yet to be relocated. Delays have been related largely to funding constraints. The concentrated relocation approach in the Hoa Binh relocation plan is relatively capital intensive, requiring approximately VND 100 million (USD 4,400) per household to fund construction of infrastructure and provision of land. Total investment in the relocation project is shared across central and local government funds however, the funding available to date has not been able to meet the required budget (Hoa Binh People’s Committee, 2011).

3.1. Study objectives

As yet, there has been no assessment of the current government-supported relocation programme in Hoa Binh. Given the ongoing efforts to improve relocation outcomes in Viet Nam, and the challenges of ensuring livelihood sustainability following relocation, it is important to evaluate the progress and effectiveness of programmes such as the Hoa Binh Relocation Project. It is particularly critical to understand the perspectives of affected households, both in terms of their motivations to move or remain, and the impacts of relocation on households who have moved.

In addition, there is limited research available to date on the responses and decision-making processes of households regarding environmentally induced relocation policies in Viet Nam. It is critical to have a clearer understanding of how households perceive and make decisions about their relocation options, in order to identify how the government can support communities more effectively to reduce their disaster risk.

This study addresses these gaps by assessing the experiences in Hoa Binh, both before and after relocation, and by exploring the attitudes of those who choose to participate in relocation programmes and those who choose to remain.

The results will provide information for policy makers to understand the factors that facilitate or constrain participation in relocation projects, and which affect relocation outcomes. This is expected to contribute to improving communications and planning relocation and disaster risk reduction in Viet Nam, as well as to the literature on relocation practices globally.

The study focuses on three key questions:

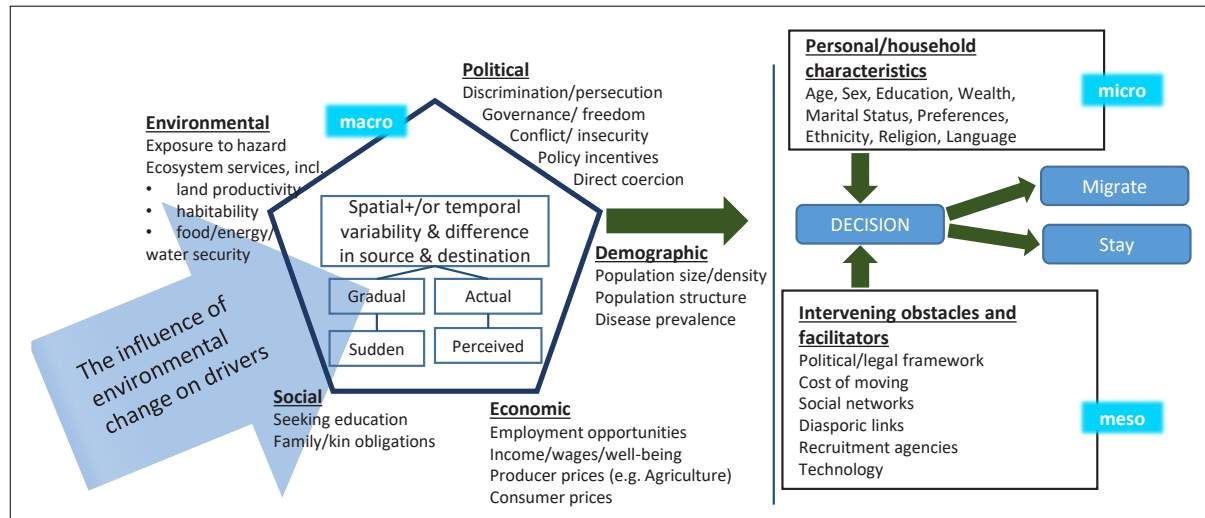
- What are the key factors influencing household decisions around relocation?
- What are the dynamics and decision-making processes of households on relocation?
- What are the impacts of relocation on households under the current programme?

3.2. Analytical framework

This study seeks to explore household decision-making and relocation outcomes in the Hoa Binh Relocation Project. It is expected that better understanding of these processes can help to identify how policy, planning, and implementation can improve relocation outcomes while reducing environmental risks for vulnerable populations.

With regard to migration decisions, Black et al. (2011) identify five groups of migration drivers: economic, political, social, demographic and environmental factors (Figure 1). In this framework, environmental factors impact migration directly as well as indirectly through effects on other factors. Indirect influences at the macro level can include policy responses to environmental change and rural development. At the meso- or intermediate-level are factors that can facilitate or constrain households' ability to respond to macrodrivers, such as the political or legal processes through which environmental policy is implemented, or social and economic factors which mediate the impacts of environmental change, like social networks or access to technology. Drivers and barriers interact with microlevel factors such as education or wealth, which affect vulnerability and capacity to migrate, to influence migration decisions at the household level.

Figure 1. An analytical framework of the impacts of the environment and economic, political, social and demographic factors on migration



Source: Black et al. (2011).

In terms of relocation outcomes in the context of environmental change, researchers such as Rogers and Xue (2015) argue that vulnerability analysis of rural livelihoods is necessary to understand how households respond to the risks and benefits of relocation. Vulnerability analysis requires attention to the political, economic, and social factors that shape exposure to environmental and socioeconomic risks and stressors, as well as how policy and institutional factors can shape these processes.

Drawing on these frameworks, this analysis explores relocation dynamics in relation to household-level factors including:

- Gender, age, and education level
- Income and poverty status
- Social networks and family relationships
- Perceptions and experience of natural hazards and disaster risks

The study also seeks to understand the decision-making process of households with regard to relocation, and how this process can be supported by relocation policy. The analysis explores how households access and evaluate information on the relocation process in terms of:

- Types and sources of information accessed to inform settlement decisions
- Assessment of benefits, costs, and risks of relocation
- Perceptions of personal and livelihood security
- Participation in relocation decision-making
- Gender and household relationships in relocation decisions

Finally, the study examines the impacts of relocation on households and the factors affecting relocation success, including:

- Effectiveness of government assistance to relocated households
- Comparison of environmental risk between origin and destination
- Changes in living conditions including livelihoods, access to services, and infrastructure
- Individual and family well-being, social integration, and personal satisfaction

04

DATA COLLECTION



In-depth interview with a relocated household
© IOM 2016 (Photo credit: Tran Thi Ngoc Thu)

4.1. Survey sites

Fieldwork was conducted by the Institute of Sociology in 2016 in two communes of origin targeted for relocation and at three relocation destination sites. Research sites selected in areas targeted for relocation were in Tan Mai and Phuc San communes in Mai Chau district. Three relocation destination sites were selected: in Yen Nghiep commune, Lac Son district; Bao Hieu commune, Yen Thuy district, and Dong Tam commune, Lac Thuy district.

Figure 2. Map of survey sites in two relocated communes and three relocation sites



Source: Google Maps.

From 2010 to 2014, 148 households from Tan Mai commune and 98 households from Phuc San moved to relocation sites, including sites at Yen Nghiep, Bao Hieu and Dong Tam. At the time of the research, a number of households in Tan Mai and Phuc San had registered for relocation, but had not yet relocated.

4.1.1. Communes of origin

Tan Mai commune has a population of 1,500 people, mostly comprised of Muong and Dao ethnic groups. The commune has a relatively high poverty rate at 57 per cent. Phuc San commune hosts a population of 2,035, with a poverty rate of almost 35 per cent. The majority of residents are Muong, with a significant Thai population as well as smaller numbers of Dao, Kinh, and Tay people. Income in the two communes is largely generated from bamboo plantations and reservoir fishery.

Table 1. Socioeconomic profiles of survey sites

	Communes of origin		Relocation communes		
	Tan Mai	Phuc San	Yen Nghiep	Bao Hieu	Dong Tam
Land area (km ²)	34.9	33.6	22.6	28.1	49.3
Population	1,500	2,035	6,500	7,000	6,700
No. of households	359	515	1,500	1,500	1,700
% poor households ²	57	34.8	22.4	36	7.3
Number of households targeted for relocation	>249	>403	n.a.	n.a.	n.a.
Number of households relocated from commune	148	98	n.a.	n.a.	n.a.
Number of households resettled to commune	n.a.	n.a.	60	75	50
Ethnicity (%):					
- Muong	53.4	61.8	98	85	-
- Thai	-	21.5	-	<5	-
- Dao	40.7	9.4	-	<5	-
- Kinh	-	7.2	-	10	92
- Tay	-	0.1	-	-	-
- Other	5.9	-	2	-	8

Source: Data provided by the local authorities of Tan Mai, Phuc San, Yen Nghiep, Bao Hieu and Dong Tam communes.

Due to the location of the communes along the lake bed in a mountainous area, landslides are common in the rainy season, and the communes have also been significantly affected by other disasters. In 2007, storm No. 5³ (Typhoon Lekima) killed four people and damaged or destroyed hundreds of houses. More than 100 hectares of land were buried in landslides and are no longer cultivable. A 2007 survey identified large cracks in most of the significant slopes in the communes, representing major landslide risks. As a result, 249 households in Tan Mai and 403 households in Phuc San were identified for relocation to minimize risks to households' safety and property (Do Ha, 2014).

² The terms 'poor' and 'near-poor' households refer to households registered as such according to the national poverty lines set by the Ministry of Labour, Invalids, and Social Affairs, as follows:

"A rural poor household is a household with each member earning an average income of up to VND 400,000 (USD 17.6) per month."

"A rural household in danger of falling into poverty is a household with each member earning an average income of between VND 401,000 and VND 520,000 (USD 17.6 and 22.9) per month." (Prime Minister's Decision No. 09/2011/QĐ-TTg)

³ Viet Nam uses a numerical system for naming typhoons and tropical storms, so Storm No. 5 of 2007 (Typhoon Lekima) was the fifth typhoon of the 2007 season to hit Viet Nam.

4.1.2. Relocation sites

Surveys were conducted at three relocation sites in Yen Nghiep, Bao Hieu, and Dong Tam communes, located between 90 and 150 kilometers from Tan Mai and Phuc San.

Yen Nghiep commune has a land area of 22.6 square kilometers. The population of 6,500 people is almost entirely Muong, with a poverty rate of 22.4 per cent. Main livelihoods in the commune are farming, forestry and fishery, as well as handicrafts, trade, and services. In 2010, 60 households were relocated to Yen Nghiep, establishing Mai Son village.

Bao Hieu commune covers an area of roughly 28 square kilometers, with a population of 7,000 people. Main livelihood activities are farming and forestry, and the commune has a poverty rate of 36 per cent. Muong people account for 85 per cent of the population, with the remainder of the population made up of Kinh, Thai, and Dao people. In 2010, the commune received 75 relocated households, establishing Tan Phuc village. There also remain 18 vacant relocation plots in Tan Phuc.

Dong Tam commune has an area of 49.32 square kilometers, and a population of 6,700 people. Unlike the other communes, Dong Tam's population is mostly Kinh, and has few residents from ethnic minority groups. The commune has a relatively low poverty rate at 7.3 per cent. Dong Tam planned to receive 120 households from Tan Mai and Phuc San communes, in accordance with the relocation plan. By 2014, 50 households had been relocated in the commune under the project, establishing Dong Mai village, and 70 additional land plots remain households to be relocated. In comparison to the other communes, Dong Tam has more land available however, much of the land available for relocation sites is poorly suited to agriculture.

4.2. Data collection methods

The study carried out surveys with relocated and targeted households assessing their perceptions and experiences of relocation. In depth interviews and focus groups were conducted with key informants, including household members and local community leaders to further explore responses to the project.

Quantitative surveys were conducted with a random sample of households in relocation communes (*relocated households*) and communes of origin (*targeted households*). In communes of origin, households were randomly selected from household lists for all ten hamlets⁴ in the communes, and surveys were completed with 274 targeted households. In destination communes, the study attempted to survey all 185 relocated households, securing responses from 132 households.

The quantitative survey questions addressed household composition and demographics, living conditions, awareness and experience of natural disasters, relocation status, decision-making processes, and experience with the relocation process. The survey collected sex-disaggregated data where relevant and explored participation of women and men in household decision making to explore gender dynamics within households. Survey enumerators conducted interviews in person with the head of household wherever possible or, in their absence, the spouse of the household head.⁵ Following a pilot survey in July 2016 in Tan Mai and Phuc San communes, the household survey was conducted in the five research sites from August to September 2016. The survey team consisted of two supervisors and eight interviewers.

⁴ In Viet Nam 'hamlet' describes a geographical subdivision of a commune.

⁵ 'Household head refers to the individual who is registered as such on the household's official registration. This may be a man or woman, though the household head is most commonly male.

To gather qualitative data on the relocation process, 30 in-depth interviews were conducted with:

- 13 household representatives (5 from targeted communes and 8 from relocation communes);
- 14 community leaders and local officials (6 from targeted communes and 8 from relocation communes);
- 3 representatives of provincial authorities.

In addition, 15 focus group discussions were conducted with six groups of household representatives and nine groups of leaders and officials. Interviews explored perspectives and opinions on relocation experiences and perceptions of environmental change. Focus group discussions collected more detailed information on the relocation process and the implementation of the project.

4.2.1. Sample

The composition of the survey sample is presented in Table 2. The sample of 406 households comprised 274 targeted households in Tan Mai and Phuc San communes, and 132 relocated households in Yen Nghiep, Dong Tam and Bao Hieu communes. Of the targeted households in communes of origin, the sample included:

- 103 households that have decided to relocate;
- 100 households that have decided not to relocate;
- 71 households that have not yet made a decision on relocation.

Table 2. Survey sample

	Commune					Total
	Tan Mai	Phuc San	Yen Nghiep	Dong Tam	Bao Hieu	
Relocated households	0	0	43	47	42	132
Households decided to move	49	54	0	0	0	103
Households decided not to move	57	43	0	0	0	100
Households have not decided	26	45	0	0	0	71
Total	132	142	43	47	42	406

Source: Survey data, Hoa Binh 2016.

05

RESULTS



In-depth interview with a relocated household
© IOM 2016 (Photo credit: Tran Thi Ngoc Thu)

5.1. Sociodemographic characteristics of the household heads

Ethnicity of household heads broadly reflects the makeup of the population, including Muong (57%), Dao (24.6%), Thai (9.1%) and Kinh (9.1%). The average age of household heads in the sample is 43.4 years, with the largest proportion of the population between 35 and 49 years old. Most household heads are male (86.5%) and married (86.5%). Educational attainment of household heads is generally low: 32 per cent did not complete primary school education, and only 11 per cent completed secondary school.

Table 3. Social and demographic characteristics of interviewed households (%)

Household heads		Type of household		Total
		Relocated	Targeted	
Ethnicity	Kinh	9.1	9.1	9.1
	Muong	62.9	54.4	57.1
	Thai	0.8	13.1	9.1
	Dao, other	27.3	23.4	24.6
Age	Less than 35	29.8	28.2	28.7
	35–49	42.7	38.8	40.1
	50+	27.5	33.0	31.2
Sex	Male	89.4	85.0	86.5
	Female	10.6	15.0	13.5
Marital status	Never married	0.8	2.9	2.2
	Married	92.5	88.3	89.6
	Widowed, divorced, separated	6.8	8.8	8.1
Education	Lower than primary school	32.3	31.7	31.9
	Completed primary school	36.9	38.4	37.9
	Completed junior secondary	20.8	18.1	19.0
	Completed senior secondary	10.0	11.8	11.2
N		132	274	406
All household members				
Ethnicity	Kinh	9.2	7.4	8.0
	Muong	63.1	53.2	56.4
	Thai	1.9	16.3	11.7
	Dao, other	25.8	23.1	24.0
Age	Less than 15	27.2	25.1	25.8
	15–24	13.8	15.5	14.9
	25–34	19.9	18.0	18.6
	35–49	24.1	20.0	21.3
	50+	15.1	21.4	19.4
Sex	Male	51.9	48.6	49.6
	Female	48.1	51.4	50.4
Marital status	Never married	39.6	35.8	37.0
	Married	54.6	55.2	55.0
	Widowed, divorced, separated	5.8	9.0	8.0
Education	Lower than primary school	35.7	34.7	35.0
	Completed primary school	31.2	30.1	30.5
	Completed junior secondary	20.4	23.1	22.2
	Completed senior secondary	12.6	12.1	12.3
N		480	1,013	1,493

Source: Survey data, Hoa Binh 2016.

5.2. Profiles of sampled households

The average household size is 3.6 members, and more than half (55%) of interviewed households have four or more members. The proportion of households with three to four members was higher in the relocated group, while targeted households had a larger proportion of households with five or more people. The total proportion of poor or near poor households is 61 per cent, and is particularly high in the relocated group at 85.6 per cent. The most common housing type is semi-permanent housing of brick walls and with tin or tiled roofs (59%), and is more common among the relocated group (70.5%). Low quality housing of temporary materials is higher among the targeted group (13.1%) than the relocated group (3.8%).

More than 87 per cent of households have mobile phones. The proportions of households having a TV and motorbike was high (80% and 76% respectively), while few households owned computers (4.7%) or washing machines (1.7%). More than 95 per cent of interviewed households reported that all household members have a health insurance card that provides access to government health-care services, though this proportion is lower in the relocated group.

Table 4. Household profiles (%)

	Type of household		Total
	Relocated	Targeted	
Household size:			
1	3.0	3.6	3.4
2	12.1	15.7	14.5
3	27.3	24.8	25.6
4	41.7	31.0	34.5
5+	15.9	24.8	21.9
Mean of household size	3.64	3.70	3.68
Poor or near-poor household ⁶	85.6	49.3	61.1
Type of house:			
Concrete roof, multi-store house	3.0	1.8	2.2
Brick, wooded house	22.7	31.4	28.6
Semi-permanent (brick, tin/fibro, cement)	70.5	53.6	59.1
Temporary (bamboo, leaves, tents)	3.8	13.1	10.1
Household goods:			
Cell phone	88.6	86.5	87.2
TV	83.3	78.1	79.8
Motorbike	78.0	75.2	76.1
Fridge, freezer	26.5	42.0	36.9
DVD player	16.7	28.5	24.6
Boat	0.0	20.1	13.5
Washing machine	2.3	1.5	1.7
Computer	3.8	5.1	4.7
Generator (gasoline, oil)	0.8	2.2	1.7
Landline telephone	1.5	1.1	1.2
Car, truck	0.0	1.1	0.7
Health insurance card:			
None	3.0	0.0	1.0
Some household members	9.1	1.5	3.9
All household members	87.9	98.5	95.1

Source: Survey data, Hoa Binh 2016.

⁶ See footnote 1 for definition of these categories.

5.3. Household relocation decisions

5.3.1. Socioeconomic and demographic factors

Of the economic, social and demographic factors considered in Table 5, ethnicity and poverty status are correlated with household relocation decisions. The proportion of undecided households is highest among the Thai ethnic group (48.6%). The proportion of households deciding not to move is also high among Thai (32.4%) and Dao (36%) groups. The proportion of those who have decided to move is highest among Kinh people (35.1%) but lowest among the Thai (16%). The proportion of relocated households is also very low among the Thai (2.7%). It is not clear from the survey data how ethnicity impacts the migration decision. Qualitative data suggests that some Thai people expressed concern about leaving culturally important sites such as ancestral graves. However, it is worth considering whether ethnicity may influence migration decisions in other ways. The relative absence of people of the same ethnic group at relocation sites – which have larger Muong and Kinh populations – may play a role. Alternatively, ethnicity may also be related to other factors that affect engagement with the project, such as education or social networks.

Of the poor or near-poor households in the total sample, 45.6 per cent have already relocated. The combined proportion of poor or near-poor households who have relocated and decided to relocate is 62.5 per cent – that is, higher than the non-poor group. However, among the poor/near-poor households that remain in the communes of origin, only 31 per cent of these have agreed to move, while almost 40 per cent have decided to remain, and 29 per cent are undecided. In contrast, 43.9 per cent of the remaining non-poor households have decided to move. The high proportion of poor/near-poor households in the relocated group may suggest that poor households are at higher risk, as in general, poorer households often occupy more marginal land where risks may be higher. As higher risk or previously affected households were prioritized to move first, this may have resulted in a higher proportion of poor/near poor households prioritized for relocation. An additional consideration may be that poor households considered the impacts of previous disasters more significant or problematic, due to low capacity to cope with economic shocks. However, for the poor/near-poor households which remain, these results suggest that concerns over the economic impacts of relocation may be a contributing factor in their reluctance to relocate.

Table 5. Household sociodemographic characteristics and decision on relocation (%)

		Decision of household				N
		Have not decided	Decided not to move	Decided to move	Relocated	
Age of household head	Less than 35	22.4	19.8	24.1	33.6	116
	35–49	16.7	24.7	24.1	34.6	162
	50+	13.5	29.4	28.6	28.6	126
Sex of household head	Male	16.5	25.4	24.5	33.6	351
	Female	23.6	20.0	30.9	25.5	55
Education of household head	< Primary	17.2	26.6	23.4	32.8	128
	< Jnr secondary	17.8	23.7	27.0	31.6	152
	Secondary+	17.4	24.0	25.6	33.1	121
Ethnicity of household head**	Kinh	10.8	21.6	35.1	32.4	37
	Muong	16.8	19.0	28.4	35.8	232
	Thai	48.6	32.4	16.2	2.7	37
	Dao	10.0	36.0	18.0	36.0	100

Main occupation of household head	Farm	17.9	24.4	26.9	30.8	308
	Non-farm	16.3	25.5	20.4	37.8	98
Household size	2	13.7	23.3	35.6	27.4	73
	3	22.1	24.0	19.2	34.6	104
	4	12.9	22.9	25.0	39.3	140
	5+	22.5	29.2	24.7	23.6	89
Poverty status**	Poor/near-poor	16.1	21.4	16.9	45.6	248
	Not poor	19.6	29.7	38.6	12.0	158
Total		17.5	24.6	25.4	32.5	
N		71	100	103	132	406

Note: * p<0,01 ** p<0,001.

Source: Survey data, Hoa Binh 2016.

5.3.2. Experience of natural disasters

Survey respondents were asked about their experience of natural disaster since 2005, including before and after relocation. Results show that between 2005 and 2016, the majority of households were affected by at least one natural disaster: more than 77 per cent experienced landslides, 29 per cent experienced flooding, 47.5 per cent faced cyclones or storms, and nearly 29 per cent faced drought (Table 6). Many households have experienced multiple disasters, and some have been affected dozens of times.

Table 6. Number of natural disasters experienced since 2005 (%)

Type of disaster		Type of household				Total
		Relocated	Have not relocated	Poor/near-poor	Not poor	
Landslides:	None	29.5	34.3	31.5	34.8	32.8
	1 time	53.8	25.5	37.5	30.4	34.7
	2+	16.7	40.1	31.0	34.8	32.5
Floods:	None	69.7	71.5	71.8	69.6	70.9
	1 time	16.7	10.6	12.1	13.3	12.6
	2+	13.6	17.9	16.1	17.1	16.5
Cyclone, storm, hail:	None	50.8	53.3	52.0	53.2	52.5
	1 time	27.3	16.8	20.6	19.6	20.2
	2+	22.0	29.9	27.4	27.2	27.3
Drought:	None	59.8	76.6	67.7	76.6	71.2
	1	14.4	7.7	8.9	11.4	9.9
	2+	25.8	15.7	23.4	12.0	19.0
N		132	274	248	158	406

Source: Survey data, Hoa Binh 2016.

Relocated and targeted groups show similar proportions of households experiencing at least one landslide. However, only 16.7 per cent of relocated households have experienced more than one landslide, compared with 40 per cent of non-relocated households who have experienced two or more. Based on households' reports that landslide risk is lower at relocation sites (Section 5.7.3) this likely reflect that relocated households have experienced fewer landslides after relocation. The level of natural disaster experience does not differ greatly with economic status. Though more poor/near-poor households have

suffered drought than non-poor households, this may relate to the larger proportion of poor households who already relocated, as qualitative data indicates that households have experienced more drought at relocation sites. For other events, the differences between income groups is minor.

A high proportion of all sampled households have suffered significant impacts⁷ as a result of these events, with 65 per cent of all households reporting significant adverse effects from at least one disaster event (Table 7). Landslides were the major cause of negative impacts, with 51.7 per cent of households reporting significant damage from landslides. Relocated households were more likely than non-relocated to report having experienced significant impacts from landslides, as were poor/near-poor households. However, there is not a clear relationship between experience of disasters and the decision to relocate, with relatively small differences in disaster experience between those who have decided to remain and those who wish to move (Table 8).

This data shows that experience of disaster is one of multiple drivers which play a role in household decision-making about relocation. Along with data in the following section, which reflects widespread recognition of risks and reasons to move, these results suggest that households evaluate a range of social and economic factors to make decisions about responding to disaster risks.

Table 7. Proportion of households significantly affected by natural disasters, by relocation and economic status (%)

Type of calamity/disaster	Type of household				Total
	Relocated	Not relocated	Poor/ Near- poor	Not poor	
Landslide	55.3	50.0	54.8	46.8	51.7
Flood	13.6	18.2	14.5	20.3	16.7
Cyclone, storm, hail	16.7	21.5	19.8	20.3	20.0
Drought	4.5	14.6	9.7	13.9	11.3
Any natural disaster	62.1	66.4	64.9	65.2	65.0
N	132	274	248	158	406

Source: Survey data, Hoa Binh 2016.

Table 8. Proportion of households significantly affected by natural disasters, by relocation decision (%)

Type of disaster	Type of household				Total
	Undecided	Decided not to move	Decided to move	Have relocated	
Landslide	47.9	47.0	54.4	56.8	52.2
Flood	22.5	27.0	6.8	23.5	20.0
Cyclone, storm, hail	22.5	20.0	22.3	31.1	24.6
Drought	18.3	15.0	11.7	25.8	18.2
Any natural disaster	64.8	65.0	68.9	74.2	69.0
N	71	100	103	132	406

Source: Survey data, Hoa Binh 2016.

⁷ According to respondents' own evaluation of 'significant impact'.

5.3.3. Attitudes and knowledge about natural disasters and climate change

The two most common causes of natural disasters cited by respondents were “climate change” (65.8%) and “deforestation” (63%), followed by “hydroelectricity/irrigation systems” (Table 9). Deforestation and climate change are more commonly cited by men than by women, and by those with higher levels of education. Understanding of climate change and its impact is varied. In total, 44 per cent of respondents understood climate change as involving erratic weather, while 35 per cent mentioned that it related to disasters such as landslides and storms. However, 37 per cent of respondents said they do not know what climate change is, and less than 6 per cent understood the concept as a change in climate due to rising average temperatures.

Perceptions about the specific impacts of climate change reflect respondents’ experiences of local environmental conditions. Most frequently cited signs of climate change were “more storms, floods, landslides” (47.9%), and “persistent irregular weather” (45.7%), while few respondents mentioned “sea level rise, salinity intrusion” (4.4%). Understanding of impacts varied with education, with higher awareness of signs of climate change among those with secondary school education.

Overall, understanding of environmental changes reflects a widespread awareness of the risks of natural disasters. However, there are varied levels of understanding of what climate change entails and its potential to increase disaster risk, with limited awareness among those with lower levels of education.

Table 9. Perceptions of natural disasters and climate change (%)

	Sex		Education			Total
	Male	Female	<Primary	< Jnr secondary	Jnr secondary+	
Causes of natural disasters:						
Due to climate change	74.6	58.1	54.9	64.9	77.0	65.8
Due to deforestation	69.3	58.5	51.1	61.9	77.0	63.5
Hydroelectric and irrigation works	51.9	40.1	40.6	48.5	47.5	45.6
What is climate change?						
Changing erratic weather	51.3	38.4	27.1	48.5	57.2	44.4
Storms, floods, landslides	37.0	34.3	28.6	38.8	39.1	35.6
Drought	13.2	15.7	12.0	12.7	18.8	14.6
Sea level rise	5.3	2.3	1.5	5.2	4.3	3.7
Change of climate due to rising average temperature of the earth	8.5	3.7	3.8	4.5	9.4	5.9
Don't know	31.7	41.7	54.1	36.6	21.0	37.0
Signs of climate change:						
Persistent irregular weather	57.1	35.6	30.1	47.8	58.7	45.7
More storms, floods and landslides	53.4	43.1	35.3	50.7	57.2	47.9
More frequent drought	24.3	17.1	12.0	22.4	26.8	20.5
Sea level rise, salinity intrusion	6.3	2.8	1.5	4.5	7.2	4.4
Don't know	27.0	38.9	50.4	32.1	18.1	33.3
N	189	217	133	134	139	406

Source: Survey data, Hoa Binh 2016.

5.4. Perceptions of relocation project

5.4.1. Awareness of the project

For the majority of households, the announcement of the project and notification that they had been identified for relocation was received from the village head (88.6% in the relocated group and 75.5% in the targeted group). The proportion of households who were advised of the project by the People's Committee is noticeably lower in the relocated group at 7.6 per cent, and may reflect a change in methods of communication about the project.

Most households received information about the relocation project from village meetings (91.4%), although a small proportion of households did not attend meetings and received information via newspapers (7.9%) or TV, radio, and village loudspeaker (8.4%).

Table 10. Announcement of relocation project (%)

	Type of household		Total
	Relocated	Targeted	
Source of announcement			
People's Committee	7.6	22.2	17.5
Village head	88.6	75.5	79.8
Other people in the village/commune	2.3	0.7	1.2
Other	1.5	1.5	1.5
Form of announcement			
Official letter	6.1	8.8	7.9
Village meetings	93.2	90.5	91.4
TV, radio, loudspeaker	6.8	9.1	8.4
Other	1.5	2.2	2.0
Relocation reasons given			
Previously affected by landslides	65.2	47.1	53.0
At high risk of landslides	58.3	65.7	63.3
Previously affected by floods	3.0	10.9	8.4
At high risk of floods	3.0	14.6	10.8
Risk of other natural disasters	0.0	1.1	0.7
Other reasons	0.8	3.3	4.4
N	132	274	406

Source: Survey data, Hoa Binh 2016.

There is widespread understanding of the reasons for relocation. Two thirds of relocated households reported that they were advised to move because they had been affected by landslides in the past, and the majority of targeted households are aware that they have been identified for relocation due to either high risks or previous impacts of disasters. The higher proportion of previously affected households in the relocation area likely reflects that relocation was prioritized for households affected in the past.

5.4.2. Attitudes towards the relocation project

The data in Table 11 shows that most households (73.2%) strongly agreed with the rationale of the project, to reduce disaster risks, while 12.8 per cent partly agreed, and only 3.4 per cent disagreed. Agreement was higher in the relocated group, with 86.6 per cent strongly agreeing with the rationale for relocation, and higher still among the group waiting to move (93.9%). Agreement is lower, but still widespread, among those deciding not to move (53%) and households who are undecided (50.7%). There is also more ambiguity among undecided households, with one quarter giving no answer or a neutral opinion on the rationale of the relocation project.

Agreement with the reasons for relocation varies very little by educational attainment or poverty status, but does tend to be stronger with age (Table 12). Female respondents were slightly more likely to be ambivalent about the official reasons for relocation, with more women than men stating only partial agreement or a neutral response.

Table 11. Agreement with relocation rationale by relocation status (%)

	Status of relocation				Total
	Undecided	Decided not to move	Decided to move	Relocated	
Strongly agree	50.7	53.0	81.6	93.9	73.2
Partly agree	21.1	20.0	9.7	5.3	12.8
Neither agree nor disagree	14.1	3.0	1.0	0.0	3.4
Disagree	2.8	12.0	0.0	0.0	3.4
No answer	11.3	12.0	7.8	0.8	7.1
N	71	100	103	132	406

Source: Survey data, Hoa Binh 2016.

It can be seen that understanding and agreement with the purpose of the relocation project to reduce risks is important for households to opt in to relocation. Nonetheless, 86 households have opted not to move, or remain undecided, despite strongly agreeing with the reasons for their proposed relocation. This reinforces that recognition of disaster risks and reasons to relocate is one of multiple factors affecting households' decisions, as they consider concerns and potential impacts of relocation.

Table 12. Agreement with relocation rationale by age and gender (%)

	Age			Gender		Total
	< 35	35 – 49	50+	Male	Female	
Strongly agree	68.1	72.4	79.8	74.6	71.9	73.2
Partly agree	18.5	12.5	6.7	9.5	15.7	12.8
Neither agree nor disagree	4.4	2.6	3.4	1.1	5.5	3.4
Disagree	2.2	5.9	1.7	4.8	2.3	3.4
No answer	6.7	6.6	8.4	10.1	4.6	7.1
N	135	152	119	189	217	406

Source: Survey data, Hoa Binh 2016.

5.4.3. Knowledge of relocation process and support policies

The relocation project was communicated to targeted communes through a series of announcements by the local government, via village meetings, loudspeaker announcements, and to a lesser extent, flyers and posters. Among relocated households, most recalled receiving information in relation to “housing and land assistance at the destination” (90.9%), “level and type of assistance” (84.1%), “relocation procedures” (71.2%) and “timing of relocation” (71.2%). Among the targeted group, only one-third

of households recalled receiving any of this information through these channels (Table 13). There is very limited awareness among targeted households of livelihood support or opportunities at destination sites, at 12 per cent. Meanwhile, the proportion of households receiving information on how to resolve complaints or get assistance with legal procedures is low in both groups. It is important to note also that 8.4 per cent of targeted households said they had not received any information regarding the timing, process, or support available for relocation.

Table 13. Information received through formal channels, by relocation status (%)

	Type of household		Total
	Relocated	Targeted	
On relocation procedures:			
Timing of relocation	71.2	24.5	39.8
Moving procedures	71.2	33.7	45.9
Amount and type of assistance	84.1	27.1	45.7
Housing and land at destination	90.9	32.2	51.4
Loans, employment, and livelihood support	43.9	12.1	22.5
Guidance on complaints/resolution	15.2	3.3	7.2
Support with legal procedures	12.9	1.8	5.4
None, don't know	0.0	8.4	5.7
On the relocation site:			
Agricultural land	92.4	41.0	57.8
Water source for cultivation	61.4	27.5	38.5
Employment, livelihood opportunities	43.2	12.8	22.7
Water for domestic use	78.0	27.8	44.2
Roads, transportation	83.3	25.6	44.4
Electricity access	84.8	28.9	47.2
Schools	87.1	28.9	47.9
Health facilities	75.8	22.3	39.8
Climate, environment, natural disaster	31.8	7.7	15.6
None, don't know	0.8	36.6	24.9
N	132	274	406

Source: Survey data, Hoa Binh 2016.

The proportion of households receiving information about infrastructure and living conditions and at the destination are high among the relocated group, and much higher in comparison to the targeted group. Almost all relocated households had information about agricultural land at the destination (92.4%) before they moved, and the majority were informed about infrastructure such as schools (87.1%), electricity access (84.8%), transport/roads (83.3%), domestic water access (78%) and health facilities (75.8%). The proportion of households among the targeted group who received this information is significantly lower, and more than a third of targeted households said they have not received any information about the relocation sites. Less than half (41%) recalled information about agricultural land, while less than a third remembered receiving any information about infrastructure or living conditions at relocation sites.

The proportion of households having received comprehensive information about relocation procedures and conditions is relatively low across all households, regardless of their relocation decision (Table 14). However, households who have decided not to move were slightly more likely than other targeted households to have received information about relocation timing, procedures, and agricultural land and livelihoods at their destination. This may be attributable to a small group of households which interviews show had initially registered to resettle but have decided to remain, due to delays in the relocation process or concerns about the viability of agricultural livelihoods at relocation sites.

Table 14. Information received through formal channels, by relocation decision (%)

	Type of household				Total
	Undecided	Decided not to move	Decided to move	Have relocated	
On relocation procedures:					
Timing of relocation	19.7	31.3	21.4	71.2	39.8
Moving procedures	28.2	38.4	33.0	71.2	45.9
Amount and type of support	25.4	27.3	28.2	84.1	45.7
Housing and land at destination	25.4	34.3	35.0	90.9	51.4
Loans, employment and livelihood support	9.9	11.1	14.6	43.9	22.5
Guidance on complaints/resolution	4.2	1.0	4.9	15.2	7.2
Support with legal procedures	2.8	1.0	1.9	12.9	5.4
Other	1.4	4.0	4.9	6.8	4.7
N	71	99	103	132	405 ⁸
On the relocation site:					
Agricultural land	33.8	49.5	37.9	92.4	57.8
Water source for cultivation	21.1	30.3	29.1	61.4	38.5
Employment, livelihood opportunities	7.0	16.2	13.6	43.2	22.7
Domestic water access	26.8	27.3	29.1	78.0	44.2
Roads, transportation	21.1	25.3	29.1	83.3	44.4
Electricity access	22.5	28.3	34.0	84.8	47.2
Schools	23.9	26.3	35.0	87.1	47.9
Health facilities	15.5	22.2	27.2	75.8	39.8
Climate, environment, natural disaster	5.6	5.1	11.7	31.8	15.6
Other	5.6	11.1	10.7	5.3	8.1
None	47.9	29.3	35.9	0.8	24.9
N	71	99	103	132	405

* knowledge before relocation.

Source: Survey data, Hoa Binh 2016.

The core relocation assistance provided for relocated households includes a cash payment for relocation costs and house construction, along with residential land, and 5,000 square meters of agricultural land, and training support for livelihood development. Depending on the destination site and economic status of the household, they may also access low-interest loans from a national government credit scheme, subsidies for food and agricultural inputs, and payments for other assets like water tanks. Respondents were asked whether they knew about specific relocation assistance policies, and in the case of relocated households, what types of assistance they knew about before they relocated.

⁸ Absence of response from one household on this specific question, here and below.

Table 15. Knowledge of support policies (%)

	Type of household		Poverty status		Total
	Relocated*	Targeted	Poor/ near-poor	Not poor	
Housing	75.8	36.5	52.8	43.7	49.3
Agricultural land	81.1	29.9	49.6	41.8	46.6
Loan for poverty eradication	32.6	11.7	21.0	14.6	18.5
Education, training	28.0	5.5	14.5	10.1	12.8
Health care	22.7	3.6	12.1	6.3	9.9
Agriculture/forestry training	22.7	2.6	12.5	3.8	9.1
Subsidies for agricultural inputs	3.0	2.2	2.4	2.5	2.5
Employment information	3.0	1.1	1.6	1.9	1.7
Agricultural tax exemption	1.5	1.1	1.2	1.3	1.2
Market information	1.5	0.4	1.2	0.0	0.7
Unknown	15.2	51.1	36.7	43.7	39.4
N	132	274	248	158	406

* knowledge before relocation.

Source: Survey data, Hoa Binh 2016

The proportion of respondents who did not have specific knowledge of support policies is high: 15.2 per cent in the relocated group, 51.1 per cent in the targeted group. In terms of economic status, 36.6 per cent in the poor/near-poor group, and 43.7 per cent in the non-poor group did not have specific knowledge of support policies (Table 15). Provision of housing and farmland are a central focus of relocation assistance, but not all households are aware of their entitlements in this regard. Among relocated households, the proportions of households who knew about support for housing and agricultural land before they relocated are about 76 per cent and 81 per cent respectively, and this awareness is much lower among the targeted group, (36.5% and 30%). Even among households who have decided to move, only about one third said they knew about housing and land support. Knowledge of other support policies to facilitate economic activities, like loans, tax exemptions, training, or employment information is significantly lower across all groups.

Looking at economic status, poor/near-poor households are more likely to know about support policies than non-poor households. This may be due to the fact that low-income households have greater need of assistance, or are more concerned about the livelihood impacts of relocation, leading to greater interest in support policies. However, only about half of poor/near-poor households had knowledge of housing and land support when they made their relocation decision.

Table 16. Sources of information on relocation support

	Type of household		Poverty status		Total
	Relocated*	Targeted	Poor/ Near-poor	Not poor	
Village or commune meetings	93.8	77.6	87.9	79.8	85.0
From other people	6.3	32.1	15.3	29.2	20.3
Poster at communal government office	2.7	11.2	4.5	12.4	7.3
Communal loudspeakers	8.9	4.5	7.6	4.5	6.5
Leaflets distributed to households	0.0	3.0	0.0	4.5	1.6
Internet, radio, TV, newspapers	0.9	1.5	1.3	1.1	1.2
Other sources	1.8	3.7	1.3	5.6	2.8
N	112	134	157	89	246

*Note: Information source before relocation.

Source: Survey data, Hoa Binh 2016.

Community meetings are by far the most common source of information on relocation assistance, with 93 per cent of relocated households and 77.6 per cent of targeted households receiving information through this channel. Low-income households were also more likely than the non-poor group to receive information through meetings, while non-poor households were somewhat more likely to receive information from other people. Targeted households are also more likely to access information from other people than were those who have already relocated. This likely reflects the fact that households who have yet to move can now seek information from those who relocated earlier. Other sources of information were much less common, with only a small number of households getting information through posters at public buildings, loudspeakers, or media. Leaflets are reported as a source of information by only a few households, indicating that this has not been widely used as a channel for communication. In addition, the qualitative data suggested that there was confusion among some households regarding what support they were entitled to receive and how it would be distributed.

Widespread announcement of the support policies through additional channels, including via leaflets distributed directly to households, supported by further discussion with households through mass organizations such as the Women’s Union could be effective in increasing understanding of support policies. In-person meetings are undeniably an effective communication means at the community level, particularly for households with lower levels of education. However details of support processes may not be fully understood or recalled easily. Print materials detailing support policies could promote clear and consistent dissemination of information, and provide a point of reference for discussion within the household following the meetings.

5.4.4. Understanding of relocation process

Clear understanding of the relocation process may help households be better prepared and confident about relocation. However, in Hoa Binh, understanding of the formal process is generally limited, even among those who have already relocated. Respondents mentioned steps including “submit a relocation application” (41.4%), followed by “receive housing and land at destination” (27.8%), “receive payments, financial support” (27.1%), and “receive agricultural land” (25.4%). Among targeted households, more than 40 per cent of households said they did not know any of the steps required in the relocation process, and this was more common among undecided households.

Table 17. Knowledge of procedures required for relocation (%)

	Status of relocation				Total
	Have not decided	Decided not to move	Decided to move	Relocated	
Signing the relocation commitment	11.3	26.0	23.3	49.2	30.3
Submit relocation application	31.0	42.0	37.9	49.2	41.4
Receiving house, land at destination	9.9	13.0	13.6	59.8	27.8
Receiving payments, financial support	9.9	15.0	12.6	56.8	27.1
Receiving agriculture land at new place	5.6	13.0	8.7	58.3	25.4
Transport of belongings to destination	4.2	8.0	10.7	48.5	21.2
Building house at new place	1.4	2.0	4.9	41.7	15.5
Registration for land use and access to services at destination	0.0	3.0	1.9	18.9	7.4
Application for financial support	1.4	5.0	3.9	6.8	4.7
Application for housing, land	2.8	5.0	5.8	3.8	4.4
Inventory of assets, crops of household	4.2	2.0	1.9	1.5	2.2
Other procedures	11.3	16.0	21.4	25.0	19.5
Don't know, no answer	60.6	41.0	33.0	3.8	30.3
N	71	100	103	132	406

Source: Survey data, Hoa Binh 2016.

A clear understanding of the processes required to apply for housing, land, and relocation support is highly relevant for households to relocate successfully. Noting that these processes would be necessary for all households in the relocation project, regardless of destination or poverty status, the level of awareness about these processes in all three targeted groups is very limited at less than 10 per cent. The proportion of households who are aware of the procedures to register land use and access infrastructure and services at relocation sites is low, at only 19 per cent in the relocated group and negligible among targeted groups.

The data does not show significant variation in knowledge of these procedures by gender, age, or education. This suggests that the lack of understanding does not stem from comprehension or demographic differences between households. Given the data presented in preceding sections, it can be seen that while many households understand and agree with the reasons for relocation, knowledge of the assistance available for resettling households is much more limited, and relatively few households understand how the relocation process would work. The results suggest that communication about relocation processes may not be sufficiently specific, clear, or consistent for households to fully understand the process before making their decision.

5.5. Participation in relocation planning

Effective participation of people in identifying and implementing relocation objectives and solutions is an important contributing factor to the success of a relocation project (ADB, 1995:98). The level of household attendance at meetings about relocation plans is relatively high (Table 18). However, the proportion of households consulted and contributing comments in meetings is low, suggesting that meetings were more focused on disseminating information than encouraging households to participate in planning of the relocation project. Given the varied levels of knowledge about relocation support policies and processes examined in the preceding sections, it would appear that high attendance at meetings did not translate into widespread or thorough understanding of relocation plans or available assistance.

Table 18. Participation in meetings on relocation planning (%)

	Participation in meetings				Total	N
	Attended, gave comments	Attended, was not consulted	Did not attend	Unknown		
Sex of HH head:						
Male	37.9	41.9	17.4	2.8	100	351
Female	38.2	50.9	7.3	3.6	100	55
Age of HH head:						
Less than 35	40.5	36.2	19.8	3.4	100	116
35–49	30.2	48.8	17.9	3.1	100	162
50+	45.2	42.1	10.3	2.4	100	126
Education of HH head:						
Less than primary	32.0	53.9	12.5	1.6	100	128
Less than low secondary	36.2	42.1	18.4	3.3	100	152
Low secondary ⁺	46.3	32.2	17.4	4.1	100	121
Ethnicity of HH head:						
Kinh, Thai	32.4	52.7	14.9	0.0	100	74
Muong	42.7	38.8	14.7	3.9	100	232
Dao	31.0	46.0	20.0	3.0	100	100

Poverty status:						
Poor/near poor	34.3	46.4	14.5	4.8	100	248
Not poor	43.7	38.0	18.4	0.0	100	158
Relocation status:						
Have not decided	26.8	46.5	23.9	2.8	100	71
Decided not to move	40.0	47.0	13.0	0.0	100	100
Decided to move	38.8	39.8	21.4	0.0	100	103
Relocated	41.7	40.9	9.8	7.6	100	132
Total	37.9	43.1	16.0	3.0	100	406

Source: Survey data, Hoa Binh 2016.

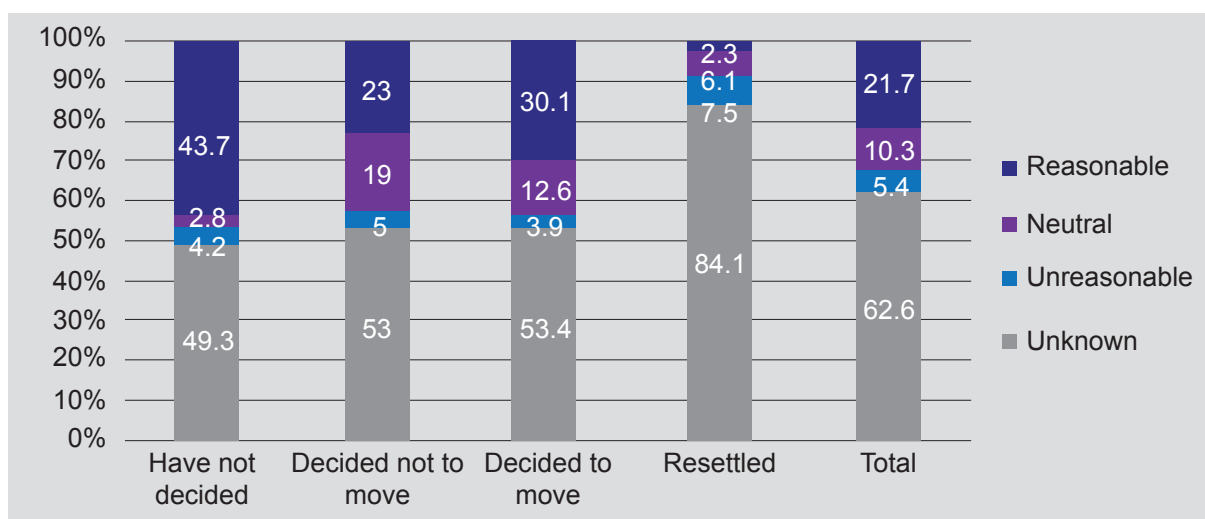
Table 19. Issues raised by households in relocation meetings (%)

	Sex of HH head		Poverty status		Total
	Male	Female	Poor/Near-poor	Not poor	
About place of destination	29.6	28.6	26.5	34.1	29.5
Level of housing and land support	21.8	16.3	18.5	24.8	21.0
Level of transportation support	19.6	14.3	17.0	21.7	18.8
Level of financial support	17.1	12.2	15.5	17.8	16.4
Other issues	13.6	16.3	14.0	14.0	14.0
Attended, but did not have comments	52.5	57.1	57.5	46.5	53.2
N	280	49	200	129	329

Source: Survey data, Hoa Binh 2016.

Four themes were clear in the comments made by households at the meetings, focusing on the location or conditions of the relocation destination (29.5%), housing and land support (21%), transportation support (18.8%) and financial support (16.4%). Nonetheless, more than half of those who attended meetings were not actively involved in discussing any issues. The proportion of household heads who were consulted for comments in relocation meetings is only 37 per cent of all sampled households. In general, male-headed households are slightly more likely to have provided comments on these issues than female-headed households, and poor/near-poor households less likely to have been active in the discussion compared to the non-poor group.

Figure 3. Evaluation of the relocation plan



Source: Survey data, Hoa Binh 2016.

The survey also asked respondents to evaluate the appropriateness of the proposed relocation and assistance policies, although these results must be interpreted in light of the limitations of households' knowledge identified in the preceding sections. Overall, 62.6 per cent of interviewed households evaluated the relocation plan as "reasonable", while 10.3 per cent found it "unreasonable" and 21.7 per cent gave no opinion. Relocated households were much more likely to evaluate the project positively with 84.1 per cent calling it reasonable, while only about half of targeted households thought the same. However, among targeted households, the proportion rating the project 'reasonable' was almost the same among those deciding to move (53.4%) and those choosing not to move (54%). Slightly more of those who decided to remain thought the plan was unreasonable (19%) compared to those choosing to move (12.6%). Meanwhile, nearly one third of those choosing to move could not say whether they thought the project was reasonable or not. Dissatisfaction with the relocation plan may affect some households' decision to remain. Nonetheless, there are a number of households that do not have a clear opinion on the relocation plan, or even found it unreasonable, but have still decided to move.

As with knowledge of relocation procedures, evaluations of the relocation plan varied only slightly by age, gender, education and poverty status. Agreement or disagreement with the relocation plan is therefore not likely to be due to educational level or demographic characteristics. It may instead relate more to the planning and communication of the relocation project, which affects households' perceptions of the trade-offs between disaster risks versus concerns about relocation or available support.

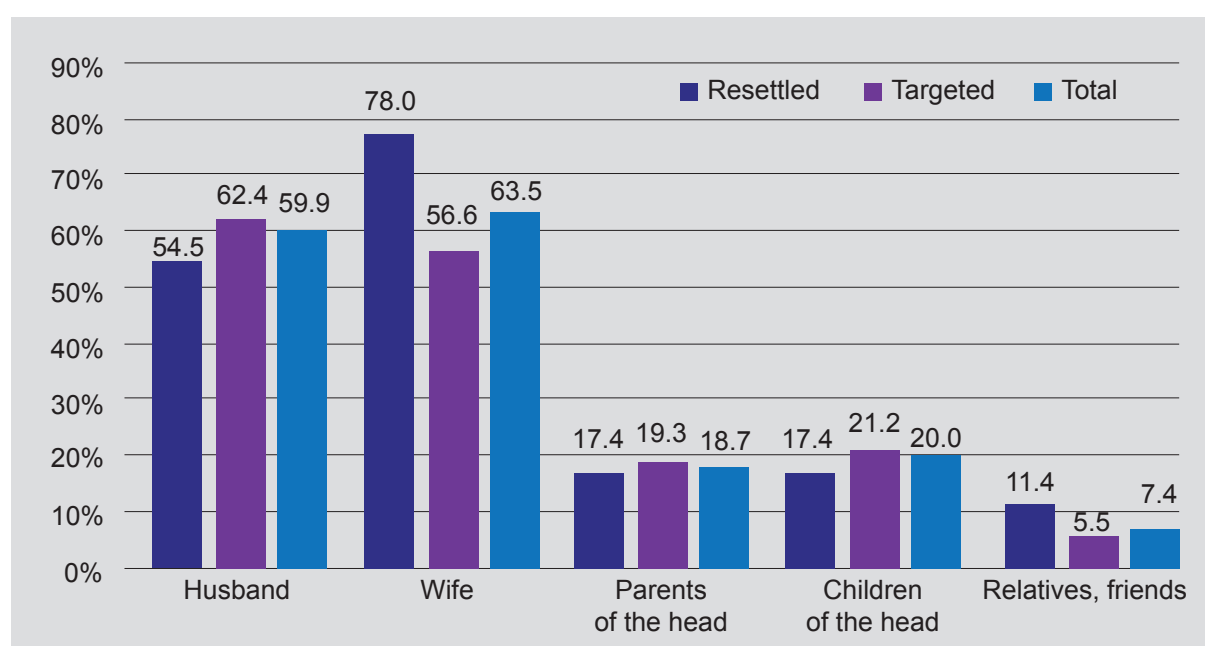
5.6. Household decision-making processes

Among 274 interviewed households remaining in origin areas, 25.9 per cent have yet to make a decision, 37.6 per cent have decided to relocate, and 36.5 per cent have decided not to move under the current conditions.

5.6.1. Participation in decision

The process of making the relocation decision within the household is important for understanding household motivations and the effectiveness of communications about relocation. The following data addresses the questions of who participates in household decision making and their key concerns.

Figure 4. Involvement of household members in relocation decision-making

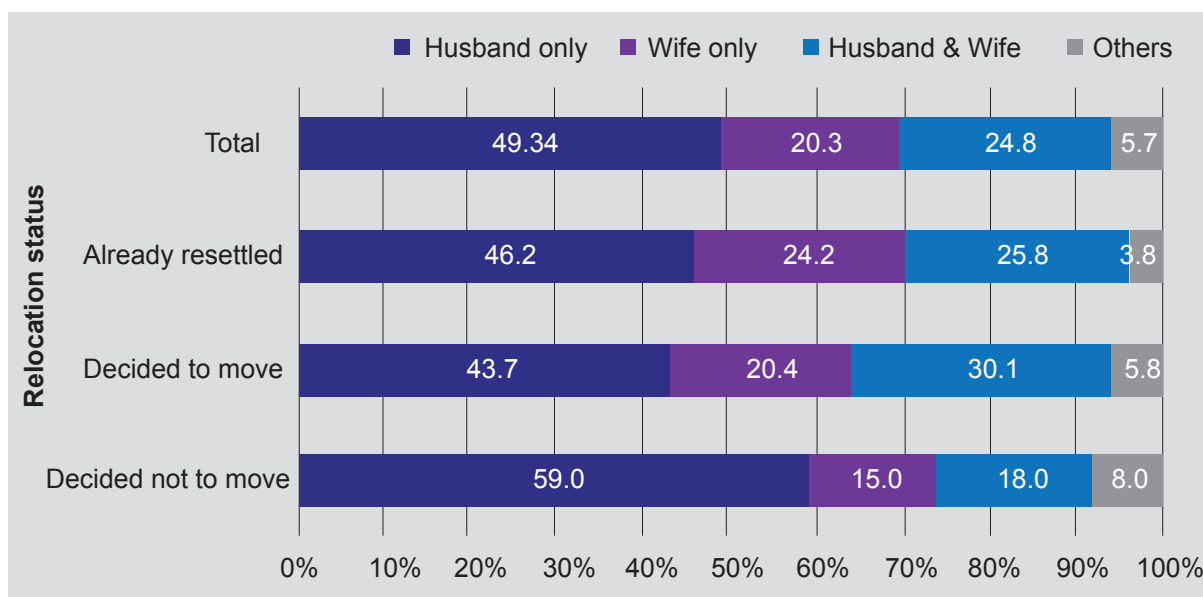


Source: Survey data, Hoa Binh 2016.

In 63.5 per cent of households, women participated in the discussion either as the wife of the household head, or as the head of household (Figure 4). This is slightly higher than the participation of males, at 59.9 per cent. This indicates that the involvement of women in relocation discussions was generally high. It is noteworthy that the proportion of wife’s participation among the relocated group is much higher than in the targeted group (78% versus 54.5%).

Parents of the head were involved in the discussion in 18.7 per cent of households, with similar levels of involvement from children of the head (20%). The participation of other relatives and friends was reported only in 7.4 per cent of households.

Figure 5. Who is the MAIN decision-maker regarding household relocation



Source: Survey data, Hoa Binh 2016.

As presented in Figure 5, men are most likely to be the main decision maker regarding household relocation. Among households that have decided to move and those who have relocated, nearly half reported that the decision was made primarily by the male household head or husband of the female head. This proportion is higher among households deciding not to move (59%), while the proportion of households with women as the main decision maker is higher in the relocated group, and lower among those deciding not to move. Despite high involvement of women in discussions on relocation, only 25 per cent of households said the relocation decision was made by both husband and wife, and this proportion is highest among the group deciding to move (30.1%). Thus, while the main decision-maker regarding relocation is more likely to be male, women were more likely to have been involved in the discussion among households that decided to move.

Table 20. Topic of household discussion before deciding their relocation (%)

	Type of household				Total
	Undecided	Decided not to move	Decided to move	Already relocated	
Reasons for relocation	33.3	44.6	57.7	75.0	56.3
Timing of relocation	7.6	17.4	16.5	32.6	20.7
Relocation procedures	19.7	13.0	19.6	26.5	20.4
Cash support and compensation	10.6	16.3	18.6	33.3	21.7
Housing and land support	24.2	23.9	39.2	43.9	34.6
Loan and livelihood support	18.2	15.2	17.5	37.1	23.8

Guideline for resolving complaints	4.5	0.0	1.0	9.8	4.4
Support with legal procedures	1.5	2.2	0.0	9.1	3.9
Other	16.7	10.8	15.5	11.4	13.1
No discussion, don't remember	42.4	27.2	16.5	11.4	21.7
N	66	92	97	132	387
Living conditions at destination					
Cultivated land	29.6	37.0	40.8	60.6	44.3
Water source for production	11.3	18.0	22.3	34.8	23.4
Possibilities of employment, livelihoods	19.7	25.0	30.1	43.9	31.5
Water source for living, drinking	12.7	14.0	21.4	31.8	21.4
Road, transportation	9.9	12.0	16.5	40.2	21.9
Electricity grid	8.5	6.0	17.5	36.4	19.2
Schools for children	8.5	10.0	18.4	40.9	21.9
Health-care facilities	5.6	5.0	13.6	32.6	16.3
Status of climate, environment, natural disaster	2.8	4.0	5.8	20.5	9.6
Other	7.0	9.0	5.8	5.3	6.7
No discussion or don't remember	52.1	46.0	37.9	23.5	37.7
N	71	100	103	132	406

Source: Survey data, Hoa Binh 2016.

Issues discussed by households across all groups focus on the relocation process and agricultural resources at relocation sites. Although the levels of discussion vary widely across these groups, the relative ranking of key issues is similar. The cited reasons for relocation, i.e. environmental risks, were the most commonly discussed (75% in the relocated group and 46.7% in the targeted group), followed by housing and land support (43.9% and 29.8%) and capital, employment, and livelihood support (37.1% and 16.9%) (Table 20).

In terms of relocation conditions, the most discussed topics were the availability of agricultural land (60.6% in the relocated group and 36.5% in the targeted group) and livelihoods or employment (43.9% and 25.5%). This was followed by water availability for production, then infrastructure such as schools, roads, and domestic water supply.

Notably, the majority of undecided households did not report discussing the conditions at relocation sites, and almost half had not discussed the relocation process itself. Of those choosing to remain, most had discussed the relocation process, but almost half had not discussed living conditions at destinations. Those who had relocated were more likely than other groups to have discussed health care, school facilities, electricity and environmental conditions at relocation sites, with very few households who were undecided or choosing to remain having discussed these issues.

These differences may be attributed to more discussion of destination conditions among relocated households as they approached their decision to relocate, or as they prepared to move. However, the results show that the level of interest in these key issues among other groups is not high. Qualitative data reflects that some households are uncertain about where and when they may move if they were to relocate. The relative lack of discussion of relocation conditions may be in part due to this uncertainty.

5.6.2. Push and pull factors

With the environmental risks in the survey area, moving to a more secure location and reducing risks to health and safety was an important factor for households who decided to move. Overall, 91 per cent of households among those who have already relocated and those who have decided to move cited risks at the place of origin and safety at relocation sites as key reasons to move. In addition, social networks

play a role, such as relatives who have already moved, highlighted by the fact that this is more commonly cited as a motivation among those households now waiting to move, than among the group who relocated earlier.

However, other reasons also play a significant role as push and pull factors. Many households expect that infrastructure, housing, land, or economic conditions will be better at relocation sites than in their place of origin (Table 21). Interviews suggest that households also evaluated tradeoffs between challenges of relocation and expected benefits from greater security and access to services:

“For me, it was clear that I move down here for the future of my children. It was clear to me that here would be better than up there. Up there we already faced landslides. I knew that in comparison to our native place it would be more difficult for the present, but my children will do better. Because my children will be in contact with many things, a more diversified society.” Male, age 47, Dao ethnic group, relocated households.

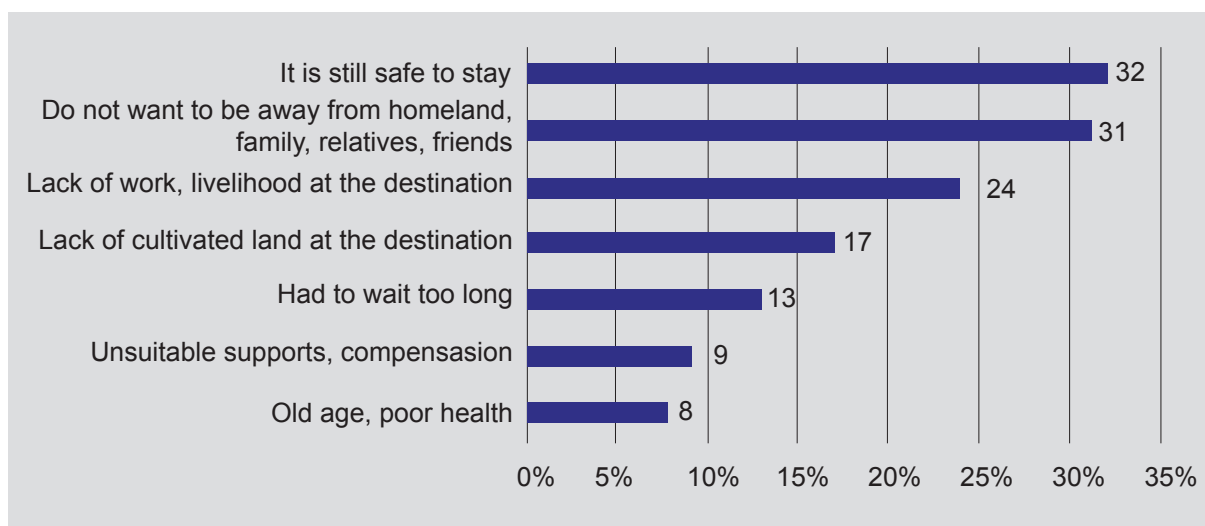
Table 21. Main reasons cited for relocation (%)

	Type of household		Total
	Already relocated	Decided to move	
Place of origin:			
Risks to health, safety	92.4	91.3	91.9
Poor infrastructure	25.0	16.5	21.3
House is damaged or lost	24.2	15.5	20.4
Poor livelihood/production conditions	18.9	20.4	19.6
Cultivated land damaged or lost	25.0	10.7	18.7
Relatives have moved	6.8	12.6	9.4
Receiving support to move	3.8	7.8	5.5
Forced/pressured by authorities	0.8	2.9	1.7
N	132	103	235
Place of destination:			
Health and safety	90.8	89.2	90.1
Better infrastructure	44.3	27.5	36.9
Better livelihood/production conditions	22.9	17.6	20.6
Better housing conditions	19.1	13.7	16.7
Less impact from floods, natural disasters	19.8	10.8	15.9
Better cultivated land	13.0	10.8	12.0
Closer to relatives	3.1	14.7	8.2
No choice	2.3	6.9	4.3
Receiving support for resettling	3.1	4.9	3.9
N	131	102	233

Source: Survey data, Hoa Binh 2016.

While support and compensation for relocated households often play very important roles in many development-induced relocation projects, they do not appear to be the main reason households chose to participate in the relocation project in Hoa Binh. Relocation support was often discussed among households considering relocation, but few cite it as a reason to move. This would suggest that government support provides enabling conditions to move, rather than being a pull factor in itself.

Figure 6. Reasons for deciding not to move



Source: Survey data, Hoa Binh 2016.

Risk perception and social networks are also important in decisions not to relocate. Of the households deciding to remain almost a third said it was “still safe to stay” (32%) (Figure 6). This suggests that communication on disaster risks could be more effective. Further, 31 per cent said they did not wish to move away from family, a factor also reflected in interviews:

“Some people already moved, and I also did register to be resettled. But then my older brother said he won’t move, so I said the same. Since I said I won’t go anywhere, my wife and my children said then the whole family should stay.” Male resident, Dong Tam commune.

Other reasons to remain related to livelihoods, including “no work, income at the destination” (24%) and “lack of productive land” (17%). This highlights that ensuring livelihoods for relocated households is of critical importance. Concerns about land and livelihood issues at destination will be discussed further in the following sections.

Also noteworthy is that among the group deciding to stay, 13 per cent said that their decision had changed because they had waited too long for relocation. This reflects the fact that land or funds have not been available to support the immediate relocation of all households who wanted to move, and that some have subsequently opted to remain. This appears to support the earlier suggestion that certainty around relocation timing is important in decision-making. Uncertainty around relocation timing and location may create difficulties for households in decisions about investing time or resources in livelihoods and homes. A small number of households mentioned “unsuitable support” or “old age, poor health” as reasons to remain.

5.6.3. Concerns about relocation

Relocating to a new home, particularly in mountainous and difficult areas, is a major undertaking, and the prospect of relocation gives rise to a variety of concerns. Survey results show that more than 85 per cent of households have at least one concern about relocation, and that key concerns differ only slightly between relocated and targeted groups.

As in other environmental migration projects in Viet Nam and elsewhere (e.g. Bangalore et al., 2016; Chun, 2014; Danh and Mushtaq, 2011; Dun, 2009), the most common concerns of the households in Hoa Binh relate to employment, income and livelihood (53.9%). As discussed in the literature, unless households can secure sufficient livelihoods, relocation will not be sustainable. Chun (2014) highlights that if livelihoods cannot be secured, relocation may provide reduced environmental risk at the cost of socioeconomic vulnerability. In such cases, the result of relocation may simply be an exchange of environmental risks for economic ones, rather than a true increase in resilience.

In Hoa Binh, 63 per cent of relocated households had concerns about livelihoods at their destination before they moved, while 49.3 per cent of remaining households also cite this concern (Table 22). The difference between these groups may be due to the higher proportion of poor and near-poor households in the relocated group (see Section 1.7). However, it is worth noting that despite similar numbers of poor/near-poor households among undecided households (16.1%) and households deciding to move (16.9%), concern about livelihoods is more common among undecided households, at 59 per cent.

Table 22. Worries and concerns about relocation (%)

	Type of household		Total
	Relocated	Targeted	
Worry about work, income, livelihood	63.6	49.3	53.9
Lack of agricultural land	31.8	40.5	37.7
Poor housing conditions	15.2	20.1	18.5
Social integration	22.7	8.0	12.8
Health problems	6.8	4.4	5.2
Poor roads or transportation	2.3	6.6	5.2
Poor schools or health care	4.5	5.8	5.4
No worries	15.9	14.2	14.8
N	132	274	406

Source: Survey data, Hoa Binh 2016.

The next main concern is “lack of agricultural land” (31.8% in the relocated group and 40.5% in the targeted group). This is clearly an important determinant of rural incomes, and reflects concerns about establishing viable livelihoods in a new place. Once again, this concern is more common among households who are undecided compared to other targeted groups, and may be related to the experiences of households in some relocation areas. The data on relocation outcomes (discussed in Section 6) suggests that a number of relocated households lacked access to water for irrigation or received agricultural land that was too poor to cultivate. Interviews suggest that some targeted households have heard about this experience through their social networks, and are concerned about their livelihood options.

A lesser, but significant concern is housing, though this was less common among the relocated group (15.2%) than the targeted groups (20.1%). Concerns about social integration were nearly three times higher in the relocated group (22.7%) than that of the targeted group (8%). This suggests that households who relocated earlier were more worried about a lack of social networks compared to those remaining, who now have social connections among those who have already relocated. The proportion of households with concerns about health and infrastructure is relatively low in both targeted and relocated groups (~5%), which supports the suggestion that households generally expect improved infrastructure at relocation sites. Better transportation was clearly one of the highlights of relocation sites:

“I returned to our home place but I wanted to come back [to the relocation site] as up there [in the commune of origin], we had to climb up and down. People called me to ask for advice and I told them that down here transportation is easy.” Female, aged 56, relocation commune.

5.6.4. Social networks

The social networks of targeted households play a role as a pull factor to move or remain, as well as in sharing information and experiences about relocation. The survey data shows that 83.3 per cent of respondents knew some households that had already relocated. Among the relocated group, households they knew that had relocated before them were often neighbours, relatives, or friends.

Table 23. Knowledge on previous relocated households (%)

	Relocation status		Total
	Relocated	Targeted	
Knew some already-relocated households:			
Yes	81.1	84.3	83.3
No	18.9	15.7	16.7
N	132	274	406
No. of already-relocated households known:			
Less than 30 households	18.7	39.8	33.1
30 households or more	43.9	17.3	25.7
Don't know how many	37.4	42.9	41.1
Relationship:			
Former neighbours	90.7	68.4	75.4
Relatives	86.9	64.1	71.3
Friends	76.6	32.5	46.4
Others	0.0	1.7	1.2
N	107	231	338

Source: Survey data, Hoa Binh 2016.

Nearly half of households (48%) have consulted with other households when discussing relocation (Table 23). For households yet to relocate, more than half (55%) have consulted previously relocated households. Issues discussed among social networks focused on agricultural land (68.2%), living conditions (62.6%), and residential land and housing (59%) (Table 24). Other aspects were less discussed, such as “access to employment” (23.1%), “infrastructure” (20%), “climate and environment conditions” (12.3%). This echoes the key issues of concern for households in their relocation decision, which centred around land, living conditions, and livelihoods.

These results confirm that social networks play an important role for households in sourcing information about relocation, and that households are interested in understanding more about their prospective living conditions and livelihood resources. Notably, environmental risks at the destination are less discussed with already-relocated households. As noted in section 4, this was also less commonly discussed within households when making their relocation decision. Given the broad agreement with the rationale of the project to reduce disaster risk, this may indicate that a large proportion of households already have confidence that the relocation location chosen by the project will be safer than their current commune, and are more focused on potential changes to livelihoods and living conditions.

Table 24. Reference to relocation experience from social networks (%)

	Relocation status		Total
	Relocated	Have not relocated	
Reference to experience from other people:			
Yes	44.7	49.6	48.0
No	53.0	47.4	49.3
Unknown, do not remember	2.3	2.9	2.7
N	132	274	406
Sources of reference:			
Previously relocated households	5.1	55.9	40.5
Previously relocated relatives	16.9	44.9	36.4
Other friends, acquaintances	25.4	28.7	27.7
Non-relocated relatives	15.3	10.3	11.8
Local authorities	8.5	13.2	11.8
Others	50.8	7.4	20.5
Topics discussed:			
Farmland	61.0	71.3	68.2
Living conditions	67.8	60.3	62.6
Residential land and housing	47.5	64.0	59.0
Access to employment	18.6	25.0	23.1
Infrastructure	23.7	18.4	20.0
Climate and environment conditions	13.6	11.8	12.3
Relationship with local people	1.7	4.4	3.6
Other experiences	28.8	7.4	13.8
N	59	136	195

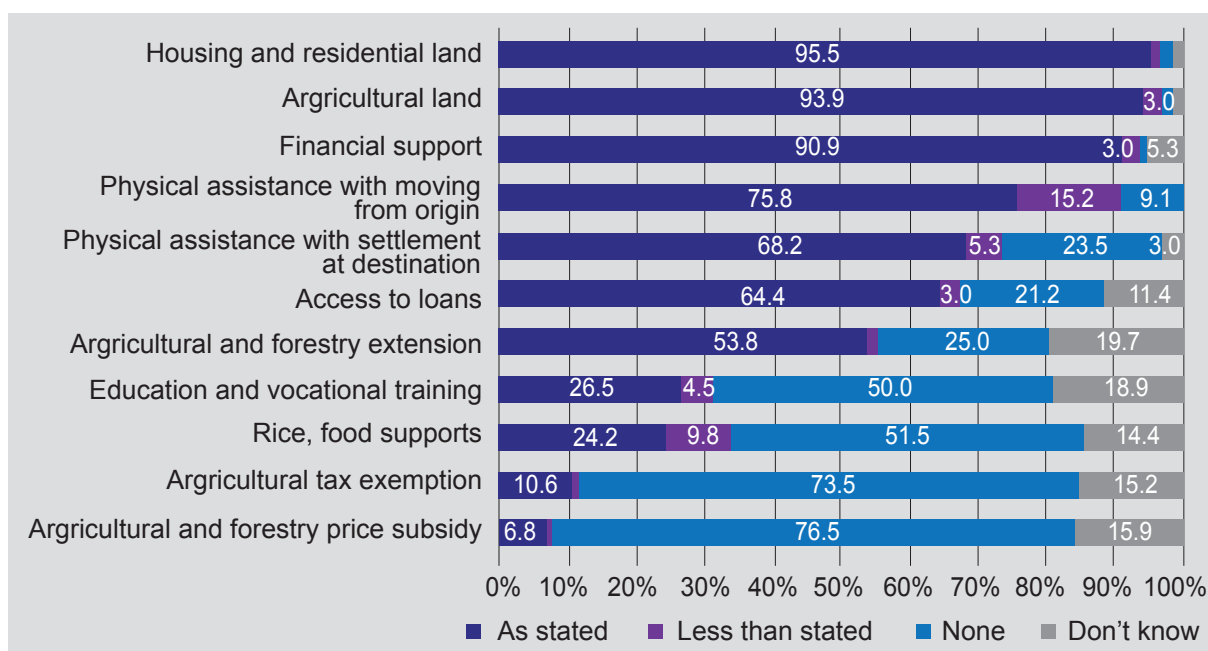
Source: Survey data, Hoa Binh 2016.

5.7. Relocation outcomes

5.7.1. Evaluation of support received

According to relocation policy, relocated households are supported by the government with relocation costs, housing, food, investments for essential infrastructure, and services to support business and production (Government of Viet Nam, 2012a). This section examines the implementation and outcomes of these policies in the relocation project in Hoa Binh.

Survey data from 132 relocated households in the sample show that the three major elements of relocation support – housing and residential land, agricultural land, and relocation assistance – have been provided in accordance with relocation plans to more than 90 per cent of households. In terms of information about this assistance, 75.8 per cent felt they had enough information about the process of relocating their family and assets from their commune of origin, and 68.2 per cent felt sufficiently informed about accessing land, housing and services at relocation sites. However, almost one-quarter (23.5%) of households said that they did not receive information about the process of receiving their house and land at relocation sites.

Figure 7. Actual assistance received compared to assistance stated in relocation plans

Source: Survey data, Hoa Binh 2016.

More than half of households received loans (67%) and agricultural or forestry training (55%), in accordance with the relocation plan, while almost a third (31%) have received vocational training. Rice or food support was accessed by 34 per cent of households, while few received agricultural tax exemption (10.6%) or agricultural and forestry subsidies (6.8%).

Households relocated in 2010 were more likely to have received the support they expected from the project, compared to those relocated in 2014. In particular, more of the households relocated in 2014 reported shortfalls in the provision of land, financial assistance, and information about accessing support. However, they were more likely than the earlier group to have received vocational training and rice/food support (Table 25). This may relate to the resources available for relocation in 2014, indicating that funding or land availability was more limited than in 2010.

Table 25. Proportions of households receiving sufficient support as stated in relocation plans (%)

	Year of relocation		Total
	2010	2014	
Housing and residential land	96.9	91.2	95.5
Agricultural land	96.9	85.3	93.9
Financial support	93.9	82.4	90.9
Information on relocating from origin	83.7	52.9	75.8
Information on accessing support at destination	70.4	61.8	68.2
Access to loans	67.3	55.9	64.4
Agriculture and forestry extension	54.1	52.9	53.8
Education and vocational training	19.4	47.1	26.5
Rice, food support	22.4	29.4	24.2
Agricultural tax exemption	13.3	2.9	10.6
Agricultural and forestry price subsidy	8.2	2.9	6.8
N	98	34	132

Source: Survey data, Hoa Binh 2016.

Table 26. Satisfaction and difficulties regarding relocation support (%)

	Education of HH head			Total
	Less than primary	Less than low secondary	Low secondary+	
Satisfaction with support:				
Not satisfied	16.7	27.1	22.5	22.3
Partly satisfied	35.7	47.9	45.0	43.1
Satisfied	47.6	25.0	32.5	34.6
Difficulties receiving support:				
No difficulties	50.0	60.4	57.5	56.2
Support divided into installments	26.2	10.4	20.0	18.5
Insufficient or unsuitable support	19.0	22.9	10.0	17.7
Delays receiving support	14.3	10.4	15.0	13.1
Complex procedures	2.4	2.1	5.0	3.1
N	42	48	40	130

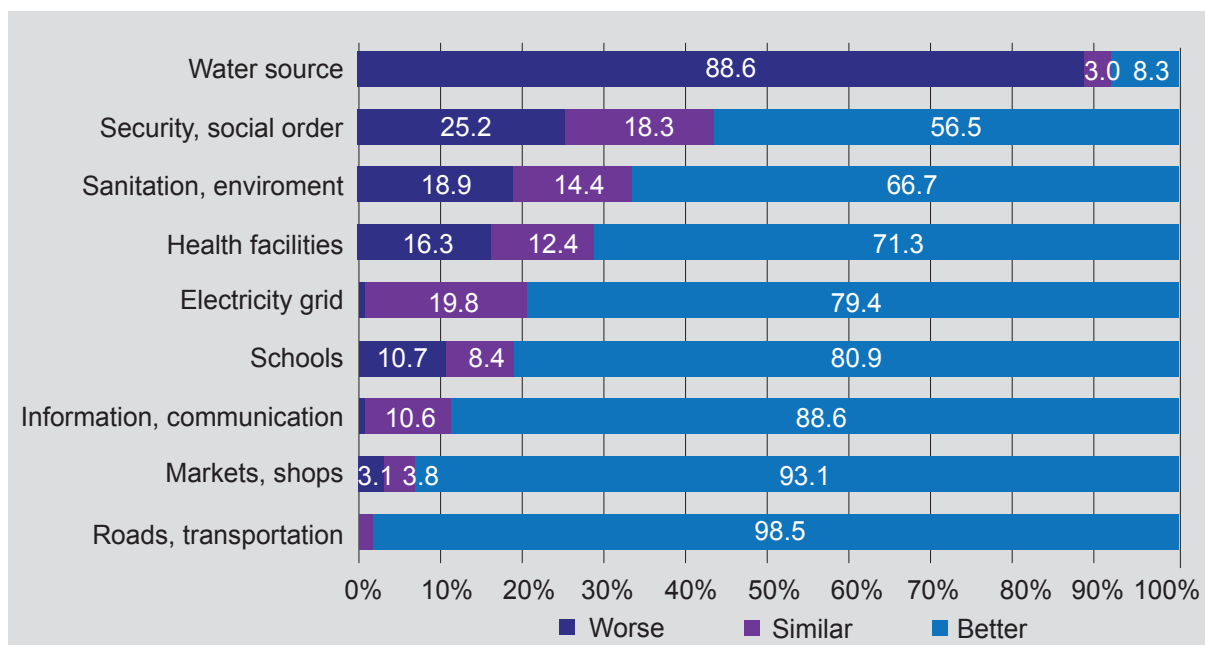
Source: Survey data, Hoa Binh 2016.

About three quarters of the relocated households were satisfied (34.6%) or partially satisfied (43.1%) with the support they received, while 22.3 per cent were dissatisfied. The highest level of satisfaction was found among household heads with less than primary school education (47.6%), although the least satisfaction was found among households who completed primary but not junior secondary education (25%), rather than among those with higher levels of education. It is possible that the group with higher education levels had greater understanding of relocation policy and was better able to access assistance, while households with the least education may have been less informed about their entitlements and more likely to be satisfied with what they received. In addition, poor/near poor households qualify for support such as poverty-reduction loans, and may have been more likely to move earlier, so may have received higher levels of support than non-poor households.

Among relocated households, about half (56.2%) said they had no difficulty in accessing support from the project. The difficulties reported by other households show three main issues: that support was delivered in several installments rather than all at once (18.5%), support was insufficient or unsuitable (17.7%), or that there were delays in receiving support (13.1%). Channels for resolving complaints is not clear to all households. Issues can be raised with the village head, who will in turn report to the commune government, however, the commune-level authorities have little active role in relocation planning or implementation, so it is not clear how responsive this channel may be. Households can also report to a meeting with provincial-level representatives, however this meeting occurs only twice a year.

5.7.2. Infrastructure and services

The majority of households saw improvement in infrastructure and services in relocations sites compared to their communes of origin (Figure 8). In particular, almost all households agreed that roads and transport (98.5%) and access to markets (92.4%) were better than their place of origin. Most thought that information and communication (88.6%), schools (80.3%), and electricity access (78.8%) was better. Between 10 to 20 per cent of households felt that health facilities, schools, and sanitation were worse in their relocation site than their place of origin, while the majority thought these services were better at relocation sites. A more significant issue may be relocated households' sense of safety, with 25 per cent of households reporting that "security and social order" at the relocation site is worse than their previous location.

Figure 8. Infrastructure in comparison to previous place

Source: Survey data, Hoa Binh 2016.

However, the condition of water source at relocation sites appears to be a critical problem, with 90 per cent of the households rating it as worse than their previous home. Field surveys and qualitative interviews show that many relocated households lack water, particularly for agricultural production. This dissatisfaction is exacerbated by the fact that many relocated households previously lived near the Da river reservoir, and never experienced problems with water access, whereas relocation sites do not have large natural water sources.

Qualitative data highlight that the water shortage, for both living and farming, is a significant problem for many relocated households:

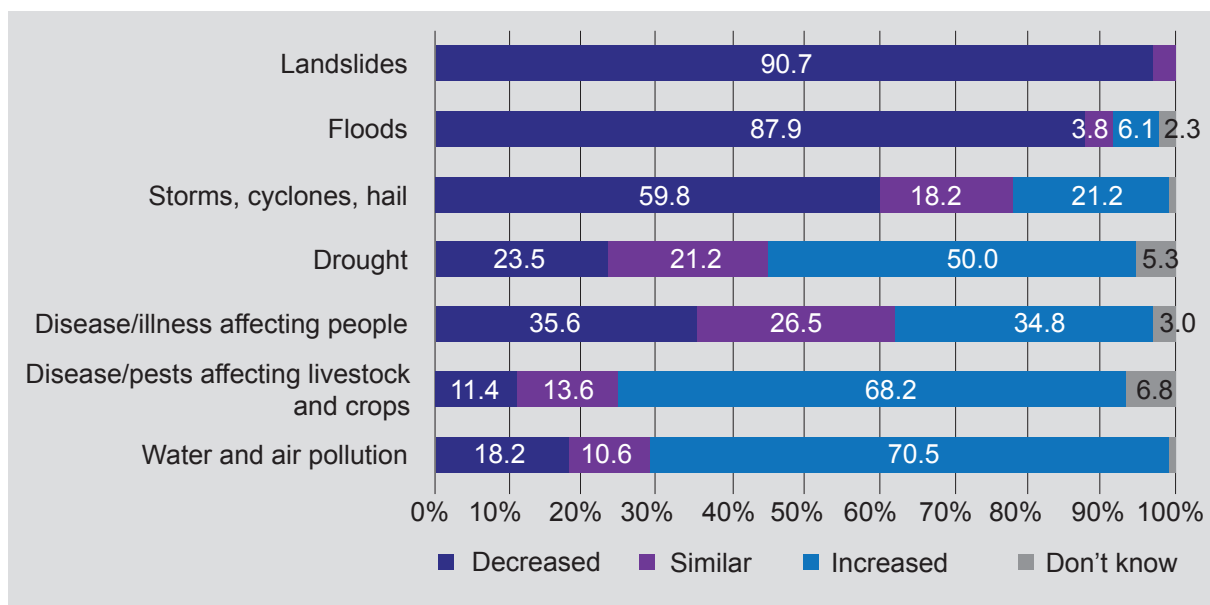
“Before, we had an irrigation system but here it is not available. Our water for drinking and living is so crazy. For the whole village, getting water for domestic use is very difficult. For drinking water, they designed the water tank so small that only 10 cubic meters of water has to serve 200 households.” Male, aged 47, Dao ethnicity, relocation commune.

It appears that the relocation project did not plan sufficiently for water access for all relocated households, or alternatively, that Project Management Committee could not identify any potential relocation areas with better water supply.

5.7.3. Environmental conditions

The central goal of the project to reduce household exposure to environmental risks has been to some extent achieved, as most households report less impacts from landslide and flooding since relocation (Figure 9). All but four respondents said their exposure to landslides has decreased, while the other four said they did not know if had changed. Most households (88%) also reported less flooding, although some reported being more affected by floods (6%) or storms (21.2%). Meanwhile, highlighting the problem of water shortage, about half of the relocated households reported that drought has increased and only 23.5 per cent said drought has declined. The reported increase in drought may be a perception partly related to the lack of sufficient water source, rather than more frequent periods of low rainfall, however water access is clearly a difficult issue for many households.

Figure 9. Environmental conditions at relocation compared to place of origin



Source: Survey data, Hoa Binh 2016.

In terms of health and disease, relocated households had varied experiences with pests and disease affecting livestock and crops, with similar numbers of households reporting an increase, a decrease, and no change compared with their place of origin. However, 68.2 per cent reported more illness among people in their household after relocation, and 70.5 per cent thought there was more air and water pollution at relocation sites than at their previous homes.

Table 27. Households reporting a decline in natural disasters or environmental problems (%)

	Relocation commune			Total
	Yen Nghiep	Dong Tam	Bao Hieu	
Landslides	95.3	95.7	100.0	97.0
Floods	90.7	85.1	88.1	87.9
Storms, cyclones, hail	62.8	46.8	71.4	59.8
Drought	11.6	44.7	11.9	23.5
Insects, diseases for livestock and crops	0.0	25.5	7.1	11.4
Diseases for human	20.9	48.9	35.7	35.6
Water and air pollution	14.0	25.5	14.3	18.2
N	43	47	42	132

Source: Survey data, Hoa Binh 2016.

Table 27 shows that the degree of perceived improvement in environmental conditions by location. Landslide risk has decreased for almost all households in all three sites. The majority of households also report a reduction in flood or storm exposure, and this decrease is more pronounced in Yen Nghiep and Bao Hieu. In Dong Tam, households are more likely than in other communes to report a decrease in drought, pests, illness, or water pollution, although at least half of households still report that some of these problems have not improved with relocation. Perceptions of reductions in environmental risks are similar between Bao Hieu and Yen Nghiep communes, although notably all households in Bao Hieu report reduction of landslides and are more likely to report a reduction in storm exposure.

It can be seen that while relocation has to a large extent achieved a reduction in the risks of landslides and other sudden onset events, relocated households also face an increase in other environmental problems which can increase their vulnerability, particularly with regard to disease, pests, and water supply. Pest or health problems may indicate more exposure to hazards, or may result from unfamiliarity with locally specific risks at relocation sites. Reports of increases in these different types of risk reflects one way in which relocation can create new vulnerabilities, as households face new hazards for which they have not developed mitigation strategies.

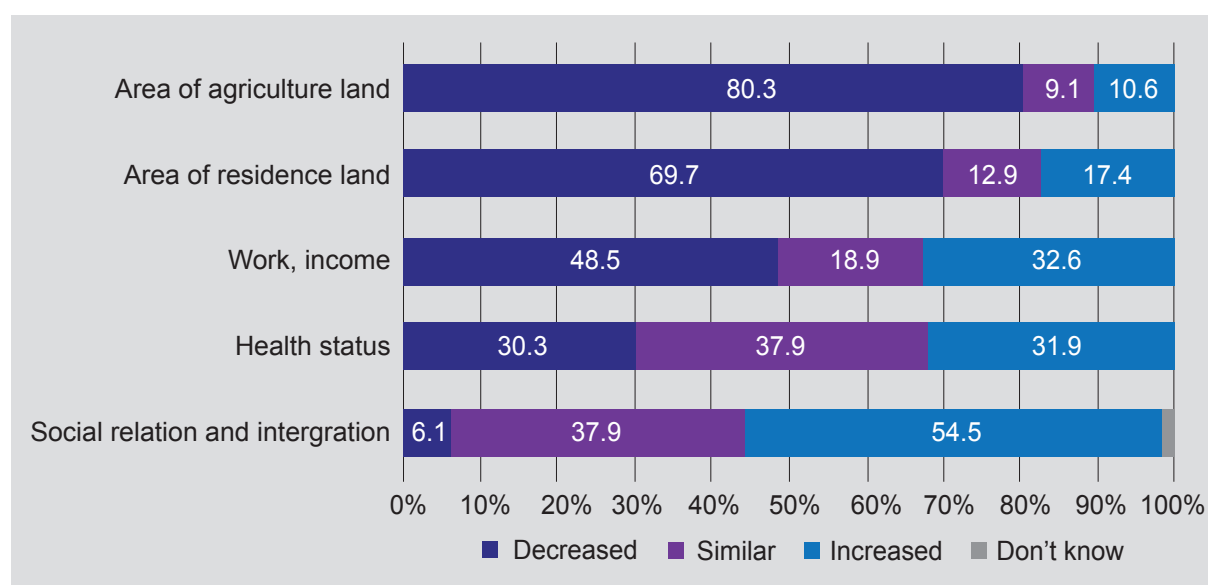
5.7.4. Livelihoods and well-being

5.7.4.1. Land access

Access to land is crucial in relocation of rural communities to ensure sustainable livelihoods, particularly as relocated communities are often dependent to some extent on agriculture. However, the land resources available at relocation sites are not sufficient to provide all relocated households with the same area of agricultural and residential land as they had previously. The majority of relocated households (80%) have a reduced area of agricultural land compared to their previous location, and nearly 70 per cent have a smaller area of residential land (Figure 10).

Reduction in land resources appears to be most pronounced in Yen Nghiep and Bao Hieu, where 90 per cent of households have seen their agricultural land area reduced after relocation, and a high proportion of households (72%) report a reduction in income. (Table 28).

Figure 10. Status of livelihood and well-being indicators after relocation



Source: Survey data, Hoa Binh 2016.

In Dong Tam, which has a larger land area, almost 40 per cent of households received the same or more agricultural land than they had previously, and almost half have residential land as large as or larger than in their commune of origin.

Table 28. Households reporting decrease in indicators of livelihood and well-being (%)

	Commune			Ethnic group		Total
	Yen Nghiep	Dong Tam	Bao Hieu	Muong	Other	
Area of agriculture land	90.7	61.7	90.5	77.1	85.7	80.3
Area of residence land	79.1	53.2	78.6	65.1	77.6	69.7
Work, income	72.1	38.3	35.7	45.8	53.1	48.5
Health status	37.2	27.7	26.2	30.1	30.6	30.3
Social relation and integration	4.7	4.3	9.5	3.6	10.2	6.1
N	43	47	42	83	49	132

Source: Survey data, Hoa Binh 2016.

However, the major problem for agriculture is related more to the quality, rather than the quantity, of land allocated. Many households found that the land they were allocated at their relocation site was extremely poor quality and difficult to cultivate. This issue was raised by households in all three relocation communes, but the problem appears to be most common in Dong Tam, despite the larger agricultural plots allocated to households there:

“The people who came here before us took all good land. The remaining land is full of gravel and rock, people cannot use it. When we arrived here people said that we are working on gravel. We are suffering with this problem. Here, we only know about this land, because they did not show us any cultivable land. We only got to know this rocky piece of land after it was allocated to us. There is another household who received rugged, rocky land and they cannot plant anything. The other four to five households are tired of trying to use the land with no results, and have already left. If this situation remains, honestly speaking, no one can remain.” Female head of household, relocated to Dong Tam in 2014.

Some households reported that they were taken on a tour to the commune before relocating and had seen good quality agricultural land. However, they had never seen the land they were allocated (by random draw) until they relocated to the new village, and found the land to be poor:

“After signing the documents and beginning to work the land, we soon realized that it is entirely full of rocks. My household and some others cannot cultivate. Some households received land... which doesn't allow them to plant anything because all the soil is washed away by water flows in the rainy season. So far it has not been resolved, even though we have petitioned the commune leaders to do something.” Male, 47-year-old man, Dao ethnicity, relocation commune.

It's important to note that while the local commune-level authorities, especially those at destination, are directly responsible for the well-being of households in their commune and are the official first line of contact for community members, they seem to have a limited role in the relocation planning and implementation:

“(The commune) is only in contact (with relocated households) and do the best we can to support, (we) are not asked to make proposal, not asked to provide input, not involved in the planning. [...] If the commune were involved at the early stage, there will be some benefits. For example (in defining) priorities for lands, irrigation systems, other infrastructure components, environmental sanitation, kindergarten, domestic wastewater treatment. But the commune was not involved, if we were involved, we would make suggestions that are really helpful for the community. At the moment, we are also very interested in those issues, and we are continuing to submit our recommendations to the Management Committee for their consideration.” Commune-level representative at relocation site.

Another issue raised in interviews is that a number of households have not been issued a land-use certificate, despite having been settled in their relocation site for some years. Land-use certificates are often required as collateral for bank loans, so households without a certificate struggle to access loans for developing livelihoods:

“I think the government moved us here six years ago but they have not provided a red book [land use registration]. That is very difficult for us. If we want to develop business without a red book, we cannot borrow money. Whether you need to borrow or not, everyone wants to have a red book.” Female respondent, aged 30, relocation commune.

While poor/near-poor households are eligible for no-collateral loans from a poverty-reduction loan scheme, these may often be limited to about VND 5 million (USD 220), which households report as insufficient for livelihood investments. Further, inexperience with new activities means that some ventures fail, leaving households with debt and limited income. For example, one household borrowed VND 20 million (USD 880) from a bank to invest in goats, but all the livestock died within a month because the household lacked experience in caring for them. They are now reluctant to make further investments.

5.7.5. *Employment, production and income*

Given the problems encountered with land and water resources for agriculture, the income from agricultural production for many relocated households is lower than before relocation. Overall, almost half (48.5%) of households rate their employment and incomes as worse at the relocation sites. Nonetheless, one third (32.6%) say their work and income has improved, indicating that a significant number of households have been able to adapt positively. (Figure 10). Again, this varies with location. Although problems with the quality of agricultural land were most common in Dong Tam, households relocated to Yen Nghiep are much more likely (72%) to report a decline in their income or work than households in the other two communes (Table 28). Employment and income difficulties are also reflected in qualitative interviews:

“It has been persistently difficult for two years since we arrived here. We can’t sell purple sugarcane here... not enough to cover the initial investment. We can only sell them for 500 VND (USD 0.02) each. In this village, women and youth leave to work elsewhere because we had two years of poor crops. Not just us, but also the local people planted purple sugarcane, but they cannot find a market.” Female respondent, relocation commune.

In addition, differences in conditions, cultivation practices, and natural resources present problems or additional costs for relocated households:

“Here the cultivation method is very different from what we did back in our native place. There the soil is still fertile so we only need to clear the trees and we can cultivate, no need to add fertilizer. Here, we need to add a bunch of NPK [fertilizer] otherwise no plant can grow. Here we have to plow the earth, back there, we only need to clear the land. People here who have financial means to afford fertilizer have a good income. People who are poor and can’t afford buying fertilizer have poor income, or even no income at all.” Male, aged 50, Muong, relocation commune.

“Breeding livestock here is more difficult than where we came from. It’s difficult because people here often spray pesticide on their crops but we did not. Goats and cows went into the garden and ate grass with chemical fertilizer and pesticides on it, and they got sick and died.” Male household head, Dong Tam commune.

The Da River was an important source of water in communes of origin, but also provided additional livelihood activities, whereas these livelihood strategies are not possible in destination sites:

“Back home, if we had no work, we went to the river and we could catch shrimp or fish. Here, if we don’t get hired for work today, then we have nothing to eat. So here it’s more difficult than in our homeland.” Female respondent, relocation commune.

Some respondents feel they have not received appropriate support for livelihoods in the new site:

“I want the government to support and educate people on how to do the appropriate thing. For example, what should be planted [here]? Like last year, everyone planted sugarcane, and everybody suffered. The government gives chickens for people who don't have chicken feed, and they have no money to buy any. So the chickens do not have food, they die one by one, or people just eat all the chickens gradually. So I want the government to guide us about what we should plant, what livestock we should breed. If the state just provides support all at once [without planning], then it will not work.” Female household head, relocation commune.

Some households reported that their total annual income from agriculture is just enough for household consumption for about five months. A mitigating factor at relocation sites is that they are closer to other residential areas and better connected with road infrastructure, which makes it easier to find paid labouring work than in the communes of origin.

For a number of households, due to the challenges involved in establishing reliable livelihoods in their new location, income from farmland in their old commune accounts for a high proportion of their income. According to households and local authorities, several households still spend six to nine months working on their land in their commune of origin:

“Every year we go back to our home place because we still have land where we plant bamboo there. Some families here even leave kids with grand-parents while the parents go back to work for a few months. If we didn't have our land back in our home place, most of the households here wouldn't have been able to survive in this new place.” Male respondent, age 39, resettlement commune.

While this mobility seems to be an effective adaptation strategy for households, there seems to be a mixed sentiment about this practice among the local authorities:

“At present here there are 8 households who do that (returning to commune of origin) ... I think [this] is not correct. In this case, it makes it more difficult for management of household registration. However ... it's their right to do so. We can only raise their awareness so as to get them to understand. This said, we still want 100 per cent presence here.” Local authority, resettlement commune.

5.7.6. Health status

In general, the survey data did not show a clear relationship between relocation and health status. The proportion of households reporting that their health status has decreased after relocation (30%) is almost the same as the proportion of households with increased health status (32%). Households were more likely to report a decline in health status in Yen Nghiep commune than in Dong Tam and Bao Hieu communes.

5.7.7. Social network and community participation

Survey data indicates a high degree of social integration of relocated households with existing residents. More than half of relocated households say social connections and community participation is better after relocation than in their commune of origin, and more than a third (38%) say it has not changed (Table 29). Only six per cent of the respondents felt that social integration was worse after relocation than in their former commune. Almost all (95%) households said that they regularly participate in community meetings. Negative evaluations of social integration were very low in Yen Nghiep and Dong Tam communes (<5%), and in the Muong ethnic group (3.6%), but slightly higher in Bao Hieu commune (9.5%) and among other ethnic groups (10.2%).

Table 29. Attendance at community meetings and intention to move (%)

	Commune			Ethnicity		Total
	Yen Nghiep	Dong Tam	Bao Hieu	Muong	Other	
Attended communal meetings:						
Sometimes	7.1	4.3	4.8	3.7	8.2	5.3
Many times, frequently	92.9	95.7	95.2	96.3	91.8	94.7
Intention to move:						
No intention to move	97.7	93.6	95.2	98.8	89.8	95.5
Return to previous place	2.3	2.1	4.8	0.0	8.2	3.0
Move to another place	0.0	4.3	0.0	1.2	2.0	1.5
N	43	47	42	83	49	132

Source: Survey data, Hoa Binh 2016.

Some people were strongly positive about the response of local people in relocation areas:

“Local people appreciate us very much. They often give us a lift to work. In the evening, they often come to visit us and ask if we need anything, or they let us know about jobs for us to work.” Male, relocation commune.

However, there was some indication of conflict over land, with one household reporting that local people disputed their rights to allocated land plots, arguing that the transfer and compensation for the land had not been completed.

When asked to consider overall conditions, the great majority of relocated households (95.5%) want to stay and continue to establish their lives at their new location. Despite the larger proportion of households in Yen Nghiep reporting difficulties, this commune has the highest rate of households intending to stay, at 97.7 per cent, while in Dong Tam this drops to 93.6 per cent. Intention to stay at relocation sites is highest among the Muong (98.8%) compared to other ethnic groups (89.8%). Overall, 3 per cent of households want to return to their old home, and 1.5 per cent intend to move to another place. These figures indicate that the programme has achieved important successes from the perspective of relocated households. However, it is also clear that stabilizing and improving livelihoods remains a challenge, which may affect the long-term sustainability of the relocation project.

06

CONCLUSIONS AND POLICY IMPLICATIONS



A relocation site in Hoa Binh Province
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6.1. Conclusions

The relocation project in Hoa Binh has, for most respondents, reduced disaster risks for relocated households, and improved their access to infrastructure and services. Nonetheless, some critical challenges remain for establishing livelihoods and improving access to resources and training. In communes of origin, remaining households vary widely in the knowledge of the project and attitude to relocation, with economic factors, uncertainty about the relocation process, and social networks playing a role in the decision to remain. Key conclusions around these issues are explored in the following section.

6.1.1. Decision-making process of households regarding relocation

The relocation decision is complex and often discussed in relation to a range of social, economic, and environmental issues, both within households and among social networks. Income status and ethnicity have been identified as playing a role in these decisions however, these factors may influence households in a range of ways. As ethnicity may relate to a range of economic and social variables, it is not clear how this affects relocation decisions, but should receive attention in project planning and implementation to understand how different social and cultural groups engage with and respond to relocation options. Income status can influence migration decisions in various ways – poor households may be more exposed or less able to cope with impacts of disaster, increasing their motivation to move. However, results indicate that low-income households likely had greater concerns about the livelihood challenges of relocation and that for some households this was a barrier to relocation. Other demographic factors such as age and education do not appear to play a distinctive role. In terms of gender, in general women participate in discussions on the household decision, and many households make decisions after discussion between husbands, wives, and other family members. Though males are most often the key decision maker, households who relocated were more likely to have had the participation of women in their discussion.

Awareness and experiences of local disasters was widespread in communes of origin, and the majority of households agreed that the risk of disasters was a valid reason for the relocation project. Households who relocated often discussed the environmental risks they faced in communes of origin in their relocation decision-making, and reducing risks of damage or injury was a key reason that relocated households had decided to move.

Nonetheless, experiences of disaster and risk perceptions did not show a strong relationship with the decision to relocate. Only one-third of those choosing not to move said it was still safe to stay. This underscores that there are multiple drivers and barriers beyond disaster risk that affect household decisions, and demonstrates that households are evaluating complex trade-offs between economic, environmental and social factors. While many households agree that they are at risk, they may also evaluate the social and economic costs of relocation as more significant than the risk of future disaster impacts. Livelihoods, land, and employment at destination were the issues of most concern to both targeted and relocated groups in their relocation decision, and this concern is higher among those yet to relocate. Social networks play an important role here, as concerns may be strengthened or alleviated by the experiences of people who have already relocated, while separation from family or cultural groups may also discourage people from relocating. Economic barriers can also be seen in the response of remaining poor/near-poor households in the commune, who are less likely to want to relocate than non-poor families. This suggests that for those remaining, immediate economic concerns about relocation may be more pressing than future disaster risk. This highlights that the economic and social challenges of relocation can present a real barrier to households, even when they recognize that relocation can offer benefits in terms of improved infrastructure and reduced risks.

Overall, the results suggest that most households are aware of their risks and understand the reasons to move. Relocating from dangerous areas was the key reason to move for households who have chosen to relocate. Expectations of better infrastructure, housing, and land in relocation sites also acted as pull factors. Government assistance did not form an incentive, but rather provided the enabling conditions for households to move. Some households have opted to remain despite an initial interest in relocation, because of the uncertainties around when and where they would move. Particularly for agricultural

households in remote areas, who must make decisions about investing in crops, livestock, or other assets, long periods of uncertainty may make it difficult to make important livelihood decisions, or evaluate livelihood options at destination. It is understandable, therefore, that some households withdrew their application to relocate following delays in the project and uncertainty about the quality or availability of land and water at their destination. As households' perceptions of costs, benefits, and uncertainties around relocation and its potential impacts relate strongly to livelihoods and socioeconomic conditions, these can be affected by their understanding of relocation support policies and processes. This highlights that effective policy design and communication can play a significant role in addressing households' concerns and facilitating decision-making processes.

6.1.2. Understanding of the relocation project and participation in project discussions

Knowledge about relocation assistance policies, destination sites, and relocation procedures is relatively low, and varies even among those who have moved or want to relocate. Understanding of how the relocation process works is also low. Importantly, households' key concerns about relocation relate to livelihoods and income opportunities, but knowledge of key livelihood support policies, such as the allocation of agricultural land, or training and credit support, are limited.

While many people attended meetings about relocation with local leaders or project staff, active participation in discussion of relocation plans is limited. Meetings appear to serve largely to deliver information rather than to discuss relocation options. The limited knowledge of some households about relocation plans and assistance shows that meetings are not sufficient to ensure understanding of the relocation process, and provide very limited opportunity for communities to participate in relocation planning. The group who remain undecided show the lowest level of knowledge about relocation support, low levels of participation in relocation meetings, and higher levels of concern about livelihoods after relocation. Uncertainty about relocation timing and location also play a role in decisions not to move. Some data suggests that households may only access more detailed information about relocation after they have made the decision to move. It is possible that limited knowledge of relocation may reflect a lack of interest in resettling, but also suggests that more comprehensive efforts are needed to support households to gain a detailed understanding of their relocation options before they make their relocation decision. Developing other channels of communication, such as printed information, may help to improve engagement. Given that household members discuss relocation within their families, providing clear, comprehensive information through other channels, including print materials and mass organizations such as the Women's Union, may support informed participation of family members in decision-making discussions within the household.

Literature on relocation highlights that the active participation of both source and host communities in planning and implementation is critical to successful relocation outcomes. Increasing the participation of communities in planning processes, and encouraging active engagement with discussions on implementation, would likely identify opportunities to enhance relocation plans and livelihood support, as well as increasing households' understanding of the resettlement policy. Greater understanding of relocation processes and options would help to address household concerns and enable them to plan livelihood strategies to adapt effectively.

6.1.3. Implementation of relocation support and consequences to households

The implementation of relocation support shows mixed results. Most of the relocated households have received key elements of support, namely housing and residential land, agricultural land, and financial support to undertake the relocation of their family and assets. Significantly smaller proportions of households think they have received other support in accordance with commitments made by the relocation project.

Many important aspects of infrastructure at destination, such as roads, electricity, market access, and social services are evaluated as better than the place of origin. However, many households report problems with two critical livelihood resources: productive land and water. Most relocated households received

a smaller area land than in their former commune. Many households received low-quality agricultural land that considerably affects their ability to produce. Lack of water for farming and living is a common problem, and destination sites lack irrigation and sufficient water infrastructure for domestic use. Access to non-farm employment mitigates this problem for some households, but opportunities overall remain limited. Households report difficulties adapting agricultural activities in their relocation sites, due to poor land, drought, and lack of knowledge about appropriate crops or livestock. Despite these challenges, a low proportion of households have received agricultural training, vocational training, food support, or marketing support like tax exemptions and market information.

6.1.4. Relocation outcomes

In terms of the key objective of disaster risk reduction, landslide and flood risk has been greatly reduced for relocated households. The majority of relocated households also report improvements in health and education facilities, and access to transport, markets and electricity. These are strongly positive outcomes, as reflected in the high proportions of people intending to stay in their new location. However, drought, pests, and illness have somewhat increased. The survey results do not show a clear relationship between relocation and health status, but access to health-care services is rated as better by most households. Social integration with receiving communities does not appear to have presented major challenges. These represent successes for the relocation project however, on the key issue of livelihoods, outcomes are more mixed.

As a result of the problems with land, water and employment opportunities, nearly half of the relocated households evaluate their employment status and incomes as worse after relocation, while only about one-third of households said they had improved. A number of households continue to work their agricultural land in their place of origin as production from their new land is insufficient. While this provides some additional income, it also imposes costs in terms of time and travel expenses. Others migrate for work, highlighting that mobility can remain a strategy for diversifying and adapting household incomes after relocation.

Difficulties adapting livelihoods to new conditions was widely reported, including pest problems, crop failure, low productivity on new land, and loss of livestock. At the same time, the number of households who have accessed vocational training and support to develop new modes of production is quite low, and lacking sufficient support and guidance. Interview data suggests that livelihood support and guidance is general, and does not take into account differences in household capacities or market demand.

As discussed in Section 1.4, it is increasingly recognized that livelihood restoration requires the development of support strategies that respond to the capacities and assets of households, and enable them to take advantage of local opportunities. Households will rarely be able to continue or resume activities as practiced in their place of origin, and need tailored support to adapt their knowledge and resources to different environments, access employment, or develop new livelihood strategies. Beyond land and water access, training and market information are needed, along with business development approaches that help households to identify options suited to their specific capacities and market opportunities.

6.1.5. Progress against relocation policy targets

In terms of the benchmarks set in relocation legislation, while this study cannot provide comprehensive data for the project as a whole, our data suggests that relocation sites are achieving two benchmarks: ensuring electricity access and improved housing quality. However, it is not clear that the target of “70–80 per cent of households using clean water” has been achieved, given limitations in domestic water supply. The final target is to reduce by 1.5–2 per cent per year the number of poor households in the commune. Although this research did not assess changes in poverty status at relocation, and some households have seen their incomes increase, the large proportion of households facing reporting reduction in incomes suggest that there is more support needed to achieve this goal.

6.1.6. Progress towards NTPNRD targets

Relocation policies also aim for relocation sites to make progress towards the criteria for the NTPNRD. Though the study did not specifically assess relocation sites against criteria in the NTPNRD, some observations can be made. The improved access to infrastructure reported by many households suggests that relocation sites are progressing towards criteria on roads, market access, electricity, and social services, with the notable exception of water/irrigation access. However, a key goal under the NTPNRD is the restructuring of agricultural livelihoods and the development of new opportunities in agriculture, processing, and services, as well as increasing employment opportunities. Criteria includes increasing the proportion of agricultural workers with vocational training, and developing employment opportunities. There is a low proportion of relocated households accessing training, business development support, and capital to develop new enterprises or agricultural production. While labour opportunities have improved for some people in relocation sites, stable employment opportunities are not yet widespread. This suggests that infrastructure improvement is progressing and relocation sites have potential to provide new opportunities and improved living conditions. However, the complex challenges of developing human resources and increasing the productivity agricultural enterprises needs further, comprehensive support if relocation sites are to progress towards NTPNRD targets.

The relocation project has achieved a key goal of reducing risks of natural disasters and ensure communities' safety, however if livelihoods cannot be stabilized, sustainability of risk reduction is doubtful. Relocation policy aims to contribute to overall increases in quality of life and incomes for relocated households, and to contribute to broader rural development goals. However, ensuring viable livelihoods for relocated communities remains a challenge. As mentioned in several existing studies on environment-induced relocation projects in Viet Nam and in the region (Bangalore et al., 2016; Chun, 2014; Vlaeminck et al., 2016), such relocation programmes may reduce some risks but increase other types of vulnerability. To date, this is true to some extent in Hoa Binh. The high proportion of households intending to stay in their new location suggests that reduced disaster risks and improved infrastructure and market access at destination sites are important positive outcome, however significant further support for livelihood development is clearly needed.

6.2. Policy recommendations

Results of the research show that despite potential benefits of relocation, several barriers and challenges remain for environmentally induced relocation. Relocation policy and planning, as well as integration with other institutional support policies such as rural development programmes, have an important role to play in addressing these challenges. The results also demonstrate positive aspects from the relocation programme which deserve continued focus in future programmes. The following recommendations outline potential responses to challenges and highlight existing good practices which should be continued:

Relocation planning and communication

1. Existing policies have ensured the provision of housing, residential land, and agricultural land in sufficient quantities, as well as provision of improved electricity, transport, and service access. These are important and effective supports which have contributed to positive outcomes, and should receive continued focus.
2. Identification and design of relocation sites should be assessed in more detail, and in close consultation with source and host communities to ensure destination sites can meet the needs of relocated communities. As well as availability and quality of agricultural land and water resources, planning should take into account other aspects of households livelihood strategies, resource use, and socio-cultural needs which may be affected by relocation, and develop plans to support households' short-term and long-term adaptation to new sites.

3. Clear guidelines should be developed, in consultation with households, to guide the selection and allocation of agricultural land, with a focus on ensuring clarity and transparency for households about the type, location, and quality of agricultural land.
4. Site identification and planning should include steps to assess the quality and potential of agricultural land, and ensure viability of production on land allocated for agriculture.

Participation and communication

5. Consultation and coordination with the commune-level authorities, especially those at relocation site, could be improved, as they can provide valuable inputs based on local knowledge for the design of effective relocation and support plans, and also play an active role in the follow-up and provision of long-term support to resettled households.
6. In general, it is important to foster the participation of all affected people from source and host communities in the planning, implementation, and monitoring of the relocation project. Local meetings on relocation plan should facilitate the active involvement all targeted households, including women, elderly people, and other householders. This will help project planners better understand and respond to communities' concerns, particularly around livelihood adaptation. In addition, participation of host communities would assist local government and targeted communities to develop strategies for livelihood development that are suited to the relocation context.
7. Social integration of host communities and relocated households has been generally high and shown positive outcomes, suggesting effective facilitation by local authorities and project coordinators. This is positive for host and relocated communities and should continue to be a focus. It also highlights the potential for greater participation of communities and commune-level authorities to contribute effectively to relocation planning and support processes.
8. More specific and detailed relocation information should also be made more widely available, including reliable timing and location information, in order to enable households to make fully informed decisions on their relocation options. Information about relocation procedures, complaints mechanisms, and employment and livelihood opportunities are critical areas where households need more detailed information. A more comprehensive communication strategy could include printed information providing more detail about the project process and/or outreach to households, as well as community meetings.

Livelihood development

9. It is necessary to incorporate appropriate support policies for relocated households to increase their access to non-farm occupations, especially if relocation sites are by necessity located in areas with limited land or are unfavourable for agricultural production.
10. Relocation policy identifies a comprehensive range of support mechanisms which may be provided for livelihood development such as input subsidies, vocational training, and the development of production infrastructure, which is an important positive aspect of current policy. However, engagement efforts and effective coordination of services and financing are also needed to ensure households access this support, including accessing training and planning assistance as well as seeds or capital. In addition, extension and employment support programmes should recognize that livelihood adaptation is an incremental process, and ongoing support is likely to be needed over time to ensure relocated households develop relevant skills and production models.
11. Existing provisions which allow relocated households to maintain their agricultural land at their place of origin are positive for livelihood adaptation, and should be maintained. Relocation plans should recognize and facilitate the potential for temporary and circular migration by households as part of their adaptive strategy. However, long distances between places of origin and destination make this a difficult trade-off, due to travel costs and time. Relocation within the same commune

or close to the place of origin – where possible given other site criteria – should be explored. This reduces costs as households transition their livelihoods, and could ease integration, disruption of social networks, or cultural dislocation for relocated households.

12. In addition, easing restrictions or disincentives to circular migration related to household registration, as well as ensuring households' formal registration and receipt of land use certificates at destination would help to enable this important adaptive strategy.

Monitoring and evaluation

13. Monitoring and assessment of the economic, social and environmental impacts should be regular, transparent, and responsive to the concerns raised by households in destination sites in order to adjust policies and provide solutions.
14. Clear and accessible complaint and dispute resolution mechanisms for relocated households and host communities should be maintained to ensure that issues can be raised and addressed in a timely manner. Monitoring should also seek to explore positive outcomes for households who have improved livelihoods and living conditions, which can provide lessons on specific factors supporting successful relocation.

The improvement of rural livelihoods and living conditions is an explicit goal of relocation policy, which recognizes the development of relocation sites as an investment in the overarching goals of the NTPNRD and national development objectives. Investments in infrastructure, improved living conditions, and reduction of communities' exposure to disaster risks are important objectives of the NTPNRD to which effective planned relocation can contribute.

Despite the challenging nature of re-establishing livelihoods after relocation, it is also an opportunity to invest in human resource development and modernization of rural economies outlined in the NTPNRD. At present, relocation sites in Hoa Binh and other areas suggest that infrastructure and land have received the most focus in relocation planning and implementation – an observation also made in regard to the NTPNRD programme.

Greater focus on livelihood planning, skills training, extension and support to develop new enterprises or diversify agricultural livelihoods would help to meet the shared objectives of relocation projects and the NTPNRD. Opportunities to better mobilize funding and resources for these activities in relocation sites through close integration with NTPNRD activities should be explored. In addition, the NTPNRD can benefit from and support increased community involvement in planning, feedback, and effective monitoring of development processes.

At the same time, the NTPNRD strategy continues to be refined in response to lessons learned. Recent reviews identified potential improvements which are relevant for relocation planning, including the need to focus on local priorities to guide investments, provide more targeted support for value chain development, and enhance institutional capacity and monitoring to support the programme (IFAD, 2016). Experience-sharing and strategic cooperation between relocation projects and NTPNRD activities should be encouraged, and ensure relevant lessons from each programme are shared and incorporated into planning.

Planned relocation has potential to increase the resilience of rural communities to natural disaster while contributing to rural development goals, and this is recognized in both relocation policy and the NTPNRD. Relocation approaches have evolved significantly in Viet Nam in recent years, and the current policy focus on supporting livelihood security and service access is a positive step, which has achieved some success to date, particularly in risk reduction and improved infrastructure. It is important that rural development and relocation policies continue to learn from global and local relocation experience, foster strong community participation with a focus on enabling household adaptation, and coordinate support programmes closely to ensure communities can reap the potential benefits of relocation.

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