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Environmental and human resource development issues in Vietnam: The case study of the Mekong Delta

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ABSTRACT

The Mekong Delta in Vietnam was identified by the International Panel on Climate Change as one of the three most vulnerable deltas in the world to rising sea levels. A study by the International Centre for Environmental Management indicated that about 38% of the Mekong Delta will be submerged if the sea water rises by one metre, resulting in 90% of the agriculture land being flooded, and saline water intrusion increasing by 70%. The impact would be to increase the insecurity of this highly dense population whose livelihoods are dependent on agriculture. In response, the Vietnam government has been implementing potentially adaptive strategies, including support for internal migration from the Mekong Delta to urban areas and industrial zones. However, without new skills and knowledge, these internal migrants limited employment opportunities. Furthermore, those migrants who manage to obtain work face the stress of adapting to industrial working environments and how to obtain knowledge about the industrial relations systems and human resource management processes that regulate their employment. This paper uses secondary data to present an overview of the challenges for human resources from the internal migration of the climate affected Mekong Delta to urban areas. In doing so, the paper pioneers an interdisciplinary approach that links research in environmental issues to research into human resources issues related to skills need.

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1 INTRODUCTION

The Mekong Delta (MD) was identified by the International Panel on Climate Change (IPCC) as one of the three most environmentally vulnerable deltas in the world to sea level rise caused by climate change. Carew-Reid's (2008) study funded by the International Centre for Environmental Management (ICEM) concluded that about 38% of the delta will be submerged if the sea water rises one metre. As a result, 90% of the agriculture land in

the MD would be flooded, with saline water intrusion increasing by 70%. This will have huge impact on the livelihoods of the densely populated local inhabitants who are dependent on agriculture.

In response, the Vietnam government has been putting in place strategies as aimed at diversification, intensification, specification and collaboration. Of these internal migration is favoured as one of adaptive strategies (Anh *et al.*, 2003; Anh, 2009). This has increased in the wave of internal

migrate from the MD to industrial zones and urban areas, such as Ho Chi Minh City (HCMC). However, while government planned resettlement programs aiming to address and reduce the challenges and difficulties that people face when they migrate, they face significant challenges. A major challenge is the different skills needed and new habits of working in industrial and professional compared to agricultural work. This is creating a situation where there are limited job opportunities of these new migrants in the industrial zones and those who do manage to obtain works face the prospect of losing their jobs due to lack of knowledge about industrial working habits and industrial relations system and human resource processes.

This study investigates the impact of climate change on internal migration from the MD to urban areas and industrial zones on skill needs and skill development. It examines 2 keys questions: (1) What are the key impacts of climate change on internal migration and the labour force in the MD

and (2) What are the key challenges for new migration to work in urban areas and industrial zones and what support have they received to overcome these. In doing so, the paper pioneers an interdisciplinary approach that links research in environmental issues to research into human resources issues related to skills need and skill development.

2 RESEARCH FRAMEWORKS

A conceptual research framework has been designed to identify the link between environmental change and human resource implications (Figure 1). The conceptual framework highlights the link between environmental change (in this case caused by climate change) and government policy on migration introduced to reduce the adverse impact of climate change on the local community. The resultant impacts for and from internal migration are identified, with the associated need for a focus on skills developed through Human Resources Development. This conceptual framework is used to explore the experience of the MD.

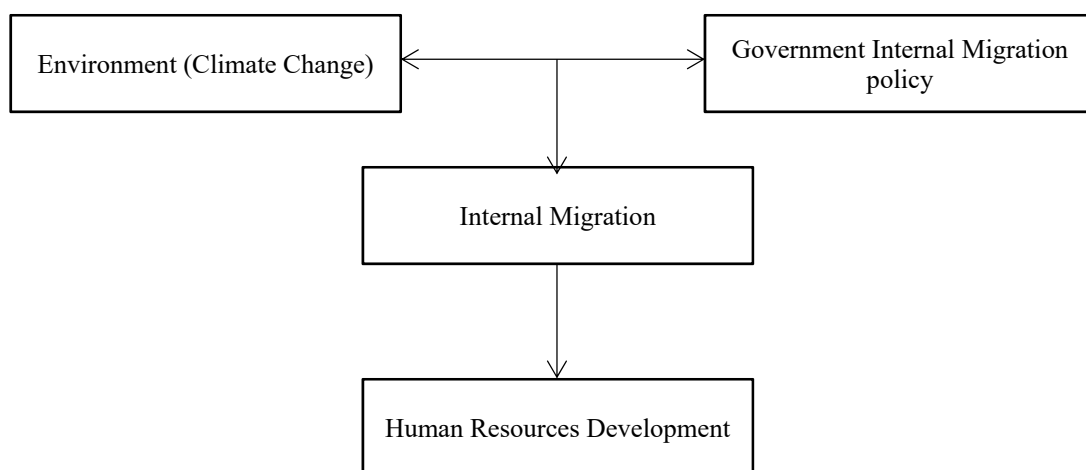


Fig. 1: Conceptual Framework of the relationships between environment (climate change), migration and human resources development (HRD)

3 THE MD: ECONOMIC AND ENVIRONMENT CHALLENGE - CLIMATE CHANGE

The MD is one of the most populated regions in Vietnam. Population has grown from around 15.5 million inhabitants in 1995 to 17.6 million in 2015 (GSO, 2016). This is an increase of approximately 100,000 people on average per year over past 20 years. This gives it one of the highest population densities in the country. The MD region is the largest agriculture and aquaculture production region in Vietnam, with about 46% of the total food produced coming from the region. This includes 50% of the nations' rice production, 80% of the fruit production and 60% of the fish production (Tran,

2014). However, despite its natural resources, the living standard and income level of the inhabitants remain lower than any other region in the southern part of Vietnam. In addition, it has a young population, with about 32% of the total population being under 15 years of age. This is causing the region to face considerable economic challenges that require it to move from a reliance on agriculture to industrial development. Together with lack of skills and poor human resource development, this young labour force requires training in skills needed to satisfy economic development for the region (Bodewig and Badiani-Magnusson, 2014).

On the skill supply side, there has been and continues to be a shortage of faculty, facilities, equip-

ment, materials and practical training programs. On the demand side, many students consider that vocational education lacks the prestige attributable to a university education in a society where education is still regarded as the biggest investment that any parent can make for their children's future (Shuang *et al.*, 2014). Consequently, the percentage of students enrolling in professional secondary and vocational schools remains low with a slight and slow increase (GSO, 2008). This has caused a huge imbalance in the labour market in the region and exerted a serious effect on the MD's sustainable development.

Many companies recognize the importance of training and development for their success, but are faced with problems in funding to achieve this. Employers often decide upon acquiring modern equipment and expanding factories rather than training and developing people (Collins, 2009). At the same time, the quality of education in general is not adequate, often failing to meet regional and world standards or the actual needs of the companies. The majority of graduates are critically limited in practical skills and in the ability to adapt to professional work, work discipline and teamwork. To close this gap, private and state-owned enterprises have begun to reserve a proportion of their budget for employee training (Thang *et al.*, 2008; Collins *et al.*, 2013).

In addition to the economic challenges facing the MD region, environment challenges associated with climate change are having a negative effect. The IPCC has warned that global warming will affect natural systems that are essential for sustaining the viability and progress of many communities, particularly those which lack the means to adapt effectively to the changes (IPCC, 2007c). The IPCC predicts that during the coming century, drought-affected areas will expand while other locations will experience greater heavy precipitation events and flood risks, river runoff will decrease between 10 to 30% across many dry regions and mid-latitudes, and glacially-stored water supplies will decline, reducing water availability for over one-sixth of the global population (IPCC, 2007a; IPCC, 2007b; Ewing, 2012). The changes in rainfall patterns and ice volumes at the source of these problems will affect both freshwater availability and agricultural production [IPCC and IPoCC (Intergovernmental Panel On Climate Change), 2007]. Those communities which depend on local agriculture for food and income, and smaller crop yield can lower individual caloric intake, which negatively affects human health, while reducing vitally important household in-

comes (UNDP, 2008). For areas of water abundance, major precipitation events, flooding and greater runoff, and erosion will have negative consequences for agricultural production and render many previously productive lands at least temporarily unviable for habitation and human utility (Ewing, 2012).

The MD area has been adversely affected by climate change since the 1970s. The average level of Vietnam's seas is predicted to rise by 28-33 cm by 2050 as compared to the 1980-1999 period. More than one million people in the MD are predicted to be directly affected by increased coastal erosion and land loss by 2050, with potential permanent inundation shifting inland by 25-50 km. A large proportion of the MD area is threatened by rising sea levels, especially in the low-lying lands at the mouth of the delta (Carew-Reid, 2008). In 2009, a MD Climate Change Forum Report predicted that 25% of Can Tho and 50% of Ben Tre would be completely swamped if the average sea level rose by one meter, while the Government of Vietnam predicted that about 38% of the MD's entire current land area would be inundated under the same scenario. It is predicted that the potential rice yield of the MD will decline by up to 50% by the year of 2100 as the rainfall patterns shift. This threatens not only the food security of Vietnam but numerous countries that rely on its rice exports (Carew-Reid, 2008). To address these issues the Government of Vietnam has planned several strategies, including a central strategy of encouraging internal migration.

4 VIETNAM'S GOVERNMENT RESPONSE TO ECONOMIC AND ENVIRONMENT CHALLENGES: INTERNAL MIGRATION

The role of migrations, particularly internal migration as a contributor to economic development, has been widely recognized. Internal migration is seen as enabling many poor and rural families escape poverty by moving to urban centres (Huynh and Le Nguyen, 2011). Migration in response to climate change has also attracted the interests of researchers and policy makers over the last two decades (Perch-Nielsen *et al.*, 2008). Reuveny (2007) claims that people can adapt to environmental problems in three ways: (i) stay in place and do nothing, accept the costs; (ii) stay in place and mitigate changes or (iii) leave affected areas. While in developed countries people tend to mitigate problems by developing technological innovations and engaging in institutional redesign, whereas less developed countries tend to opt to leave the affected areas when they are facing these severe environmental issues (Reuveny, 2007). The United

Nations Development Program 2009 report on human development estimated that there were 740 million internal migrants in the world, four times as many as the number that moved internationally (IOM, 2005). Many researchers have recognized the relationships between migration (principally internal migration) and development. This pattern of migration not only contributes to economic growth in the receiving area, but also has positive effects on livelihood strategies and poverty reduction in the originating area (Turnham, 1993). More specifically, the contributions of migration to the development are usually summarized in the following way. For the destination area, migration can affect the average level of human capital, both in terms of quantity and quality, leading to an increase in the size and quality of the urban labour force (one side of the so-called brain drain). For the originating area, remittances from migrants as an additional source of income improve livelihoods of people remaining in the originating area, stimulate consumption, and improve the area's financial ability to cope with vulnerabilities (Huynh and Le Nguyen, 2011).

There are several economic factors pushing rural to urban migration, including loss of farmers' bonds to land (due to de-collectivization), commercialization and mechanization of agriculture, these associated with losses of cropping and farming systems, low income from agricultural production and services in the rural areas. On the other hand, urban economic zones, with growing industry, service and technology sectors, and foreign direct investment, particularly cities such as HCMC and Hanoi and surrounding areas are important pull factors for rural to urban migration (Anh, 2006; Chun and Sang, 2012). In general, the standard of living in urban areas is perceived to be better compared to rural sending areas. However, more financial means are needed for consumption these days because particularly younger people are attracted to items such as mobile phones, laptops and computers and motorcycles.

The United Nations Vietnam (2014) reported that the 2009 Population and Housing Census (MPI2009) counted a population of 5,789,573 people, with 6.6 million internal migrants (persons who migrated in the five years prior to the census) in Vietnam. Of those internal recorded migrants about 50% moved within provinces and 50% migrated across provinces. The census defines a migrant as someone who has a different place of residence at the time of the survey compared to a designated date of five years prior to the survey. Such a definition does not count those who migrated

within the five years period but returned home before the census date, including seasonal and temporary (returning) migrants and unregistered movements (UN Vietnam, 2010b). Therefore, the total number of internal migrants is not known, but probably much higher (UN Vietnam, 2010b).

Chun and Sang (2012) identified two main drivers of migration in Vietnam: (a) lack of (steady) employment, and (b) low income in sending rural areas. Joining family is also a reason for migration. Existing social networks are vital in determining if a person migrates or not. Also, the fact that incomes in cities are higher than in rural areas attracts many migrants into the cities and southern provinces. Ownership of housing and/or of productive land, which is of great cultural significance, are important factors that restrain (permanent) outmigration. People and households who own land and/or a house are less likely to take up migration as a strategy, and more likely to return to their home and land should they migrate (Chun and Sang, 2012).

Environmental factors are often drivers of migration. In recent years, the issues of migration, climate changes and development have been major concerns for academic researchers and policy makers in coastal countries such as Vietnam (Huynh and Le Nguyen, 2011). Generally, migration is viewed as one of the most frequent used strategies of rural household facing the negative effects of climate changes, and it is also a useful tool for helping poor households to improve livelihood and reduce poverty. In the case of Vietnam, during the period of 1994-1999, 4.35 million people were estimated to migrate internally, while the number of international migration was fewer than 300,000 (Collins, 2005).

Government-managed resettlement is a typical form of internal mobility in Vietnam, with planned movements since 1961 in the North and since 1975 throughout the country (United Nations Vietnam, 2014). Contemporary resettlement programs are diverse. Resettlement is targeted to people in disaster-affected areas, highly disadvantaged areas (Chun and Sang, 2012). People are also encouraged to move to certain industrial areas with labour needs. Specifically, resettlement policies are a form of addressing exposure and vulnerability to flooding, and other forms of environmental degradation (e.g. river bank erosion) (Danh and Mushtaq, 2011).

Several Vietnam government policies on migration, resettlement and climate change have been introduced to assist the MD as well as other reset-

tlement efforts in order to reduce exposure to climate related and other environmental stresses (United Nations Vietnam, 2014). At national level, a series of policy such as the five-year plan of 1996-2000 for development of irrigation, transportation and construction in rural areas of the MD regulated the program of developing traffic and building up residential clusters of the MD, the Land Law (2013) formed the legal framework for individual ownership of land. The regional government bodies issued some important policies to deal with vary climate change impact's issues such as resettlement, job creation and vocational training for labourers whose agricultural lands have been confiscated. The 'Socio-economic Development of the MD Region in the 2001-2005 Period' was issued at regional level to support the development of residential clusters and dykes and the efforts to improve living conditions and provide stable livelihoods for people in disaster prone areas. Among the support programs, the National Target Program to Respond to Climate Change (2008) and the National Strategy for Natural Disaster Prevention, Response and Mitigation to 2020 (2007) have been seen as the most important movements from the government that have impacted directly to managing the climate changed migrations. Up to 2010 they manage to relocate all populations from flash flood and landslide high-risk areas and dangerous areas to

The government has introduced reforms to assist migration. First, changes were made to the Vietnamese Household Registration System (*Ho Khau*) system to enable temporary migrants full access to essential services and basic rights (Anh, 2009). In these reforms, a distinction is made between four categories of households' registration system based on their registration status. This ranges from permanent registration (*Ho Khau Thuong Tru*) to temporary registration (*Tam Tru*). According to the government new regulation, any Vietnamese citizen residing in a place outside of their permanent residence for 30 days or more must register and receive *Tam Tru* KT4. This provides migrants with temporary registration for 1-6 months in the receiving area (United Nations Vietnam, 2010a). Legal residence documentation is also issued to provide citizens with greater freedom to choose their area of residency without any employment preconditions. Nonetheless, issue of these documents at local level has been inconsistent due to lack of guidance and differing interpretations of the law, causing a lot of confusion (Pincus and Sender, 2008; United Nations Vietnam, 2010b).

However, there are also problems associated with internal migration. As the impacts of climate change intensifies, conflict may occur as the potential of mass migration of individuals who have lost their livelihoods increases (Deshingkar, 2005). This can result in social and/or political unrest as shortages occur and threats to the livelihoods of the residents in the regions to which migration increase (Black *et al.*, 2011). In addition, there are a range of human resource issues.

5 MIGRATION AND HRD ISSUES

The Ministry of Planning and Investment of Vietnam in their report on the 2011 Vietnam labour force supply states that the entire country had 51.4 million people aged 15 years and older who belonged to the labour force. This accounts for 58.5% of total population and includes 50.35 million employed and 1.05 million unemployed people. Among the nation's labour force, women account for a lower share than men (48.5% female and 51.5% male). According to the census results, over the past 30 years, the proportion of the labour force comprised of women has changed very little (1989 Census: 48.8%; 1999 Census: 48.2%, 2009 Census: 48.0%). In terms of female labours, it varies little between urban and rural areas, yet there is variation from the lowest level at 46.0% in the MD, to the highest level at 50.4% in the Red River Delta. The data indicate contrasting labour force participation by sex between the two large delta regions of the country. While in the MD, women account for a remarkably smaller share of the labour force than men (46.0% compared to 54.0%), in the Red River Delta the share is almost equal between women and men (50.4% compared to 49.6%). The reason may be that many women in the South (MD and Southeast) mainly perform housework, and do not participate in economic activity (Ministry of Planning and Investment, 2012).

The percentage of the labour force with technical qualifications is low (Ministry of Planning and Investment, 2012). Of 51.4 million workers aged 15 years and older in Vietnam's labour force, only around 8 million people, or 15.6% of the labour force, have technical training. Currently the entire country has more than 43.4 million workers (accounting for 84.4% of the labour force) who have never received training to achieve any level of technical specialization. Breaking this down by cities and areas, Hanoi City has the highest proportion of workers with technical training (30.7%), while the MD has the lowest percentage (8.6%). There is a higher proportion of male than female workers who are trained. The highest proportion of

the labour force with university or higher qualifications is in Hanoi and HCMC (17.0%), with the MD having the lowest proportion (3.4%).

Additionally, in terms of average weekly hours worked, the result of the survey indicates that over a third of workers working from 40 to 48 hours per week (37.2%). Number of employees working under 20 hours per week has the low proportion (3.4%). Number of employees working over 60 hours per week occupies 12.5%. The proportion of employees working under 35 hours per week of 2011 is 15.7%. This proportion has quite large differences between urban and rural areas, the equivalent proportion of urban area is 9.9% and that of rural area is 18.2%. In 8 socio-economic regions, the proportion of employees working less than 35 hours per week is the lowest in HCMC (5.5%) and is the highest in the MD (24.1%).

Internal migration adds to the challenges as many internal migrants face job insecurity and often work without labour contracts (IOM, 2005). This means that regulations are easily violated by employers, leading to insecure, often risky and dangerous employment (United Nations Vietnam, 2010b). In Hanoi and HCMC, approximately 60% of migrants are working without a formal contract. Such jobs rarely provide benefits such as health insurance, unemployment benefits, sick leave, maternity leave, or vacation leave. Only Vietnamese employees who work under labour contracts with a definite term and contract of three months are entitled to join compulsory social insurance according to the Social Insurance Law (No 71/2006/QH11). Migrants tend to be less skilled than residents. Among migrants in Hanoi and HCMC, 76% lacked professional training, compared to 60% for residents; and only 10% of migrants had any college education, compared to 25% for residents (Haughton *et al.*, 2010). This is a likely reason for the slightly lower average incomes of migrants compared with residents. Women migrants and migrants from ethnic minority groups appear to be at a particular disadvantage and earn much less on average than non-migrant women as well as male migrants and non-migrants. Language can be a barrier for ethnic minority migrants moving to urban areas (GSO, 2004; UNFPA, 2007).

In addition to income poverty, migrants have limited access to social services such as health care and education, water and sanitation, and hazardous environmental and physical conditions, limited access to reproductive health services and inadequate access to information (United Nations Vietnam, 2010b). Migrants generally do not receive the same level of administrative and legal

support as permanent residents, who have lived in one place for more than five years (IOM, 2009b). Although, according to the amended Constitution of Vietnam (2013), all citizens have equal rights, and the Law on Residence (2006) determines that every citizen has the right to choose their area of residency, existing frameworks and practices related to the Household Registration System and urban regulations, hinder the equal rights and social protection of internal migrants. This is reflected in less job security, lower wages, poor housing conditions, limited access to social services, including health care and education, and social exclusion (IOM, 2004). In particular, children, women and elderly people, as well as ethnic minorities, are vulnerable to exploitation. The current legal and administrative structure for social protection does not cover spontaneous migration, and such movements are largely discouraged, in particular as the *Ho Khau* system creates a barrier for the protection of migrants (Duong *et al.*, 2011). No legal framework that protects spontaneous migrants exists. Institutionally, there is no government agency responsible for social protection of spontaneous (internal) migrants. This means that their specific challenges and needs frequently fall between the cracks (Hanh, 2013).

In addition to the problems facing internal migrants to cities, there are also problems facing internal migrants to resettlement program area. A survey conducted in An Giang and Can Tho of 28 residential clusters (accounting for 30% of the total number of residential clusters in the two provinces) showed that the resettlement program caused changes in the structure of employment (Xe and Dang, 2006). After arriving in the residential clusters, the unemployment rate increased to 5.6% (this combines an increase of 5.8% in non-agricultural activities and a decrease of 12% in agricultural activities). While the income per household remained relatively unchanged, the structure of income sources changed. Off-farm incomes increased significantly while on-farm incomes, including employment activities, decreased. Before resettlement, more than 50% of households were involved in animal-husbandry activities. These activities; however, are banned as per regulations of residential clusters (Huy and Le Nguyen, 2011).

A study in Tan Chau district, An Giang resettlement clusters (Fforde *et al.*, 2003) revealed that there were some advantages to living in the resettlement clusters. Living conditions were better, and the quality of life was improved. People no longer had to move away when the flood arrived and could go out to find jobs without worrying about

flooding affecting their children and the elderly. Basic living conditions were ensured with easy access to water and electricity supply, healthcare and educational services, and road networks. All respondents who were resettled were very satisfied with living conditions in the residential cluster. However, there were also disadvantages. First, it took more time to getting to work outside the residential clusters. Some sold their agricultural land because of the long distance to work. Second, there were no job opportunities for those who were living in the residential clusters. Third, for the poor, incomes had not increased, and, in some cases, had even decreased due to extra expenditures for water and electricity bills which they did not have to pay before. Fourth, they were not allowed to raise animals around their houses or inside the residential clusters. Finally, the quality of house construction was poor, and infrastructure in the residential clusters was not completely built. For example, the toilet system did not work. The water discharge system did not function well during the flood, leading to inundation in many areas in the residential clusters (Fforde *et al.*, 2003).

Another research on resettlement in Long An and Dong Thap areas was conducted by Chun and Sang (2012). This research was conducted in one residential cluster and one residential dyke in Vinh Tri commune, Vinh Hung district, Long An province and two residential dykes in Long Thuan commune, Hong Ngu district, Dong Thap province. In the interview of 200 resettled respondents, almost all agreed that houses in the resettlement areas were safer and better in quality, except a large percentage of dyke residents in Long An complained that housing condition had remained the same/ was worse compared to the cluster residents. Most respondents in Long An saw improvement in availability of jobs and income levels, whereas dyke residents in Dong Thap felt that these aspects had not changed. Access to clean water had much improved in residential clusters but had worsened in residential dykes in Long An, because the water discharged from the canal was used for domestic purposes. Other social services such as health care, education, transportation and public services improved across all sites, as well as overall quality of life.

In summary, levels of employment and skills vary significantly between regions and cities as well as between young and older workers, men and women. Internal migration places new economic pressures on the areas to which migration occurs. In addition, there are employment and livelihood pressures placed on migrants who do have the nec-

essary skills and knowledge of employment conditions. This can lead to labour market exploitation.

6 CONCLUSIONS

The impacts of climate change are already affecting the MD, with substantial recorded increases in average temperatures and sea level rise occurring since the 1970s. As the impacts of climate change intensify, conflict may occur as a result of a potential mass migration of individuals who have lost their livelihoods due to the declining agricultural productivity of the MD and/or individuals that are forced to relocate as a result of rising sea levels. This poses the potential for social and/or political unrest as resource shortages may affect the food security and livelihoods of the residents of the regions to which the MD refugees may migrate. This paper used a conceptual research framework to explore the link between environmental change (in this case caused by climate change) and government policy on migration introduced to reduce the adverse impact of climate change on the local community. The resultant impacts for and from internal migration were identified, with the associated need for a focus on skills developed through Human Resource Development. The conclusion from this research is that in order for the Vietnamese government to improve their data and information on migration, there is a need to gain in-depth understanding of the diversity in migration streams in terms of who leave (men, women, men and women, entire families, etc.), durations of migrations, distances (internal vs. international migration) and the returns. A thorough research and study in this area could understand the importance of social factors in the migration process, human resources implications to the areas being left as well as to the resettlement areas, required skills for migrants as well as policy implications to the country.

Moreover, policy makers on migration in Vietnam need to recognise the importance of migration for poverty reduction and development. The policy should aim to ease the hardship of migrants and facilitate a flexible labour force in the short term in order to distribute the benefits of growth as evenly as possible. But there is a need to build human capabilities over the long term so that people who currently have to depend on such livelihood strategies can diversify into more remunerative options.

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