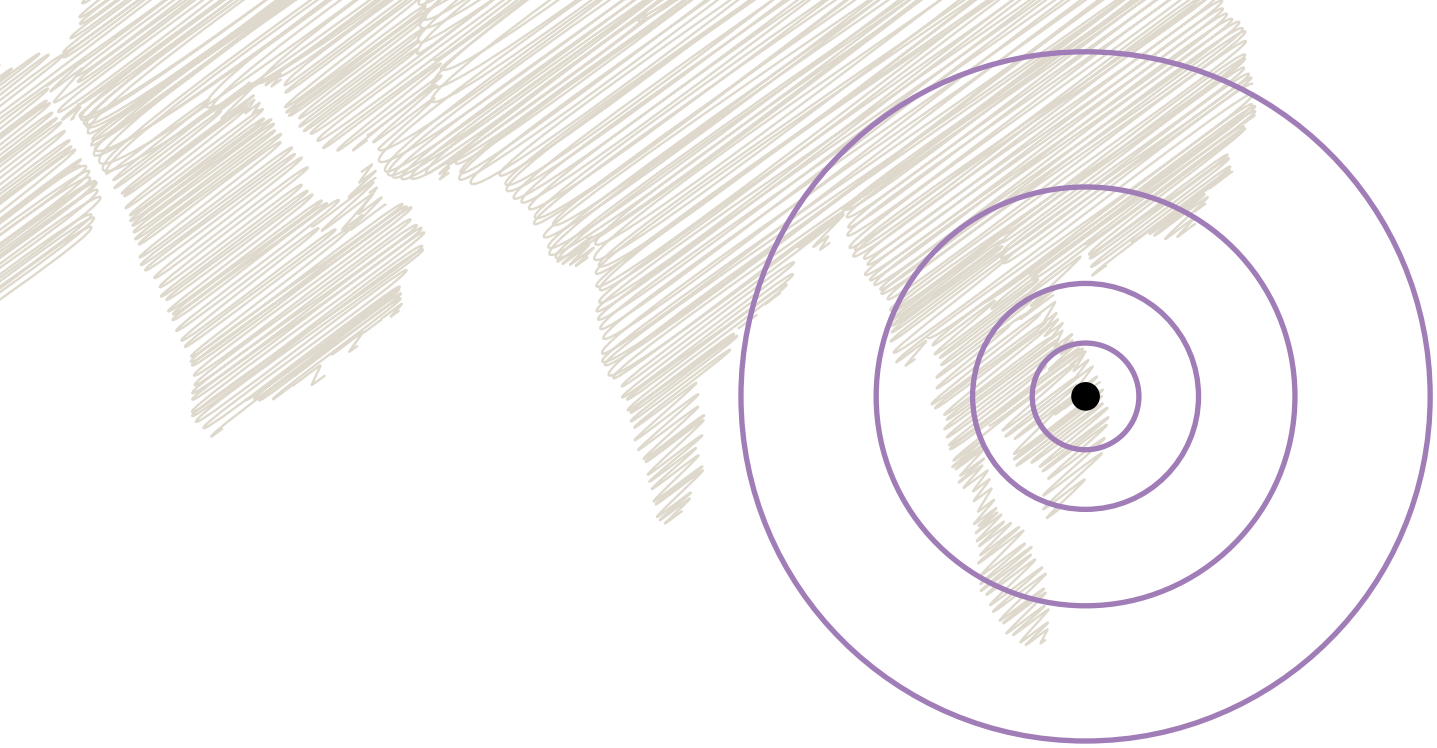

Food security in the context of Vietnam's rural-urban linkages and climate change

Hoang Xuan Thanh, Truong Tuan Anh, Luu Trong Quang, Dinh Thi Giang and Dinh Thi Thu Phuong

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List of abbreviations

AAV	ActionAid International in Viet Nam
ADB	Asian Development Bank
CDF	Commune/Community Development Fund
CDM	Clean development mechanism
CO2	Carbon dioxide
CPI	Consumer price Index
FAO	Food and Agriculture Organization
GDP	Gross domestic product
GOV	Government of Vietnam
GSO	General Statistics Office (of Vietnam)
HCMC	Ho Chi Minh City
HDI	Human Development Index
HH	Household
IOM	International Organization for Migration
ISDS	Institute for Social Development Studies
IZ	Industrial zone
MARD	Ministry of Agriculture and Rural Development
MDG	Millennium Development Goal
MOLISA	Ministry of Labour, War Invalids and Social Affairs
MONRE	Ministry of Natural Resource and Environment
MPI	Ministry of Planning and Investment
NGO	Non-governmental organisation
NTP	National targeting programme
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parity
PWG	Poverty Working Group
TV	Television
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UPA	Urban and peri-urban agriculture
VHLSS	Vietnam Household Living Standards Survey
VietGAP	Good Agriculture Practices in Vietnam
WB	World Bank
WTO	World Trade Organization

1 US$ = 20,900 VND or *dong* (as of 5 February 2013)

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Despite its modest contribution to climate change, Vietnam is expected to be heavily affected by its impacts. Stronger rural-urban links, including the development of small towns that ensure access to urban markets, often through small-scale traders, and remittances from migrants to the cities, contribute to food security by supporting both production and access. However, high food prices have affected the growing number of net food buyers in both rural and urban areas, and the financial crisis has reduced migrants' ability to send money home. Hence food security in Vietnam should be seen as a key element of development and adaptation to climate change.

Contents

Summary

Key facts

- As a whole, Vietnam is food secure, as it produces enough rice to feed its population.
- Local traders and informal food vendors play an important role in national food systems.
- 55 per cent of rural households and 92 per cent of urban households are net rice buyers.
- 22 per cent of rural households do not have productive land.
- 8 per cent of the population have been migrants in the past five years (not including seasonal, unregistered ones).
- Domestic remittances account for 5 per cent of total household income on average. The main use of remittances is for daily expenses and agricultural investment.

Key findings

- Food security is best achieved through inclusive and sustainable development, and poverty reduction in both rural and urban areas.
- Food security is undermined by several factors, including natural disasters induced by climate change, but also by prices and poverty for specific groups.
- Food availability is closely linked to rural-urban linkages in the form of intensive connections between producers and markets, especially those run by local traders and located in small towns. Urban demand stimulates production, but only when the pre-conditions such as access to land, water, labour and capital are there.
- Rural-to-urban migration is a key source of cash and information for agricultural intensification. Seasonal rural-to-rural migration improves some households' daily cash flow.
- Access to food is largely determined by access to cash – most Vietnamese people, in both urban and rural areas, buy food. Income diversification in rural areas is important for rural food security.
- For many migrants in the cities, food sent from home is important for their food security in difficult times. This 'virtuous circle' works well if rural-based relatives have access to land and water and migrants have access to decent jobs.
- The poorest and most vulnerable groups include the rural landless, particularly rural ethnic minorities facing natural hazards and pre-harvest hunger; and those working in informal, low-paid, dangerous and insecure jobs in the cities.
- Focusing only on intensive rice production will not necessarily ensure food security for all. Instead, policies should include multi-dimensional poverty reduction and social protection in the form of cash transfers, and rural and small-town urban development.

Background

1

Food security is rapidly becoming a hot topic. The steep increases in food prices that started in 2008 are expected to continue under the combined impact of climate change, population growth, urbanisation and speculation. With food security increasingly under pressure, linkages between rural and urban areas – that is, the flows of people, commodities and services, information, and capital between them – can play a role in securing people's livelihoods. This review aims to contribute to a better understanding of the important role of rural-urban linkages towards food security in the context of climate change in Vietnam by addressing the following questions:

i) What is the impact in Vietnam of food insecurity, climate change, population growth and price fluctuations on people's livelihoods? How do people adapt to the instability of food security and climate change?

ii) How can rural-urban linkages contribute to food security and poverty reduction?

iii) What are the policy implications for strengthening these linkages to improve livelihoods and food security in the rural and urban areas, especially for the poor and those groups most vulnerable to disasters?

The concept of rural-urban linkages used in this report is based on Tacoli (1998). It covers:

i) Spatial linkages, including flows of people, commodities, remitted money, technology, knowledge, information and waste.

ii) Sectoral linkages, and more specifically the ways in which food production systems are shaped by interactions with urban centres (Figure 1).

The definition of food security in this report is based on FAO (2012a), and understood to have four main dimensions:

i) **Food availability:** the ability to supply sufficient quantities of foods of appropriate quality through domestic production and import (including food aid).

ii) **Food access:** access by individuals to adequate resources (entitlements) to acquire the appropriate food for a nutritious diet.

iii) **Utilisation:** people have an adequate diet and can access clean water, sanitation and healthcare in order to meet all their physiological needs. This highlights the importance of non-food inputs in food security.

iv) **Stability:** an individual or a family must have access to adequate and safe foods at all times, without the risk of running out of food as a result of sudden shocks such as an economic or climate crisis, or cyclical events such as seasonal food insecurity or crop failure. The concept of stability can therefore cut across the other three dimensions of food security.

This report focuses on how the linkages between rural areas (pure agricultural areas, commodity production areas and traditional craft villages) and urban areas (big cities, peri-urban areas, and small towns with industrial zones and satellite enterprises) affect people's livelihoods, including income diversification and agricultural intensification, and their food security. It pays special attention to poor communities which are vulnerable to climate change and price fluctuations.

Figure 1. The rural-urban continuum

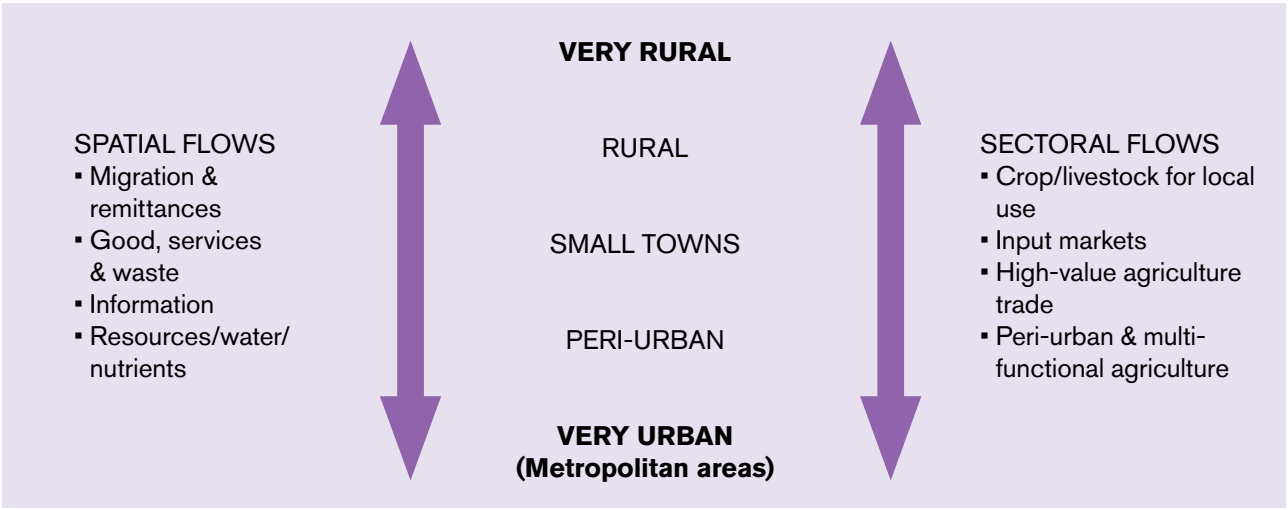


Figure 2. Rural-urban linkages and food security in Vietnam

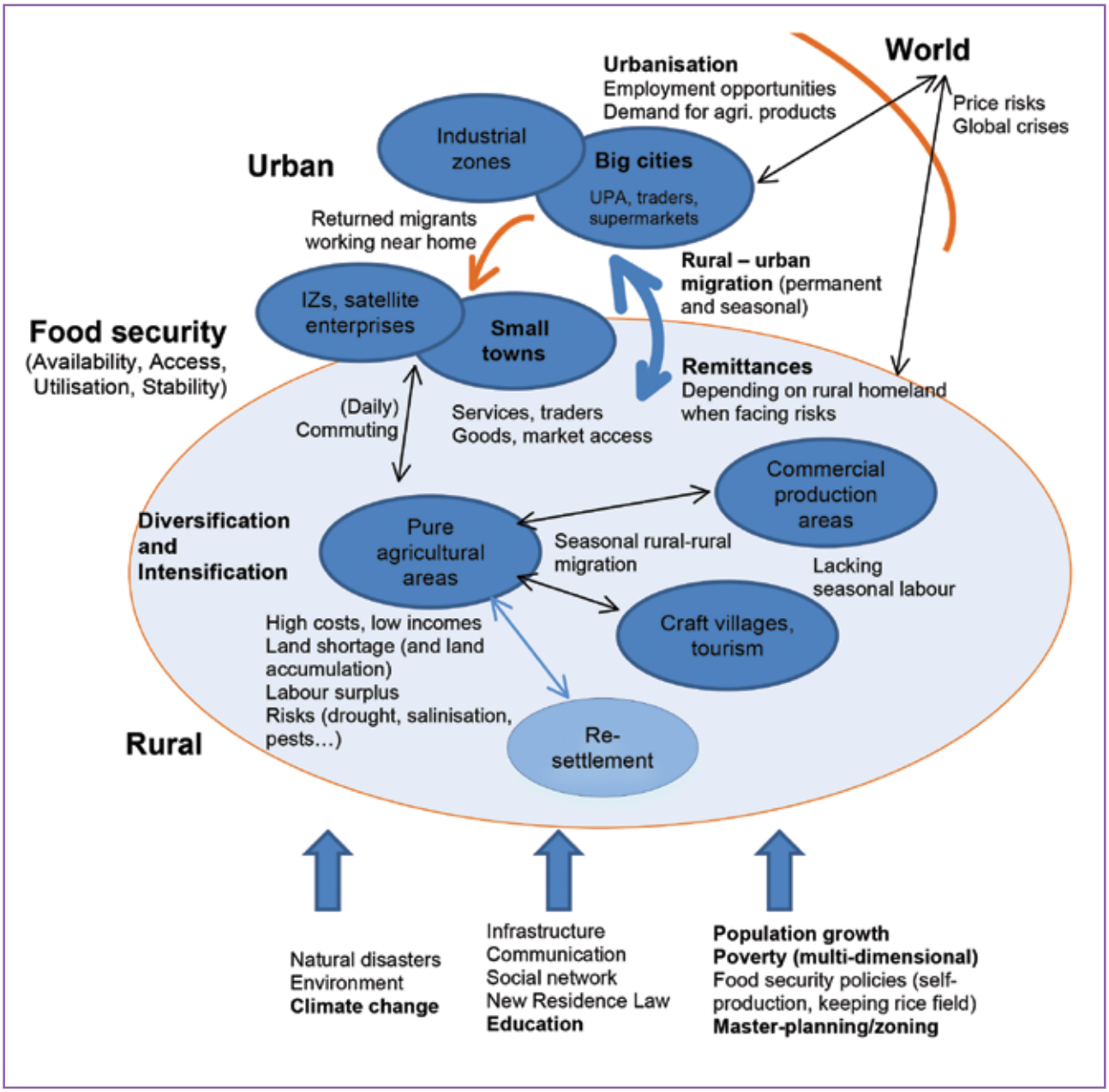


Figure 2 shows how:

- Rural areas are linked with small towns and nearby industrial zones (IZs) through people's daily commutes and the flow of commodities and services.
- Rural areas are linked with big cities through rural migrants (both seasonal and permanent, and inwards and outwards) and the flow of commodities and services.
- Rural areas are linked with rural areas in different regions through seasonal and permanent migration.
- The factors affecting rural-urban linkages include natural hazards, climate change, population growth, urbanization, development and poverty reduction policies.

This report synthesises a review of the literature on food security, climate change and migration in Vietnam, combined with the findings from the authors' studies on monitoring rural and urban poverty during the period 2007-12 for Oxfam and ActionAid International in Vietnam (AAV). It also includes findings from a short field trip carried out at the end of 2012 to Tra Vinh and Ben Tre provinces in the Mekong Delta area.

Part 2 presents an overview of climate change and migration in Vietnam. Parts 3 and 4 present the factors contributing to food security, including the role of rural-urban linkages and climate change. Finally, Part 5 offers some policy implications.

The impact of climate change on food security in Vietnam

2

Vietnam has a long coastline that often suffers from storms and typhoons, and high and changeable levels of rainfall. It is ranked 35 in the world in terms of total carbon dioxide (CO_2) emissions, accounting for only 0.5% of the global total. On average its emissions amount to about 2 tons of CO_2 per person, ranking it 111 in the world (Natural Resources Management, 2010). Despite this modest contribution to climate change, it is considered one of the countries most likely to be affected by it.

Climate change is associated with extreme and unpredictable weather phenomena that are difficult to forecast. The Institute of Meteorology, Hydrology and Environment (2012) has summarised the effect of climate changes on Vietnam during the last 40 years as follows:

- The annual temperature has increased 0.1°C in every decade from 1931 to 2000.
- There is a big difference in the rainfall among regions. It is increasingly difficult to forecast rainfalls likely to cause serious floods.
- Droughts are becoming more common in the south, and are tending to last longer.
- The sea level has risen on average 2.5-3.0 centimetres a decade for the last 50 years, with differences among regions.
- The El Niño/La Niña weather phenomena have become more severe during the recent 50 years, causing more storms, floods and droughts.
- The number of cold days affecting Vietnam has clearly reduced from 1990-2010. However, there have been episodes of abnormally cold weather, for instance the severe cold period of 38 days which occurred in January and February 2008.
- The number of typhoons on the East Sea slightly increased, but there is no clear increase in the number penetrated inland.

MONRE (2012) has updated various climate change scenarios for Vietnam. Assuming a scenario of average greenhouse gas emissions, by the end of the 21st century minimum temperatures would increase 2.2-3.00C while maximum temperatures would increase 2.0-3.2°C on average throughout the country. The northeast and south central regions will see the most increase. The number of days with temperatures above 35°C would increase by 15-30 days in most areas of the country. Rainfall will tend to reduce in the dry season and increase in the rainy season. Annual rainfall overall is predicted to increase across almost the whole territory by around 2-7 per cent over the period. There may be days of abnormally heavy rain, with double the maximum rainfall currently seen. On average the sea level along the whole of the coast will have risen about 57-73 centimetres, with the stretch from Ca Mau to Kien Giang seeing a much higher increase than the rest. A sea level increase of 1 metre would put about 39 per cent of the Mekong Delta area, more than 10 per cent of the Red River Delta and Quang Ninh areas, more than 2.5 per cent of the central coastal areas, and over 20 per cent of Ho Chi Minh City (HCMC) at risk of flooding. The forecasts over the coming 30 years rank Vietnam 23 out of 193 countries for the impact of climate change and place it among the 30 countries that are likely to be particularly affected.[1]

2.1 Impact on people, assets and agriculture

The number and severity of natural disasters in Vietnam are on the increase. About 60 per cent of the total land area and more than 70 per cent of the country's population are frequently threatened by storms and floods (Natural Resources Management, 2010). During the period 1990-2010, natural disasters have caused more than 13,000 deaths, and average annual economic losses equivalent to 1 per cent of gross domestic product (GDP). In the period 2008-12, average annual economic losses have increased to about 1.5 per cent of GDP.[2] Heavy rain, floods and soil erosion have caused huge damage to infrastructure, roads and houses.

Symptoms of climate change such as unforeseeable storms, floods, and other extreme weather phenomena, together with diseases of farm animals and crops, have negatively affected food production and livestock farming. In particular climate change has affected average crop productivity and reduced numbers of livestock and poultry. Food production in the damaged areas is threatened, especially among groups of poor and near-poor households. During the period 1997-2001, annual food production increased 2.21 per cent on average but this slowed to only 1.41 per cent during the period 2002-07. A typical episode was the unprecedented cold period which occurred at the beginning of 2008 that damaged more than 150,000 hectares of rice, and 9600ha of rice seedlings, equivalent to about 180 billion Vietnamese dong (VND; around US$8.6 million). The Ministry of Agriculture and Rural Development (MARD) found that the cold killed 62,603 animals, equivalent to a loss of VND 200 billion (US$9.6 million) (MARD, 2008). Research in the northern mountainous areas found that up to 9,050 hectares of agricultural land was lost annually due to droughts (Lau, B.N., 2000). Apart from the direct damage to assets, housing, livestock, food and crop productivity, people also face long-term impacts such as infertile soil and loss of capital for loan payments and investment (Oxfam and AAV, 2012a).

1 The countries facing the highest risks of climate changes are characterised as those with a high rate of hunger and poverty, high population growth, facing the direct impact of climate-related events, dependent on seasonal floods, and with agricultural lands which are vulnerable to drought (Maplecroft, 2011).

2 Official government website (http://baodientu.chinhphu.vn/Home/Chu-dong-cuu-ho-cuu-nan-kip-thoi/20134/165834.vgp)

BOX 1. SIGNS OF CLIMATE CHANGE

Increased salinisation in Tra Vinh and Ben Tre provinces in the Mekong Delta region

Tra Vinh province is located at the lower basin of the Mekong River, in between two river branches, the Co Chien (part of the Tien River) and the Hau River. More than 60 per cent of the total area of the province lies between 0.4 and 1 metre above sea level. Tra Vinh has been identified as one of the provinces most at risk from sea level rises in the Mekong Delta area.

Every year, about 90 per cent of the province's arable land becomes salinised. In 2010, the Southern Irrigation Science Institute found that salinisation in some of the province's river systems, for example Ham Luong and Co Chien, has reached 70 kilometres inland with an average salinity of 0.1‰. Salinity of 4‰ has penetrated 30km inland (The, D., 2010).

Sea water penetration has reduced the size of mangrove forests and affected the forests on alkaline land. Penetration of sea water inland has reduced fresh water species habitats, and reduced sources of fresh water for domestic consumption as well as irrigation. Sea water penetration is also leading to rapid soil degradation in coastal areas.

Ben Tre, the adjacent province to Tra Vinh, is facing similar salinisation problems. According to the Ben Tre Department of Agriculture and Rural Development (2010), salinisation in the main rivers of Ben Tre province (the Tien Giang, Ham Luong, and Co Chien Rivers) has increased. By the end of March 2010, salinisation had reached as far as 50 kilometres inland from the estuary.

Salinisation is causing heavy damage to fishing and aquaculture, including oyster, blood cockle, basa fish and marine shrimp farming in Ben Tre. Oxfam (2008) found that salinisation caused VND 12 billion (US$570,000) in damage in 2003 in Ben Tre province. It also meant that 16,000 households did not have fresh water for domestic consumption. By 2005 this figure had increased to VND 570 billion (US$27 million), mainly because of the damage to rice farming and fruit, coconut and sugarcane plantations. The number of households lacking fresh water in 2005 had increased to 110,000 out of the total 280,000 households in the whole province. A survey of parents by the Department of Child Care and Protection in Ben Tre found that 90 per cent of respondents agreed that natural disasters and extreme weather phenomena have had a negative impact on their household economy (DCCP, 2010). According to Oxfam (2011), unlike in the past, salinisation is now considered a serious problem by local people during its natural hazard assessments.

Ben Tre also suffered other abnormal phenomena: hurricanes, droughts and worsening floods due to high tides. Local people considered the hurricanes especially severe, while droughts were mentioned as causing massive deaths and damage to plantation trees and crops leading to diseases and food shortages. Another problem was that, even though total rainfall remained the same, the rainy season has become hard to forecast and the dry season has become longer. Floods and high tides occurred many times and caused disruption and damage to the livelihoods of local people (Oxfam, 2011).

The challenge of salinisation

The Mekong Delta region is the main rice bowl of the country. Due to its geographical and terrain location, the area is suffering hugely under the impacts of salinisation. Salinisation in the dry seasons has been increasingly occurring inland. In some areas salt water has penetrated for 30-40 kilometres or more inland, significantly salinising agricultural land.[3] Increasing salinisation around the estuaries, combined with sea level rises, has put pressure on domestic water sources, as well as agricultural livelihoods in the coastal areas. Salinisation also threatens diversification in rice and aquaculture farming in some southern provinces (Box 1).

Worsening food security for the most vulnerable

Poor households, or those just above the poverty line, are often the most vulnerable to the impacts of climate change as they lack the ability to respond to shocks.[4] Even a small event can easily make them fall back

3 Scenarios on climate change prepared by the MONRE estimated that in the absence of actions such as bank strengthening and sewerage system improvements, an average sea-level rise of 1 metre would flood 30 per cent of the Mekong Delta flooded. During the flooding season this could rise to 97 per cent of the land area. During the dry season, salinisation could affect 70 per cent of the land unless a series of mitigating actions are taken, including infrastructure construction that takes climate change into account. See MONRE (2012).

4 The 2011 Global Human Development Report indicated that every 10 per cent increase in the number of people affected by severe weather leads to a reduction of about 2 per cent of the Human Development Index (HDI) (UNDP, 2011a). The inter-relationship between climate change and human development in Vietnam has started to form, though it is still in its early days (UNDP, 2012). The HDI is a composite measure that comprises four main indicators: life expectancy, education enrolment, adult literacy, and GDP per person adjusted for purchasing power parity (PPP). This method was designed to assess the progress in human development in a broader way than simply considering income. See UNDP (2011a).

BOX 2. VULNERABLE GROUPS IN VIETNAM

Poor ethnic minorities. Food security is still a big issue among the ethnic minority groups, who have a higher poverty rate than the Kinh or Hoa people. Ethnic minority groups often reside in remote areas, with limited access to infrastructure, information, markets and other services. Low-quality land and limited education levels, which can be a barrier to accessing non-agricultural work to supplement household incomes, are key elements of this group's vulnerability. Even a small reduction in income (for example due to natural disasters or disease) can push them below the poverty line.

Groups facing frequent natural disasters. Vietnam's location and topographical characteristics mean that the country faces increasingly severe natural disasters due to global climate change. Storms and floods are the greatest threat. With about 70 per cent of the population living in low-lying areas – the delta areas or along the 3200 kilometre coastline – these events can cause heavy damage. Poor households and women in areas such as Ha Tinh (the storm capital of the country) and Ben Tre (which is most vulnerable to rising sea levels) have the lowest levels of resilience to natural disasters. The poor often live in inadequate housing and are vulnerable to disease due to lack of effective sanitation and disease-prevention measures. Frequent health problems affect labour resources and these households often have to resort to loans when faced with problems.

Landless or land-poor groups. Those who lack productive land often work locally as waged labourers to earn money for food and other basic household needs. As net food buyers, they are vulnerable to price fluctuations, and as waged labourers they are affected by fluctuating demand for work. Some people who work far from home are cheated and do not get paid. Ethnic minorities are especially vulnerable to this as they lack experience and often do not have access to legal support. Some workers become incapacitated through disease, accidents or drug addiction and become burdens on their family.

Rural-to-urban migrants. Rural-to-urban migration is becoming a common means to enhance incomes and diversify rural livelihoods. However, unskilled migrants are often engaged in the urban informal sector, including dangerous jobs with low and unstable incomes. Some migrants working in the formal sectors in the industrial and manufacturing zones often have to work overtime and live in low-quality rented houses. They limit spending in order to send money home. Many migrant workers do not have labour contracts, insurance or welfare benefits, as regulated by the labour law. These groups often face difficulties due to increasing living expenses, and have limited access to social services in the cities. In addition, they also face the risk of losing their jobs as companies struggle during difficult periods for the economy.

Groups producing agricultural commodities. These groups faced market fluctuations during Vietnam's accession to the World Trade Organization (WTO) and unfavourable weather conditions that negatively affect income and food security. Prices of agricultural inputs and materials (such as fertilisers, seeds or mechanical services) have increased, while prices for agricultural products have fluctuated, sometimes even falling. Small-scale producers are very dependent on these inputs for production, borrowing money to pay for them from private sources and paying back after harvest, and it is difficult for them to convert to other livelihoods. Where there are only weak linkages between farmers and their groups or co-operatives, manufacturers and exporters, and brand promotion and marketing, small-scale producers will continue to face market risks.

Resettled groups. Resettlement is a national policy response to environmental pressure. However, research indicates that resettlement has not necessarily improved quality of life and food security. Research by Adam, F. *et al.* (2003) in the provinces of An Giang, Dong Thap and Long An found that 60 per cent of the household heads they interviewed in the resettlement areas thought they had worse opportunities than the local farmers, including land and water shortages. According to Dun, O. (2009), some resettlement areas lack essential infrastructure and services such as schools, healthcare, and facilities for water and waste treatment. The United Nations Development Programme (UNDP) found a high percentage of resettled households in debt due to the long-term low-interest loans they were provided with to buy or build their houses. Most of the poor and near-poor households interviewed live hand-to-mouth and are unable to save. On average, the incomes of people living in the government's resettlement areas were lower than those who decided not to live there.

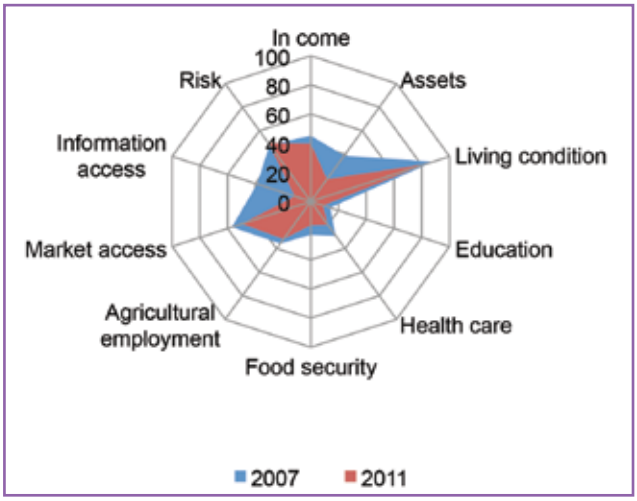
into poverty or get into debt and then it is difficult to recover. Natural disasters also contribute to widening gaps between people's living standards, with growing numbers of people losing key assets such as their homes due to the increased frequency and intensity of climate events.

Several reports have described the impact of climate change on vulnerable groups. Oxfam and AAV (2011a) demonstrated that among poor households suffering food shortages, those who frequently faced natural disasters and ethnic minority groups are most affected. According to Mai, T.S. *et al.* (2011), climate change has

worsened food security among ethnic minority groups in the northern mountainous area, with serious impacts on land, assets, health and livelihoods. Hoang *et al.* (2009) also pointed out that some vulnerable groups can easily fall into food insecurity as a result of the combined impacts of climate change and price fluctuations (Box 2).

Oxfam and ActionAid International in Vietnam (AAV) carried out participatory monitoring of poverty from 2007 to 2011 in nine rural provinces of Vietnam. Over that period, there were improvements in ownership of assets, access to information, living conditions, education and healthcare, but exposure to natural disasters worsened (Figure 3). Extreme weather events including long droughts, heavy rain and cold weather spells are becoming more complex and causing new diseases. As well as the direct damage to assets, housing, livestock, food and crop productivity, people also face long-term impacts such as infertile soil and the loss of capital for loan repayments and investment (Oxfam and AAV, 2012a).

Figure 3. Multi-dimensional rural poverty, 2007-11 (%)



Source: Oxfam and AAV (2012a)

Damage to infrastructure

Climate events have done serious damage to Vietnam's infrastructure, often disrupting the distribution of food to both urban and rural areas. The 2008 flooding in Hanoi disrupted transport for a week, leaving people in some areas cut off by the water. The difficulty of transporting vegetables and foodstuff to the city increased the price of fresh food significantly. People had to pay five to seven times more for vegetables, while chicken and pork prices increased by some VND 10,000 per kg (Quynh, A., 2011 and An, H., 2008)

BOX 3. ANNUAL FLOODING IN THE DUC HUONG COMMUNE (HA TINH)

The people of Duc Huong commune are used to the annual rain and flood season that usually lasts from August to October. Storms No. 2 and No. 5 in 2007, and the long floods of 2008, 2009 and 2010, however, have had a particularly bad impact on their livelihoods. Huge damage was caused to roads and irrigation systems, and the floods meant farmers could only produce a single crop of rice in those years.

The flooding in 2010 was the most severe yet. There were two floods in September and October 2010, the first from 29 September to the 2 October and the second from 16 October to 22 October. In the Duc Huong commune, 798 out of a total of 913 households were flooded, of which 545 faced water levels of 1-3 metres. Eight houses collapsed and 398 auxiliary facilities were seriously damaged. The water reached 60 per cent of public communications facilities and electric meters. Three schools with a total of 18 classrooms were also flooded. The water swept away 14 cows and buffaloes and most of the pigs and chicken in the commune. One person died trying to escape from the flood.

Rain and floods also had a serious impact on people's lives, as most of the villages were isolated, and power was cut. Boats became the only way to move around. When the water rose, people had to climb into their 'garrets'[5] to carry out all their daily activities. Many households did not have food during the floods as their supplies had got wet, while others had to eat instant noodles for days until the flood waters receded.

There was a huge shortage of fodder for livestock after the floods as supplies were ruined. People had to buy hay from other places at very high prices. According to the local people, enough hay to feed a cow for 7-10 days cost VND 370,000-400,000 in December 2010, nearly as much as rice. Many households found it especially difficult to spend such amounts on fodder when they had to recover from the consequences of the flooding and restore production, and in some cases had to sell other assets to feed their cows and buffaloes.

Source: Oxfam and AAV (2011c)

5 In Vietnam, the 'garret' is a bamboo or wooden space located up near the house's ceiling. During flooding, people move their belongings to the garret and stay there until the waters recede.

Climate change has directly damaged the infrastructure supporting tourism in Vietnam, especially transport systems, accommodation and entertainment facilities (Tran, T.H., 2011). This has led to a reduction in the number of tourists and disruption of tourism activities at the coastal commune of Nghe An province.

Natural disasters are also directly affecting food utilisation. Heavy floods have polluted water sources and caused outbreaks of disease and shortages of fresh foods. Similarly, droughts and salinisation have led to shortages of drinking water and vegetables. For example, a double flood at Duc Huong commune (Ha Tinh province) at the end of 2010 left the whole commune under water, causing serious damage (Box 3) (Oxfam and AAV, 2011c).

Labour migration in Vietnam

3

3.1. Internal migration

Population re-allocation and labour mobility have been common policy themes in Vietnam, with state-managed migration programmes implemented since the late 1970s. Organised migration became official policy in 1986. The process of de-collectivisation has helped free farmers from land ties. The country has made a transition from a central planned economy to a market-oriented one, with the removal of regulations that limited private enterprise and intensive investment in transportation and communication (Dang, N.A. *et al.*, 1997). There are increasing differences in living conditions and job opportunities among the regions (PWG, 1999), and looser regulations on migration (Doan, M.D. *et al.*, 1998). The commercialisation of agricultural commodities has also created rural jobs and more chances for rural-to-urban migration (UNDP, 2012). New economic zones have sprung up, dedicated to industrial growth, services and technologies. Foreign direct investment has been a driving force of migration to newly-developed industrial zones (Dang, N.A. *et al.*, 2006).

It is estimated that 4.57 million people migrated within Vietnam from 1976 to 1995. During the period 1994-1999, the number reached 2.1 million, including both individual and organized migrants (Dang, N.A. *et al.*, 2006). The total number of migrants over five years old in 1999 was 4.5 million, equivalent to 6.5 per cent of the total population. The most recent census found that in 2009 this had risen to 8.6 per cent, or about 6.7 million people, a significant rise (Central Population and Housing Census Steering Committee, 2010). In addition to these internal migrants, it is estimated that there are about 400,000-500,000 Vietnamese working overseas within the region and in the Middle East, under the country's 'labour export policy' (UNDP, 2011a). As the census did not count seasonal, unregistered or return migrants, the actual number of migrants is likely to be much higher. It is estimated that the total number of internal migrants will reach about 10.4 million people in 2019, equivalent to 12% of the country's total population (UNDP, 2011a).

Where are people migrating to?

According to GSO (2005), the biggest outward migration was from the Mekong Delta area to the southeast, with more than 714,000 people. The second biggest was from the north central and central coast to the southeast, with more than 570,000 people. The third biggest migration was from the Red River Delta to the southeast with more than 195,000 people. The southeast has seen by far the largest inward migration, receiving 1.6 million people, much higher than any other region. The Red River Delta received the second highest number, about 290,000 people. Of these, 155,000 came there from the midland and northern mountainous areas, followed by 98,000 from the north central and central coast areas. The Central Highland received the third largest number of immigrants, with 161,000 people.

Migration also takes place within districts and provinces. Table 1 shows that, out of a population of 78 million people over five years old in 2009, 1.6 million (2.1 per cent) had permanently migrated within a district, 1.7 million (2.2 per cent) had migrated to other districts in the province, while 3.4 million (4.3 per cent) had migrated to other provinces. People are increasingly migrating to other provinces, from 1.3 million in 1989 to 2 million in 1999 and 3.4 million in 2009. As a proportion of the total population, the share also rose from 2.5 per cent in 1989 to 2.9 per cent in 1999 and 4.3 per cent in 2009 (GSO, 2010a).

With the development of small towns and industrial zones in many rural areas, there is an increasing trend of migration from urban to rural areas. From 2009-11, the impact of the economic crisis, high inflation and high prices has caused many workers to shift from factories and industrial zones in cities like Hanoi or HCMC to places nearer their original homes (Oxfam and AAV 2012b).

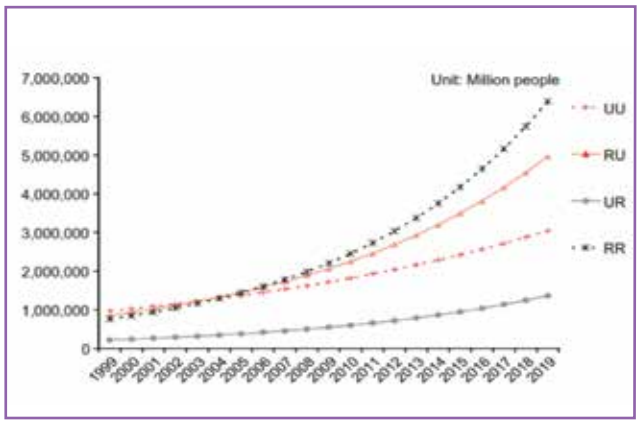
Data from the census shows that permanent rural-to-rural migration in 2009 was about 2.2 million, more than double the figure for 1999 (Figure 4). Rural-to-urban migration also more than doubled since 1999, reaching more than 2 million. Urban-to-urban migration

Table 1. Migrant population by scope of movement, 1989-2009

	1989		1999		2009	
	NUMBER	%	NUMBER	%	NUMBER	%
Intra-district migration	-	-	1,342,568	2.0	1,618,160	2.1
Inter-district migration	1,067,298	2.0	1,137,843	1.7	1,708,896	2.2
Inter-provincial migration	1,349,291	2.5	2,001,408	2.9	3,397,904	4.3

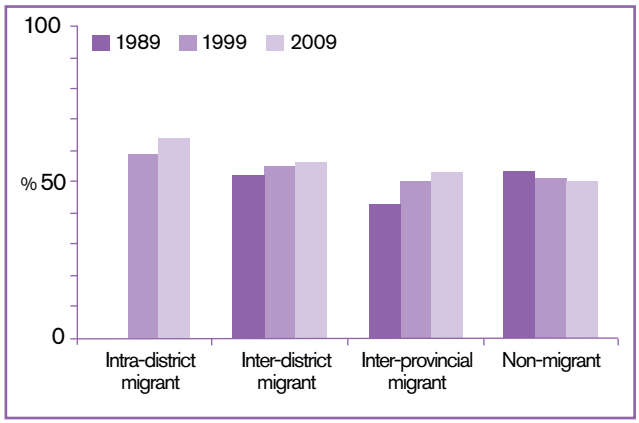
Source: GSO (2010a)

Figure 4. Permanent migration flows between urban and rural areas, 1999-2019 (projected)



Source: GSO (2010a)

Figure 5. Female migration by type and year, 1989-2009



Source: GSO (2010a)

was lower, about 1.7 million people, although this is projected to become the main type of movement as Vietnam becomes more urbanised. About 500,000 people migrated from urban to rural areas (GSO, 2010b). From 1999 to 2005, the number of rural-to-urban migrants had been higher than the number of rural-to-rural ones but after 2005 rural-to-urban migration increased more slowly than rural-to-rural. A number of labourers also came back from urban to rural areas due to the difficulties they were facing in cities.

The census also showed that the numbers of female migrants have been rising during the recent two decades, especially among short-distance migrants, that is those moving within districts or between districts within a province (Figure 5). Female migrants accounted for more than half the total intra-district and inter-district migrants between 1984 and 1989. Women and girls accounted for less than half of the total inter-provincial migrants in 1989, but reached an equal ratio with male migrants in 1999. By 2009, the number of female migrants was higher than males in all groups (GSO, 2010a. The main reasons for this increase are the reduced need for rural agricultural labourers and the rise of employment opportunities for women in cities and industrial zones (Dang, N.A. *et al.*, 2003; Kabeer, N. *et al.*, 2006).

Migration is both a driver and a result of socio-economic development (UN Vietnam, 2010). Socio-economic development is potentially important for food security if it increases resilience to climate change, supports food production and increases incomes to buy food. Labour mobility in Vietnam is essentially a form of adaptation to change – which includes socio-economic and cultural change as well as environmental change, and as such is relevant to food security. Permanent rural-to-urban migration of more educated or skilled people can lead to wider inequality between sending and receiving areas because of the 'brain drain' effect, whereby more prosperous urban areas may gain more while the poorer rural areas may lose out as permanent rural-to-urban migrants tend to come from wealthier households (GSO, 2010b). On the other hand, temporary seasonal migration of less educated and less skilled migrants is considered a way to reduce the gaps between rural and urban areas with some studies estimating that earnings increase consumption levels by 5 per cent and reduce the number of people in poverty by 3 per cent (Brauw, A. *et al.*, 2007; UN, 2010). Seasonal movement can reduce rural unemployment and poverty, and create the conditions for the diversification of the rural economy through cash and commodity redistribution, labour transfer, information dissemination and the modernisation of traditional rural social structures (Hoang, X.T. *et al.* 2005; Oxfam and AAV, 2012a; Tran, N.M.T. 2010; UNDP and MARD, 2012).

3.2. Pull and push factors for migration

The policy context is an important factor influencing migration. Both urbanisation and commodity agriculture are linked to changes in labour allocation. Oxfam and AAV (2012a) found that differences in job opportunities and incomes among regions were at the root of labour mobility in their study areas. Currently, small-scale agricultural producers generate little income while facing high risks of natural disasters, diseases and price fluctuations. They experience long periods when there is no work to do after harvest but they still have to cover high living expenses and pay for their children's education. Many rural areas have very limited opportunities for non-agricultural jobs and services. Meanwhile, there is a high demand for low-skilled and manual labourers in the cities, industrial zones and commodity production areas. Urban men and women are unwilling to take up key jobs in the informal sector such as housemaids, sales assistants, dockers, street vendors or waste material collectors. This provides an opportunity for rural migrants. Better road conditions, more convenient communication, and looser regulation on migration have also contributed to migration trends (Box 4).

BOX 4. PULL AND PUSH FACTORS FOR RURAL MIGRATION

Oxfam and AAV (2012a) found a number of pull and push factors driving migration in their rural monitoring points in recent years (2007-11). These were:

Pull factors:

i) There is a high demand for manual labour during the coffee harvest in the central highland provinces and the farming season in the southeast provinces. This work includes weeding, sowing and harvesting maize, cutting sugarcane and harvesting cashew nuts, and creates seasonal jobs for people with long periods of slack time after harvest from areas such as Duc Huon (Ha Tinh), Thuan Hoa (Tra Vinh), Phuoc Dai and Phuoc Thanh (Ninh Thuan), where lack of suitable agricultural land allows only one crop a year.

ii) After the 2009 economic crisis, many companies came recruiting in rural areas, including remote areas with high concentrations of ethnic minority people such as Luong Minh-Nghe An. These companies did not require people with any education, or only required primary education level.

iii) Demand for housemaids and sales assistants is increasing in the cities, creating job opportunities for rural and ethnic minority women.

iv) Better road conditions in Duc Huong (Ha Tinh), Luong Minh (Nghe An), Cu Hue (Dak Lak), and Thuan Hoa (Tra Vinh), with more buses connecting provinces to big cities, have enabled migrants to travel.

v) The rapidly developing mobile network has enabled the migrants to contact and communicate with employers, job middlemen and their own family (in all the monitoring points).

Push factors:

vi) Floods in Duc Huong (Ha Tinh) and droughts in Luong Minh (Nghe An) and Phuoc Dai (Ninh Thuan) are becoming more severe, causing heavy damage to trees and livestock.

vii) Lack of agricultural land among poor Khmer households in Thuan Hoa (Tra Vinh) meant people had to work as labourers, but increasing mechanisation of agricultural production has reduced demand.

viii) There were specific push factors in individual areas. For example in Luong Minh (Nghe An), many men wanted to migrate in order to avoid drug addiction, while women wanted to move in order to get married away.

Source: Oxfam and AAV (2012a)

Pull factors

With the economy restructuring towards industrial production and services, cities have attracted large numbers of labourers from rural areas. During the last 20 years, Vietnam has urbanised fast and its cities are getting larger with significant changes in infrastructure. Vietnam is considered one of the countries with the highest rate of urbanisation in Southeast Asia. The country now has 755 cities, with Hanoi and HCMC dominating the rest. The urban population makes up about 34 per cent of the total, and is growing at a rate of about 3.4 per cent a year (Central Population and Housing Census Steering Committee, 2010).

Urbanisation has created more job opportunities while differences in income have encouraged rural-to-urban migration. Economic reasons accounted for about 70 per cent of domestic migration (GSO and UNFPA, 2005). A survey by UNDP and MARD (2012) found that 92 per cent of migrants to HCMC could find more job opportunities, and 88.5 per cent could get higher incomes in HCMC than in their homeland.

In rural areas, the availability of fertile land for commodity cash crop agriculture has attracted large-scale rural-to-rural migration, especially among farmers in areas with high population density such as the Red River Delta and Mekong River Delta (under the government resettlement programmes in the late 1970s and 1980s) and among ethnic minorities in areas with small-scale or mountainous land holdings such as the northern mountainous provinces where there has been spontaneous migration since the 1990s. Permanent flows of Kinh and ethnic minority settlers have been attracted to the Central Highland and the southeast by the possibility of profitable cash crops including coffee, maize, pepper, cassava and sugarcane. Once commodity agriculture has been developed, it attracts further seasonal rural migrants during peak farming seasons.

Changes in state regulations have also made it easier for people to move. Before 1990, the government kept strict control over migration through a system of permanent and temporary residence registration. Due to the higher demand for labour in the industrial zones and service sector after Doi Moi[6], these regulations have been loosened in order to enable population movement. Some regulations came into effect in 2005 making it easier for migrants with KT3 (or temporary)[7] residence to become permanent residents (UN Vietnam, 2010). The Law on Residence No. 81/2006/QH11, dated 29 November 2006, came into effect in July 2007 and further loosened residence regulations. Citizens are allowed to reside freely anywhere within

6. *Doi Moi* (Renovation) is the name given to the economic reforms initiated in Vietnam in 1986 with the goal of creating a "socialist-oriented market economy".

7. The KT system classiffies urban households by residence status. KT1 applies to permanent households who have official residence registration in that district; KT2 applies to households registered as resident in other districts of the city; KT3 applies to households with temporary residence registration for at least six months; KT4 applies to households or persons who do not have a settled residence, but stay in rented accommodation and have registered for residence for less than six months.

Vietnam as permanent or temporary residents, without any pre-conditions, and it has become easy to register temporary stays and absences.

Many researchers have noted the role of social networks in the process of migration in Vietnam. Social networks influence decisions on destinations (Dang, N.A. *et al.*, 1997; Le *et al.*, 2011). People from the same area often migrate as a group to the same destination, making it easier for rural migrants to adapt and settle into jobs when they arrive. Figures from the General Statistics Office (GSO) census in 2009 showed that migrants had greater social capital than non-migrants (GSO, 2010a). People from the same area can exchange information and newcomers are helped by existing migrants to find jobs and share rental accommodation (Oxfam and AAV, 2012b). In recent years, the number of young ethnic minority migrants has risen in urban areas and industrial zones. This trend is partly explained by companies from industrial zones increasingly advertising for labour in the mountainous areas but also because young people from ethnic minorities have contact with relatives, friends and fellow-countrymen who have already migrated, making them more active in seeking out opportunities to migrate themselves.

Push factors

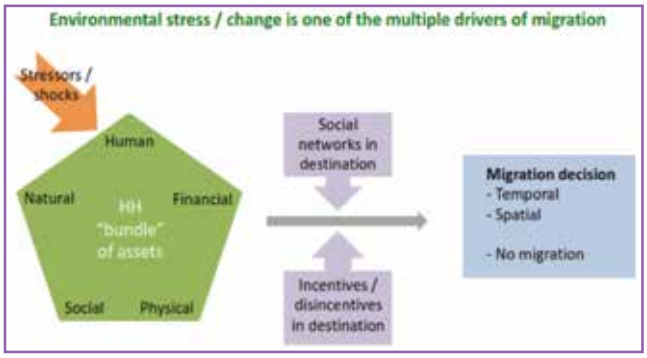
Lack of productive land is an important driver pushing rural people out of their area. Vietnam's average productive land area per person is low. GSO (2012a) shows that the country has nearly 9.3 million households farming rice, of which 85 per cent have less than 0.5 hectares of rice-growing land, and about 50 per cent have less than 0.2 hectares, especially in the Red River Delta, Northern Mountain and Central Coast regions. Limited land encourages outward migration in order to sustain household incomes. Research by the UNDP with immigrants in Hanoi and HCMC indicated that looking for jobs offering better income was the most important reason for migration (UNDP, 2012). Research by the Institute for Social Development Studies (ISDS) in Thai Binh and Tien Giang, two areas of high out-migration, showed that one in every four migrants left because of land shortages and/or unemployment (Le, B.D. *et al.*, 2011). Combine harvesters and other machinery are being increasingly used to replace manual labour, especially in rice farming. In the Mekong Delta, because of the lack of productive land, many households depend on hiring out their labour to do earth works, weeding, rice harvesting and so on. Mechanisation leaves fewer opportunities, increasing outward migration as they seek work elsewhere (Oxfam and AAV, 2010a).

Table 2. Perceived risks that greatly affect households' livelihoods, 2007-11

COMMUNE	PERCENT OF HHS FACING RISKS		RISKS AFFECTING HOUSEHOLD (HH) LIVELIHOODS IN 2011							
	2007	2011	Natural disasters, drought, flood	Epidemics, pests, disease	Unfavourable prices	Under employment, unstable jobs	Ineffective use of loans	Ineffective application of new varieties techniques	Illness, accident	Others
Thuan Hoa	48	33	10	95	10	5	0	0	15	0
Ban Lien	55	62	19	92	30	0	5	0	8	11
Thanh Xuong	22	22	31	46	8	0	0	0	77	8
Luong Minh	65	72	93	79	43	12	43	5	26	0
Duc Huong	63	37	73	55	46	14	5	0	55	0
Xy	30	60	75	86	39	8	3	3	28	3
Cu Hue	60	35	5	62	43	5	5	10	33	0
Phuoc Dai	-	70	60	62	45	7	5	2	21	2
Phuoc Thanh	-	55	76	55	36	6	3	0	6	0
Thuan Hoa	38	41	21	46	13	42	13	13	29	8
Average	49	49	52	70	34	10	10	3	26	3

Source: Oxfam and AAV (2012a)

Figure 6. Links between environmental stress and migration



Source: UNDP and MARD (2012)

Rural populations face increasing risks. Individual shocks such as the loss of a job, an accident, diseases or the death of a family member risk sending rural households into poverty, as do wider shocks such changes in rainfall and temperature, human and animal influenza epidemics, and the global financial crisis. The combination of various shocks has caused difficulties for the poor and near- poor, and even non-poor households (WB, 2012). Oxfam and AAV (2012a) found that in the checkpoints in nine provinces they were monitoring, half the households surveyed faced serious and continuous risks between 2007 and 2011 (Table 2).

According to UNDP (2008), the damage to productivity caused by climate change has increased the pressure for migration. The areas suffering the most severe climate events have seen high levels of outward migration, with men often leaving home to find jobs, leaving women with the burden of responding to storms and floods (Oxfam and AAV, 2012a). UNDP and MARD (2012) found that environmental shocks were one of a combination of factors that directly or indirectly affected migration decisions (Figure 6). In return, migration as a response to environmental pressures can strengthen households' resilience through income diversification and cash remittances, and by spreading risks in different locations (CTU, IOM and UNDP, 2012).

The food price hikes that started in 2008 also had an impact on mobility and migration. Oxfam and AAV (2008) found that prices of agricultural inputs were rising faster than prices of agricultural produce, harming the poor who are producers, labourers and also in many cases net food buyers (Box 5). As the economy has become more deeply integrated into the global market, domestic prices have fluctuated. For example, the coffee price in Dak Lak changes daily in line with global market fluctuations. Low profits have pushed farmers away from rice farming and pig raising and towards non-agricultural work, for example as wage labourers locally or further afield, either permanently or temporarily/seasonally (Oxfam and AAV, 2011b).

BOX 5. THE IMPACT OF PRICE FLUCTUATIONS ON TYPICAL POPULATION GROUPS IN 2008

Rural net rice sellers (Dien Bien). In theory, this group benefits from increased rice prices. However, input prices for fertilisers, insecticide, labour costs and agriculture services also increased. While rice prices increased 50-60 per cent (with the price of husked rice increasing a similar amount), fertiliser prices increased 60-100 per cent. The price of rice fell from June to August 2008, while fertiliser prices kept on increasing, making the situation even more serious. In addition, high risks such as natural disasters have strongly affected production effectiveness in the context of fluctuating prices.

Rural net rice buyers (Quang Tri). Often concentrated in the mountainous areas, where ethnic minorities face unfavourable conditions in terms of land and irrigation, this group has to buy rice and suffers when prices increase. They generate the income to buy rice by selling maize, tapioca and other crops, or hiring out their labour (including migration).While the selling price for fresh tapioca paid by factories increased 45 per cent, the buying price of normal rice from the lowlands increased 70 per cent.

Other cash crop producers (Dak Lak). Groups producing for manufacturing or export are generally concentrated in areas with favourable conditions for the production of commodities such as maize, coffee and fish. The prices of commodities depend on global markets. These groups may also be engaged in rice production but are also rice buyers. Fluctuation in the prices of inputs such as fertilisers, fuel and seeds, and those of the commodities they produce affect households. The price of dry maize increased by 30 per cent and the price of dry coffee beans increased more than 20 per cent, with some fluctuation, but rice prices rose by 60 per cent and fertiliser prices by 70-100 per cent. The price of potassium increased 150 per cent.

Urban net rice buyers (Hanoi, HCMC). People living in urban areas have to buy their rice. They face difficulties when the price of rice and other foods and services increases. The impact depends on their income from non-agriculture work: daily wage rates and job security strongly affect the livelihoods of the urban poor and near poor in a period of rising prices.

Source: Oxfam and AAV (2008)

Improvement in infrastructure and communication has also made migration easier. The GSO's agriculture and fisheries general survey (2011) indicated that both the availability and quality of rural transportation has improved. Virtually all communes now have roads that vehicles can access, an increase of 1.1 per cent over the survey in 2006. Access through all-season-roads has also increased by 3.5 per cent since 2006. Better roads and more inter-provincial bus routes have helped mobility and migration (Oxfam and AAV, 2011a).

The GSO (2011) also showed that 99.8 per cent of communes (up 1.1 per cent on the 2006 survey) and 95.6 per cent of villages (up 3.2 per cent) now have access to the national electricity network. Many households have bought televisions, mobile phones and computers, giving them greater access to information (WB, 2012). The proportion of rural households with a telephone has increased rapidly in recent years, from 5 per cent in 2001 to 87 per cent in 2011.

Oxfam and AAV (2012a) found that, in their monitoring areas, increased telephone possession was the most important improvement among poor and non-poor households in recent years. Wireless and mobile phones have become popular, helping with information exchange, community activities, buying and selling, and finding work and workers both locally and far away.

Impacts on food security from the wider context

4

4.1. Availability

Food production

Economic growth has brought significant changes to Vietnam's macro-economic structure. Only 20 years ago, nearly 80 per cent of the country's population lived in the rural areas, with only 20 per cent living in the towns and cities. The urban areas were mostly concentrated in the country's two economic and political centres, Hanoi in the north and HCMC in the south. More than 40 per cent of the country's GDP came from agriculture, followed by services and industry. Although growth in the agricultural sector has played an important role in the development of Vietnam and poverty reduction, its contribution to GDP has halved, and it accounted for only 20 per cent of total GDP in 2010 (WB, 2012).

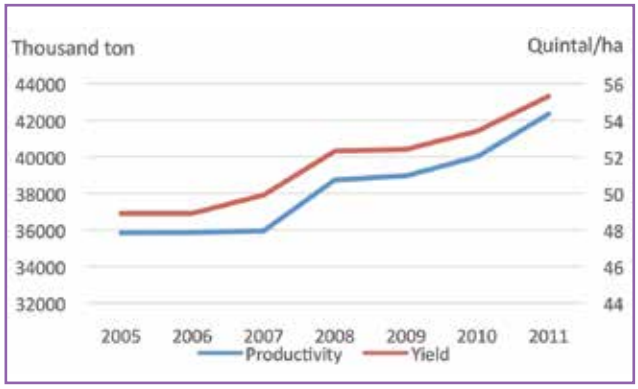
The agricultural sector grew 3.34 per cent per year on average during the period 2006-10; this has slowed in recent years, however, to only 1.83 per cent in 2009 and 2.8 per cent in 2010 (GSO, 2011a). Nationally, Vietnam is able to grow enough food for its needs (MARD, 2011). Rice, the country's main produce, has not only sustained domestic food security, but also exports.

In recent years, agricultural output has mostly increased through productivity improvements, rather than by expanding the area under production. Data from the GSO (2011) show that rice productivity and production increased from 2005 to 2011. Average rice productivity was 48.9 quintal per hectare in 2005, but reached 55.3 quintal/ha in 2011. As a result, total domestic rice production increased from 35.8 million tons in 2005 to 42.3 million tons in 2011. GSO data also showed that 2011 saw the highest level of rice yield and production in the past 10 years (Figure 7).

Rice production has been boosted since the late 1980s by land use reform, market liberalisation, and improved technology. From being a net importer, Vietnam exported rice for the first time in 1989 and rice is now one of its key export commodities. The country is the second biggest rice exporter in the world, significantly contributing to the global food supply (OECD-FAO, 2012). During the five years from 2006 to 2010, Vietnam exported more than 26,757 million tons of rice, earning more than USD 11.5 billion (MARD, 2011). It produces 6 per cent of the world's total rice and exports 15 per cent of the world total marketed rice (AAV, 2010). Exports are increasing and have exceeded 7 million tons in in 2011 (GSO, 2011).

Despite Vietnam's export performance, many groups are still facing food shortages. In 2012, there were shortages during the periods between crops in the rural areas: 450,300 households, equivalent to 1.9 million people, faced food shortages and hunger. These mostly occurred in the midland, northern mountainous, north

Figure 7. Rice production and yield, 2005-2011

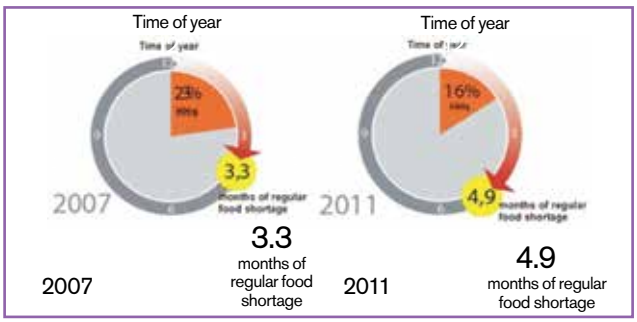


Source: GSO, 2005, 2006, 2007, 2008, 2009, 2010c, 2011b

central, central coastal and central highland areas (Official Government website, 2012). Statistics from the National Institute of Nutrition (2012) showed that the greatest concentration of households experiencing food shortages in 2010 was in the northern midland/ mountainous and central highland regions (13.1 per cent and 15.6 per cent). Those regions suffering from the greatest impact of natural disasters saw rates five times higher than those in the delta and urban areas (21.4 per cent against 4.6 per cent). Extremely poor households are three times more likely to suffer food shortages than the national average (21.5 per cent against 6.6 per cent). Work by Oxfam and AAV (2012a) also found that every rural locality has a group in 'chronic poverty' that lacked food due to disability, long-term sickness, old age, single status or other factors. These people also faced other limitations, such as lack of agricultural land, or exposure to natural disasters. Continuous monitoring from 2007 to 2011 showed a large reduction overall in the percentage of households suffering regular food shortages, from 23 per cent to 16 per cent. Among the chronically poor households, however, the period of food shortage they faced each year actually increased by six weeks (Figure 8).

Unlike rice, maize production does not meet domestic demand. In 2005, the area under maize was 1.05 million hectares, with productivity of 36 quintal/ha, meaning production totalled 3.8 million tons. In 2011, the area had increased to 1.08 million ha and productivity to

Figure 8. Duration of regular food shortages, 2005-2011



Source: Du, L. (2012) based on data from Oxfam and AAV (2012a)

43 quintal/ha, for a total production of 4.6 million tons (GSO, 2011). Vietnam's productivity is low compared with industrialised countries: for example, the United States produces 90-100 quintal/ha. Vietnam was a maize exporter during 1995-97, exporting about 230,000 tons in 1996/97. After 1997, demand for animal feed rose and Vietnam increasingly has to import maize, from 50,000 tons in 2001 to 300,000 tons in 2002. During the period from 2007/08 to 2009/10, Vietnam imported an average of 1 million tons of maize each year and in 2010/11 that figure rose to 1.5 million tons. It is estimated that the country imported 1.6 million tons of maize in 2011/12 (FAO, 2012b).

Livestock rearing is growing at a rate of 6.3 per cent a year to meet domestic demand. The value of livestock as percentage of the agriculture sector has increased from 19 per cent in 2005 to 21.6 per cent in 2010 (MARD, 2011). In recent years, there has been increasing investment in livestock facilities. By July 2010 there were 23,558 livestock farms in the country, an increase of 42 per cent since 2006. At the same time the number of small-scale livestock-keeping households declined because of disease, increases in input prices and fluctuating sale prices.

Fisheries continue to develop rapidly, both in captures and farming, and are now a key agriculture sector (MARD, 2011). The average fisheries production value has increased 7.5 per cent a year during the period from 2005 to 2010. Fish farm yields also increased rapidly, by 266,000 tons a year on average, from 1.47 million tons in 2005 to 2.8 million tons in 2010. The total captures yield has increased from 3.46 million tons in 2005 to 5.43 million tons in 2011 (GSO, 2011). The structure of the fisheries sector continues to change with the development in aquaculture activities, which has risen from 59.2 per cent of the sector by value in 2005 to 67 per cent in 2010. By contrast, the captures value has declined from 40 per cent in 2005 to 33 per cent in 2010.

Rural-urban linkages and food security

Food availability is closely linked to rural-urban linkages in the form of intensive connections between producers and markets, especially those run by local traders and located in small towns. Rural-urban linkages strongly affect local economic growth: access to urban markets is vital for agriculture producers, while many enterprises in the cities depend on customers in the rural areas. Such linkages are also important for poverty reduction in many rural areas, through the combination of various agricultural and non-agricultural activities. Household members who work in the cities can send money back home for investment, or provide market information and labour skills. For the poor, money received from cities can help cover daily expenses for food, education, healthcare and loan repayments (Hoang, X.T. *et al.*, 2005).

Urbanisation promoting local production

Urbanisation is linked to higher demand for food that in turn stimulates local production. The increase in both the number of urban people and their income has led to an increase in demand for agricultural products, especially high-value products such as meat, fish, fruit and dairy products. For instance, in order to meet the increasing demand for fresh milk, the total number of dairy cows increased by 14,000 in a single year, to 142,700 in October 2011 (GSO, 2011a). Fruit production has also developed rapidly, as many rural areas have converted from low-profit rice farming into fruit growing in order to meet the increasing consumer demand. Hoang, X.T. *et al.* (2008) noted the conversion from rice to fruit in the Mekong Delta. For example, in Tam Hiep commune (Ben Tre province), almost 100 per cent of local households converted from rice to fruit farming (longan) during the 1990s in order to

BOX 6. CHANGES IN LIVELIHOODS IN NGO LUONG COMMUNE

There have been many changes in the livelihoods of Muong ethnic people in the remote Ngo Luong commune (Tan Lac district, Hoa Binh province) during the past three years. Thanks to investment in infrastructure, agricultural extension services and improved market access, many households have seen economic improvement and less instability.

Since 2009, aware of the increased demand for fresh vegetables in Hanoi and other cities, and for inputs for animal feed manufacturing, households in Ngo Luong commune have generated income from growing hybrid maize and chayote. During the first six months of 2010, 270 hectares of maize were planted in the commune, of which 229ha of hybrid maize and 10ha of chayote. Hybrid maize was farmed by 90 per cent of households in the commune, while 70 per cent of households engaged in chayote farming. The average income for those raising two crops of maize per year reached VND 15-20 million a year while chayote farming brought about VND 5 million per household per year on average.

As a result, the commune poverty rate has fallen from 47 per cent in 2007 to 34 per cent in 2010. At present, most households have sufficient food and several were able to buy new assets. In 2007, about 30 per cent of households in the commune possessed a TV and 20 per cent possessed motorbikes. In 2010, these percentages increased to 95 per cent and 70 per cent respectively.

Source: Helvetas (2010)

meet market demand, both internal and for export. The conversion from rice into longan farming was the main driver for improved rural livelihoods during the period from 1993-2011 (Nguyen, T.G. *et al.*, 2011). Despite price fluctuations, fruit generates a much higher return than rice. Farmers commonly say that '1,000 m2 of vegetable or fruits farming generates a higher income than 5,000 m2 of rice farming', showing how conversion to plantation trees has helped improve people's income significantly (Wells-Dang, A., 2012).

Conversion to cash crops has helped generate local economic benefits, improving livelihoods and sustaining household food security even in remote ethnic minority communities (Box 6).

Market agents promoting rural-urban linkages

In urban areas, local shops and street vendors meet a variety of city dwellers' food demands. They have created an effective network that reaches every corner of the cities to provide rice, foodstuffs and other consumer items. Oxfam and AAV (2011a) found that small-scale trading, either from shops or street vending, is a common choice of employment for married women, mostly in the 30-35 age group. At three urban monitoring points in Hanoi, Hai Phong and HCMC, they found that more than 50 per cent of small-scale traders came from other localities, both as commuters and migrants. Small traders often move around and work among people from the same home towns, relying on their informal social networks. This is a popular occupation: at the three surveyed urban sites, it is estimated that the number of small traders rose by 10-30 per cent between 2010 and 2011.

In rural areas, local traders (small-scale collectors and big purchase agents) work as a network and purchase agriculture products from farmers. They then grade and pack the produce before transporting it to wholesalers at the markets. In areas with large-scale production of commodities like coffee, maize (Dak Lak), and rice (Dien Bien), agents provide production inputs as loans to farmers which are then repaid as part of the produce sale upon harvest (Oxfam and AAV, 2012a). Middlemen also play an important role in non-food chains, such as the product chain for craft villages. For example, at the Ngoc Dong traditional bamboo and rattan village (Ha Nam province), small 'contractors' advance materials and then collecte raw products from the villagers before sending them to enterprises for finishing and export (Hoang, X.T. *et al.*, 2005).

In rural areas, most local traders buy rice and other foodstuffs from agents at a district centre and then sell locally at a 10-30 per cent profit. Local shops are especially important in the remote areas. These are where the local people can borrow rice and consumer items, as well as fertilisers and seeds for production. They can even borrow cash for local events or their children's education expenses, paying interest which may be as high as 3-4 per cent a month. Local traders with their 'borrow first, and return later' operations can be seen as unofficial banks that are an integral part of people's life (Oxfam and AAV, 2012a).

According to GSO (2011), there were 8,550 marketplaces in Vietnam in 2011. Traditional markets can be formal or informal, operating at day or at night, and many of them have existed for hundreds of years in both rural and urban areas. There are many general and specialised wholesale markets acting as hubs for their localities. Together with the development of commodity chains, marketplaces also develop services that create jobs for local people. For example, in the Mekong Delta, Hoang, X.T. *et al.* (2008) found that the wholesale fruit markets in the district towns distributed fruits all over the country. This requires local labour for fruit grading and packing, transporting and monitoring of packing, as well as many other services (Box 7).

The number of supermarkets in Vietnam has rapidly increased during recent years alongside an increasing population of middle-income earners, and increasing concern about food quality on the part of consumers.

BOX 7. JOBS FOR LABOURERS AT VINH KIM FRUIT MARKET

The Vinh Kim fruit market is an important collection and distribution point for fresh fruit from three districts of Tien Giang province (Cai Lay, Cai Be and Chau Thanh) and Chau Thanh district in Ben Tre province to HCMC and other provinces in the country. The market is located beside the main road and also along the river, which makes it convenient for bus and boat transportation. Within an area of 3 hectares there are 287 trading households, of which 156 are fruit traders. About 80 per cent of the fruit traders are local people, while others mainly come from My Tho city.

The market is crowded with people and fruits arriving from midnight until noon the next day. Every day, about 150 tons of fruits are traded. At the peak, there are about 3,000 people at the market, including sellers, buyers, and providers of related services. Workers are engaged in grading and packing fruits (3-5 people in every trading household), as porters (300 people) and as motorbike drivers (200 people) from the adjacent communes. These workers can generate reasonable incomes from supplying services related to fruit trading.

Source: Hoang, X.T. *et al.*, 2008

In 2008 there were 386 supermarkets across the country, rising to 638 in 2011 (GSO, 2011). At the moment, supermarkets account for about 20 per cent of Vietnam's total retail sales. It is estimated that this share will reach 35-40 per cent in the next 10 years (Nguyen, P., 2012).

Moustier (2007) found that farmer associations played an important role in supplying supermarkets, while collectors or wholesalers operating in night wholesale markets – the key actors in traditional retail markets – had a much more limited role. This is especially the case where food commodities are sold fresh and/or specific quality characteristics are required. Hanoi supermarkets receive most of their vegetables supplies from five co-operatives located in Van Noi and Duyen Ha communes, involving fewer than 450 farms and 50 hectares, and from the Technical Fruit and Vegetable Centre, a mixed public-private establishment of around three hectares. All of these are located in Hanoi's peri-urban area. In HCMC, supermarkets are supplied with temperate vegetables by between five and ten farmer co-operatives in the Da Lat area, either directly or through a dedicated consolidator.

Trading and processing companies provide market access for agricultural produce, for example for export. They operate either through normal buying practices or through various forms of 'contract farming'. These companies place strict requirements on the quality and quantity of the product to be delivered which require a great deal of effort to satisfy. As a result, direct linkages between enterprises and farmers under such contracts are still limited.

Oxfam and AAV (2012a) found different models of linkage between enterprises and farmers in their rural monitoring points during 2007-12. Some were positive for farmers, for example those for Shan tea at Ban Lien (Lao Cai), sugarcane at Phuoc Dai (Ninh Thuan), cotton at Cu Hue (Dak Lak) and rice seed at Thanh Xuong (Dien Bien). Tea enterprises in Ban Lien exported Fair Trade organic tea to Europe in 2010 at a high price. This has helped increase the purchase price of fresh tea leaves. At Phuoc Dai, the sugarcane company has helped local people expand the area farmed from 54 hectares in 2009 to 100ha in 2010, based on signed contracts. Other models however did not benefit farmers, including maize seed contracts in Cu Hue (Dak Lak), and maize seed and ground nut contracts at Thuan Hoa (Tra Vinh). It is still difficult for the poor to participate in contract farming activities that require large-scale production, typically with high levels of mechanisation or labour-intensive. The sustainability of contract farming models needs to be better understood to avoid negative impacts on the poor. For example, tapioca farming in Xy-Quang Tri helped poverty reduction, but at the same time created risks to the poor through increased soil infertility and greater vulnerability to drought and disease, and fluctuating prices that in turn negatively affect local food security.

Co-operatives or farmer associations can link their members to markets, stimulating the production and distribution of local commodities. For example, the success of a flax co-operative in Hop Tien village in Lung Tam commune (Quan Ba, Ha Giang) has helped H'mong women improve their farming skills and increase their incomes, allowing them to buy new assets and re-invest in agricultural production, while at the same time contributing to maintaining their traditional culture. For many years, the Thanh Xuong agriculture co-operative (Dien Bien) has acted as a bridge to help farmers buy fertilisers from companies at low interest rates. The number of successful co-operatives and farmer associations remains very small, however (Oxfam and AAV, 2012a).

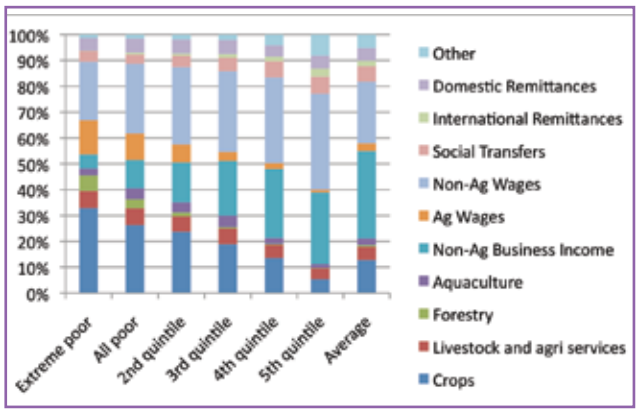
Urban and peri-urban agriculture (UPA) plays an important role in Vietnam's urban food systems, especially in supplying fresh vegetables, fruits and husbandry products for the cities. Hanoi, HCMC and other big cities have master plans for developing UPA to promote high-value and high-quality products. However, UPA faces a number of significant challenges. Urban expansion and high land prices force farmers to choose between keeping land for agriculture, converting it to other uses or selling it. Input prices are high but UPA products are only weakly differentiated and UPA has a weak product chain of high-quality/safe products, meaning UPA products have to compete with low-priced products from elsewhere.

The impact of internal migration on home areas

Rural-to-urban migration has become an important strategy for income diversification, contributing to improving the economic situation in migrants' home areas. The census found there were 6.6 million migrants in 2009. ADB (2008) estimated that at least half of them have sent money or commodities back to their home areas. Multiplying the average annual amount migrants remit by half of the number of migrants, it calculated that they would have sent VND 40,000 billion (approximately USD 2 billion) home each year. Such a huge amount is significant to the socio-economic development of migrants' home areas (Tran, N.M.T., 2010).

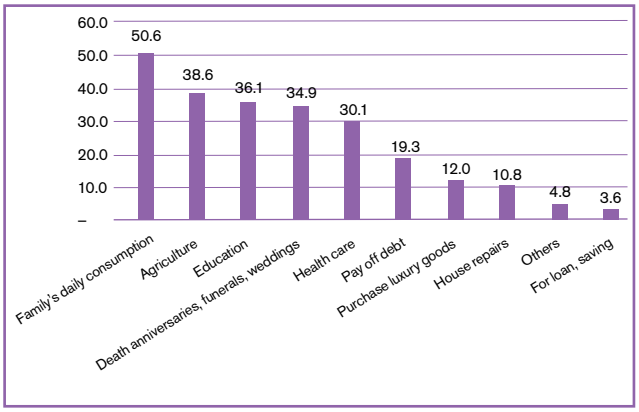
Figure 9 presents the composition of household income across the expanded per-capita expenditure quintiles according to the Vietnam Household Living Standards Survey data for 2010 (WB, 2012). What differentiates the poor from wealthier households is the extent to which the latter have successfully diversified away from farm activities – mainly non-agriculture business and non-agriculture wages. The share of internal remittances in total household income is fairly equal among the

Figure 9. Composition of household income by expanded quintile, 2010



Source: WB staff estimates and WB (2012)

Figure 10. Intended use of remittance at home (%)



Source: Oxfam and AAV (2012b)

quintiles, however. On average, remittances account for about 5 per cent of total household income in 2010 (WB staff estimates and WB, 2012).

Long-term and seasonal migrants make different contributions towards rural development. About half of all migrants send money or goods to their relatives in the rural areas (Le, B.D. *et al.*, 2011). Despite having lower incomes, a higher percentage of temporary migrants send money home: 55 per cent, compared with 45 per cent of long-term migrants. The value of the remittances from temporary migrants is also higher than that of long-term migrants. Around 50 per cent of temporary migrants send at least VND 3 million a year home, while the figure is only VND 2 million for long-term migrants. This reflects the closer relationship between temporary migrants and their relatives at home.

Money remitted by migrants is important for economic development and food security in rural areas. Surveys by Oxfam and AAV (2012b) showed that migrant workers in Hanoi, Hai Phong and HCMC sent money home for (i) daily expenses; (ii) agriculture production investment; (iii) children's education; (iv) weddings or funeral expenses; (v) healthcare expenses; and (vi) payment of loans. Other uses included buying assets, house repairs, or lending to others (Figure 10). Remittances are significant to the rural economy. This can be seen clearly in the areas with high numbers of migrants, such as Duc Huong (Ha Tinh), Thuan Hoa (Tra Vinh) and Cu Hue (Dak Lak). In Thuan Hoa (Tra Vinh), remitted money was used for daily expenses and for repairing and building houses. Some of this money was used for payment of loans due to shrimp crop failure because of disease and extreme weather conditions. Some households in Cu Hue (Dak Lak) have been able to get out of poverty, thanks to the money sent by their migrant children (Oxfam and AAV, 2012a).

Remitted money has helped crop intensification and increased access to local agricultural services, and enabled the purchase of machinery and equipment such as ploughing and raking machines, husking machines or rice harvesting machines, or other agriculture materials. According to Hoang, X.T. *et al.* (2008), better-off households are more likely to use the remitted money for agricultural investment than poor households. Remitted money is however significant for poor households that do invest for intensification, as they have little land and therefore face difficulties in borrowing capital. They have to depend on their low income as labourers and any money remitted by family members in order to invest.

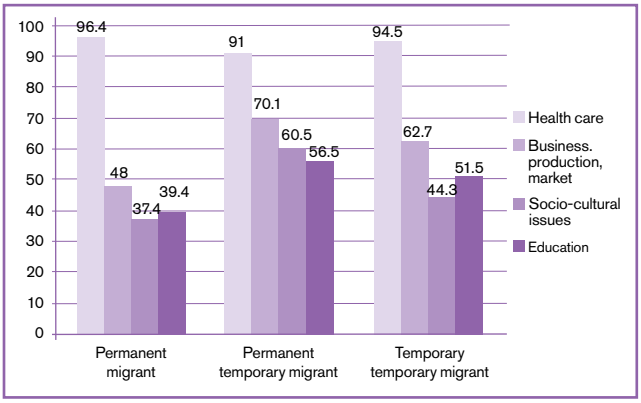
Short-distance travel to adjacent urban areas is also important for food security. According to Oxfam and AAV (2011a), the Thai people in Thanh Xuong commune (Dien Bien) often go to the nearby town of Dien Bien during the crop slack time and work as brick-and-mortar workers or porters. In Thuan Hoa commune (Tra Vinh), poor landless Khmer work as porters of construction materials in the local town in order to cover household expenses.

Migrants' contributions have gradually 'urbanised' rural life, developing other economic sectors besides agriculture. After working in the cities, many migrants return to their home area with capital they have saved up, skills and experiences. Those with the necessary capital and experience may buy a motorbike to rent out, or engage in small trading, buying and selling waste materials, or trade or work in agricultural production and services. This 'brain gain' effect has contributed to improved household and local incomes (Tran, N.M.T., 2010).

Besides their direct support, migrants can also help their relatives by sharing information (Le, B.D. *et al.*, 2011). After health care, the most common subjects of migrants' communication with relatives at home were trading and production, followed by other socio-cultural issues and education (Figure 11).

Migrants often give economic reasons for migrating, rather than natural disasters and environmental degradation. However, they might note the environmental factors that underlie economic difficulties such as crop failures due to extreme weather conditions (CTU, IOM

Figure 11. Migrant communication with home (%)



Source: Le, B.D. *et al.* (2011)

and UNDP, 2012). Research by MONRE and UNDP (2009) about response strategies to climate change in Ha Tinh and Thua Thien Hue provinces showed that households have used migration as a means of income diversification, and a strategy for responding to shocks. Oxfam and AAV (2011a) included a case study of Duc Huong commune (Ha Tinh province) which highlighted the relationship between natural disasters/climate change and labour migration. Between 2007 and 2010, Duc Huong commune faced a series of serious storms and floods, particularly the double flood that affected the whole commune in 2010 (see Box 3 for a detailed description). During this period, the percentage of households with members working away from home increased significantly among both poor and non-poor groups. Increasingly unstable income from agriculture due to natural disasters was a strong push factor, while remittances were an important source of income for households, especially during the storms and floods. The relationship between natural disasters/climate change and migration in Duc Huong commune also has a gender dimension. As men left home for work, women had to take the lead in all household work, including farm work and taking care of parents and children. The absence of men also led to the reduction of households' ability to respond to storm and floods.

As this last point shows, the impacts of rural-urban migration are complex. Migrants can remit money and goods, as well as provide information to relatives, but at the same time often leave their children with grandparents at home. When prices rise, the links between urban-based and rural-based relatives become tighter to help both groups respond to difficulties (Oxfam and AAV, 2012b; WB, 2012; Le *et al.*, 2011). While migrants to the cities sent money home, they also became more dependent on home-based relatives for food when prices rose in urban areas (Oxfam and AAV, 2012b). Many migrant workers get food such as rice, vegetables and eggs from home in order to save money. Le, B.D. *et al.* (2011) noted that migrants in cities such as Hanoi are getting commodities from home areas such as Hai Duong as often as once a week.

BOX 8. RISKS FACED BY MIGRANT WORKERS

Rural-to-rural migrants risk receiving lower than agreed wages and suffer accidents. Migrant workers from some rural areas, especially those from ethnic minority communities, don't have access to an extensive social network or information as to where to find employment so many depend on unknown employment brokers. As a result they often work in unsafe conditions, some have been cheated of their wages, others 'sold' for work in brothels and even to China, and others work illegally (logging and gold mining for example). Of those able to return home, some have had to pay a 'ransom'. Experiences like these naturally discourage others from migrating in search of work.

Parents working away from home can disrupt their children's education. For example in Cau Ngang (Tra Vinh), many migrant parents of Kh'mer ethnic groups take their children with them. Other children from poor households have to leave school to work far away to help their parents.

Rural-to-urban migrants face high living costs in urban areas, unstable employment, lack of social integration, limited access to public services, and uncomfortable and unsafe living conditions.

For migrants working in the formal sector, falling real wages in the context of high inflation mean they save less and remit less money home. Rising prices also cause tension in the work place. Many workers in small and micro-enterprises do not enjoy social benefits. Migrant workers rarely participate in activities organised by local communities or mass organisations. The role of trade unions in private and foreign invested enterprises is limited, and they have not been able to represent workers and protect their benefits.

People working away from home in the informal sector do not have access to social security. Workers have no contracts, and do not have access to social insurance or health insurance. Migrants have limited support, and often depend on relationships with people from their home village or province when they get into trouble or have problems with the local authorities and their employers.

Source: Oxfam and AAV (2012a, 2012b)

Nor can every migrant send money home because of the high costs of urban living, the difficulty of getting and keeping a job, and the barriers to accessing social services. It is easy for vulnerable migrants to fall into poverty and be unable to send money home (CTU, IOM and UNDP, 2012; Le, B.D. *et al.*, 2011; Oxfam and AAV,

2012b). This is especially the case for seasonal migrants (Tran, N.M.T., 2010). Due to their low level of education and limited social capital, many of them have to accept insecure and dangerous jobs. Oxfam and AAV (2012a, 2012b) documented the typical risks faced by migrant workers from their rural and urban monitoring points across the country (Box 8).

In summary, while migration and mobility are an important part of rural-urban linkages and can in many cases improve incomes, contribute to local economic development and as a result increase food security, this is not necessarily nor always the case. Increasing costs of living in destination areas and the greater vulnerability of migrants to discrimination in urban areas contribute to making migration a survival strategy that does not in itself lead to poverty reduction.

Challenges to food availability

In addition to the impacts of climate change on food security, covered in Part 2 of this report, there are some other significant challenges to food availability in Vietnam.

Rapid population growth

Vietnam's population is growing at a rate of 1-1.2 per cent a year. The GSO estimates that Vietnam population will increase from 88 million in 2009 to 96-98 million in 2020 and over 103 million by 2030. In order to provide enough food for the whole nation by 2030, total food production must be at least 45 million tons, including 35 million tons of rice for daily consumption, reserves, seeds, livestock farming, and loss, and 10 million tons of maize, mainly for livestock (MARD, 2008).

Agricultural land conversion and landlessness

The FAO (2012a) confirms the advantageous position of Vietnam in rice production and export for many years to come. However, the current trend of conversion of agricultural land and landlessness may create substantial pressure on food security in Vietnam.

Table 3 shows that paddy land has reduced by 379,000 hectares during the period 2000-08, or 47,400ha a year on average. Out of this total, about 70 per cent was converted into perennial plantation and aquaculture and 30 per cent was converted into urban development, industrial zones, infrastructure and services. Converting agricultural land has affected the life of nearly 1 million households, or more than 3 million people (Duong, V.S., 2012). The conversion of agricultural land will continue: it is estimated that about 500,000 hectares of rice farms will be converted to other purposes during the period from 2009 to 2030 (Mai, V.P. *et al.*, 2010).

Not all agricultural land conversions have resulted in increased productivity. In the Mekong Delta, Southeast and Central Coast regions, large areas of fresh-water rice farms have been spontaneously converted to brackish-water aquaculture, mainly shrimp farming. Losses have been widespread due to improper irrigation, poor breeding and disease management, unfavourable prices, and pollution. In recent years, many provinces tried to build golf courses. Currently, there are 141 golf course projects in 39 provinces. This has taken up 49,268 hectares of land, of which 2625ha was originally used for rice farming areas (Duong, V.S., 2012).

Analysis of the 2010 VHLSS data by the World Bank (WB, 2012) found that agriculture will continue to be an important source of income for many poor people, especially the ethnic minorities. However, the percentage of rural households without productive land has increased in all regions since the 1990s (Table 4). VHLSS data also indicated that the relationship between poverty and lack of land has become closer. Indeed, 54 per cent of the rural poor in the Southeast region and 48 per cent of the rural poor in the Mekong Delta region do not have productive land. There have been increasing opportunities for 'land-poor' households in these regions to engage in higher paid off-farm activities, sometimes involving migration. However, this requires adequate education and skills. Although young workers can acquire these skills, this is more complicated for households who depend on older workers.

Table 3. Use of agricultural land (thousand ha)

	1995	2000	2005	2008	Change			
					1995 -2000	2000 -2005	2000 -2008	1995 - 2008
Agricultural land	7,993.7	9,569.7	9,415.5	9,598.7	1,576.0	-154.2	29.0	1,605.0
Annual crop land	5,624.4	6,759.5	6,370.0	6,282.4	1,135.1	-389.5	-477.1	658.0
Paddy land	4,328.1	4,467.7	4,165.3	4,089.0	139.6	-302.4	-378.7	-239.1

Source: Mai, V.P.*et al.* (2010)

Table 4. Rural households without allocated land or depending on shifting farming (%)

	1993	1998	2010
Northern Mountains	2.0	3.7	8.1
Red River Delta	3.2	4.5	13.4
North Central Coast	3.8	7.7	15.5
South Central Coast	10.7	5.1	19.7
Central Highlands	3.9	2.6	17.3
Southeast	21.3	28.7	58.9
Mekong Delta	16.9	21.3	33.6
National	8.2	10.1	22.5

Source: WB (2012)

Note: 'land' includes annual crop land, perennial crop land, forestry land, water surface, and shifting-cultivation farmland. It excludes gardens, ponds, and land classified as 'other'.

The case study Oxfam and AAV (2010a) carried out at Thuan Hoa commune (Tra Vinh province in the Mekong Delta) showed that 385 households out of a total of 1888 had no productive land (20.4 per cent). The main reasons were parents not having enough land to give to children, and households having mortgaged or sold their land. Although a few landless households engaged in service provision and small-scale trading and became better off, most of the landless households (about 70 per cent) earned their living by selling unskilled labour and remained poor.

Water resources

There is increasing competition for the use of water in agriculture, industry, and rural and urban domestic use. As the Global Water Partnership concluded,

"On the one hand, the fundamental fear of food shortages encourages ever greater use of water resources for agriculture. On the other, there is a need to divert water from irrigated food production to other users and to protect the resource and the ecosystem. Many believe this conflict is one of the most critical problems to be tackled in the early 21st century". (Global Water Partnership, 2000)

Vietnam is no exception. Vo,T.X. (2012) warned that Vietnam's food security in the next 10 years largely depends on the available and sustainable flow of the Mekong River, as he observed the consistent droughts throughout the Mekong river system since 2006 and the irregular floods of the entire system in monsoon season since 2000. Among the reasons for these changes are climate change, the deforestation of the lower Mekong basin and the construction of several dams and reservoirs in countries upstream – China, Thailand, Cambodia and Laos.

4.2. Access

Access to food is largely determined by access to cash, as a large proportion of the Vietnamese population, in both urban and rural areas, buy food. Rice is the main staple in Vietnam. The 2006 VHLSS showed that 55 per cent of rural households and 92 per cent of urban households were net rice buyers (Oxfam, 2008). Rice is most important to the poorest groups as it provides 78 per cent of their daily calories and accounts for half of their food budget. The number of food buyers and their dependents is likely to increase due to factors such as livelihoods changing to non-agricultural activities, conversion of agricultural land, and climate change making less land available for profitable production.

Poverty and inequality

Access to food is limited for specific poor groups although the number of poor people in Vietnam has been substantially reduced, by any measure. Vietnam has made remarkable strides in poverty reduction and gradually reached the poverty target in the Millennium Development Goals (MDGs). The 'poverty gap' – the gap between the average expenditure of the poor and the poverty line – has also reduced and access to basic social and infrastructure services has improved. According to WB (2012), more than 43 million people moved out of poverty during the period 1993-2008 if the GSO-WB poverty line is used. The official Ministry of Labour, War Invalids and Social Affairs (MOLISA) poverty line, and global poverty lines adjusted with purchasing power parity, also confirm that the number of the poor in Vietnam has significantly reduced.

Progress among different regions and population groups has been uneven (WB, 2012). The main challenge in the coming years is to ensure a more equal level of poverty reduction and to reach the MDGs in both rural and urban areas, in different geographical regions, and among different population groups, especially the ethnic minorities. There is a close relationship between the ratio of the ethnic minorities in the total population and the poverty rate at provincial and district levels (Figure 12). Poverty is more concentrated in areas where there is a high ratio of ethnic minority people, especially the northern mountainous and central highland areas. Ethnic minority households with the greatest income increase did worse than the average majority (Kinh) households.

Oxfam and AAV (2012a) have pointed out that the average poverty reduction has fallen to less than 1 per cent from 2006-08, from 3-4 per cent in previous years. The poverty rate of ethnic minorities fell only slowly, and was still high, at 50 per cent in 2008. Unfavourable trends in the world economy and the impacts of climate change are challenging Vietnam's ability to sustain its poverty reduction efforts (MPI, 2010).

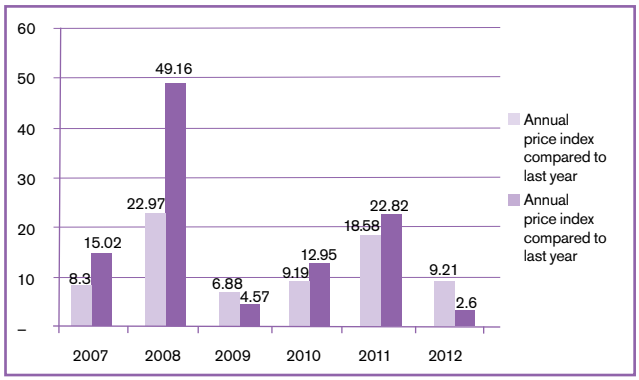
According to the GSO (2010b), the Gini index of income distribution has increased modestly in recent years, showing a slow trend towards growing income inequality. From 0.42 in 2002, 2004 and 2006 it rose to 0.43 in 2008 and 0.434 in 2010. Other indicators suggest that inequality has increased much faster. The gap between the incomes of the rich and those of the poor has increased from 6 times in 2006 to 8.9 times in 2008, and 9.2 times in 2011. The average income in the largest cities such as HCMC was USD 300 a month in 2012, 10 times the average income of low income groups in other locations. The rich spent 6 times more on education than low income groups, 3.8 times more on health care and 131 times more on entertainment and sport.

In addition, according to the WB (2012), there is a modest correlation between poverty and inequality. Locations with a higher percentage of poverty seemed to have a higher Gini index (Figure 16).

Price fluctuation and financial crisis

The consumer price index (CPI) of Vietnam has increased significantly during recent years, especially in 2008 and 2011. According to the GSO (2012b), the CPI recorded double-digit inflation in 2008 and 2011, 19.89 per cent and 18.13 per cent respectively (Figure 17). Peak inflation in 2008 was mainly due to food and food services, with the price of food increasing 49.16 per cent. The cost of other services and commodities also increased remarkably. In 2011 the cost of education increased 23.18 per cent, housing and construction materials increased 19.66 per cent, and transport increased 15.97 per cent.

Figure 12. Price index and food price index, 2007-12



Source: GSO, 2007, 2008, 2009, 2010c, 2011b, 2012b

Increased food prices significantly affect the poorest groups of net rice buyers and are exacerbated by overall high inflation (Oxfam, 2008). As more than half of rural households and almost all urban households are net rice buyers, increases in rice price negatively affect most households in Vietnam, especially in the urban areas. They particularly affect the well-being of the poorest groups that only buy rice.

Weak food reserves and fragile food distribution systems challenge the goals of price stabilisation and sustaining food access for all. Hoang, X.T. *et al.* (2009) showed how the weakness of Vietnam's domestic reserves and distribution systems was exposed during the crisis in 2008-09. Due to the rumoured 'price fever', rice prices by the end of April 2008 suddenly nearly doubled without any underlying reason. Since the introduction of a market economy in the mid-1980s, the role of the state in price stabilisation has been much reduced. Even though Vietnam has national food reserve policies, the reserves can only be used in cases of natural disasters and emergencies, and very rarely to counterbalance market fluctuations.

According to Oxfam and AAV (2008), price increases strongly affected the lives and livelihoods of rural people:

i) They caused a serious reduction in purchasing power. Based on purchasing power parity (PPP), in 2008 the sale of the output of 1 hectare of maize in Dak Lak could only purchase 40 per cent of the rice it would have purchased a year before. Similarly, the amount of rice that could be bought from the proceeds of 1ha of tapioca fell by 19 per cent. Poor and small-scale farming households found price fluctuations especially difficult.

ii) They increased pressure on the education of poor ethnic minority children. The large share of household budget taken up by food, agricultural inputs and other household needs leaves only limited money for social services, including children's education. Feeling they were unable to

afford schooling was an important reason for some children dropping out of school even though parents tried to manage. Dropping out of school may enable children to work and earn money for the household in the short term. However, in the long term, they will grow up to form poor households of their own and find it difficult to get out of poverty.

iii) Women's lives got harder as they tried to ensure there was food for the whole family. Price increases meant women worked longer on family farms, while having to take care of family and children with more limited money. More women went out to work, for example in Dien Bien and Dak Lak provinces. With limited money for food, women often gave priority to their husbands and children when serving meals.

Price increases also strongly affected the lives and livelihood of urban people (Oxfam and AAV, 2008):

i) The urban poor and near poor became more vulnerable. Price increases meant the poor and near poor had to use most of their income for food and food products, and other household expenses such as electricity, water and gas. This made them unable to save, further increasing their vulnerability.

ii) Migrants have to pay cash for all expenses, and price fluctuations impact their income and living conditions the most. Average monthly incomes during recent years did not increase, or only increased 10-20 per cent, while prices increased at least 30-50 per cent. Even though migrant workers are frugal, their salaries are not sufficient to meet their basic needs. Many have leftover rice or noodle for breakfast, or skip breakfast and have lunch at their workplace, while paying very little for dinner. People who share rented accommodation often cook together. With price increases, some workers in HCMC chose to live far from their jobs, in places with worse sanitation and infrastructure, to save on rent.

iii) Most workers sent less money home, causing difficulties for rural households. In some cases, urban migrants had to depend on support from their rural relatives.

The world financial crisis in 2009 strongly affected migrant workers, especially those in the garment and leather goods export industry (Oxfam and AAV, 2010b). With reduced salaries and no opportunities to work overtime, most migrant workers reduced the amount of money they saved and sent home. Most of the workers who lost their jobs did not return home, however. They stayed in the cities and moved to other jobs, often in the informal sector.

Even though the price fluctuations in 2011 did not affect people as strongly as in 2008, poor households who receive social support responded by reducing the quality of their meals and cutting healthcare expenses. They often reduced the amount of food they bought, or bought cheap foods, reduced visits to healthcare units, or reduced the dosage of any medicine. Such solutions may over time have a negative effect on the health of children and other family members (Oxfam and AAV, 2011b). The situation becomes more serious when migrants have to pay more for their living expenses. They often have to pay a higher informal rate for rent, electricity or water than the permanent residents. They also found it more difficult to access social services, and faced livelihood instability (World Bank, 2012). While daily expenses increased steeply, the income of migrant workers did not keep pace. Table 5 shows that total average monthly income of the workers sampled had increased about 66 per cent between 2008 and 2011. Total individual expenses, not including savings and remittances, increased 87 per cent. The amount saved fell to 9 per cent of total income in 2011 from 12 per cent in 2008. Livelihood instability in urban areas did not only cause urban poverty, but also affected rural poverty, as the amount of money sent home by migrants in 2011 fell to 7 per cent of total income, from 14 per cent in 2008.

4.3. Utilisation

Child malnutrition, lack of clean water and poor sanitation conditions, and lack of food safety are three biggest problems in the utilisation dimension of food security in Vietnam (Hoang, X.T. *et al.*, 2009).

Malnutrition

There have been significant improvements in maternal and child nutrition in Vietnam during the period from 2001 to 2010. Vietnam has reached the MDG on the reduction of malnutrition. The proportion of children under five with malnutrition fell from 30.1 per cent in 2000, to 22.9 per cent in 2005 and 17.5 per cent in 2010. Vietnam has basically solved the problems of vitamin A and iodine shortage and significantly reduced anaemia among pregnant women. Vietnam's achievement in the sustainable reduction of malnutrition has been praised by international organisations (National Institute of Nutrition, 2012).

However, Vietnam is facing challenges in nutrition:

i) Childhood malnutrition is still high, and there is wide variation across the regions. In particular, the chronic malnutrition rate that has affected the height of Vietnamese people[8] is still high (29.3 per cent in 2010) and is not evenly distributed among the regions. At present, 12 provinces have a very high chronic malnutrition rate (above 35 per cent), mostly concentrated in the three regions of Central Highland, North central and Northern mountainous areas.

Table 5. Monthly income and expenditure for migrant workers, 2008-12

	2008	2009	2010	2011
Total income (=1+2+3) 1.677	1.863	2.180	2.777	
1. Total personal expenditure	1.247	1.435	1.679	2.328
Rent	197	259	369	438
Meals	526	565	666	951
Clothing	77	113	97	154
Travel	84	124	129	138
Entertainment	51	78	80	91
Socialising	127	132	158	223
Personal purchases	62	82	77	107
Other	123	82	103	226
2. Personal savings	196	165	209	260
3. Remittances	234	263	292	189

Source: Oxfam and AAV (2012b)

ii) There is still a high rate of micro-nutritional deficiencies in communities, especially among mothers and children: pregnant women's anaemia is 36.5% while it was 29.2% for the under-fives. Deficiencies in vitamin A and iodine are still a significant community health problem, especially in the regions of North West, central and central highland areas.

iii) There is still a low rate of exclusive breast feeding (the four- month breast feeding rate is 29.3 per cent while the six-month breast feeding rate is19.6 per cent), even though the breast feeding rate has reached 93 per cent.

iv) Vietnam is facing a nutrition transition. While the malnutrition rate is still high, the rate of overweight and obesity is increasing; the current rate of overweight and obesity among children is 4.8 per cent, while it is 6.6 per cent for adults. (National Institute of Nutrition, 2012)

There are many reasons for malnutrition. During the past 10 years, the government budget allocated to encourage better nutrition has been limited. The number of staff working in the community, schools and hospitals has been too low and their quality poor. Communities have limited knowledge of nutrition, with mothers and other family members retaining inappropriate practices, especially in the remote and ethnic minority areas. Inappropriate practice in sanitation and food safety has also had an impact on the quality of people's nutrition.

Sanitation and clean water

Even though there have been improvements in access to clean water, in practice in the rural and ethnic minority areas it is still poor. Data from the VHLSS (GSO, 2010b) showed that although 92 per cent of households in Vietnam have clean water, only 68.4 per cent of ethnic minority groups do. And while overall 73.8 per cent of the population have access to adequate sanitation, among ethnic minority groups this is only 44.2 per cent. In general, the faeces of 39.9 per cent of children under two were not appropriately disposed of but among ethnic minority people the figure rises to 78.5 per cent.

Surveys show that 86.6 per cent of households in Vietnam have a place to wash their hands with water and soap. This percentage is higher in urban areas than in rural ones (93.4 per cent and 83.7 per cent respectively). Similarly, this percentage is higher among households headed by someone with Kinh or Hoa ethnicity (88.7 per cent) than among ethnic minority households (67.1 per cent).

Food safety

The problem of unsafe foods is becoming serious and difficult to control. It has caught the attention of the whole society, including the government and the National Assembly in recent times.[9] Unsafe foods can be found among almost all types of foods, and in all stages of the production chain including import,

8. The average height of an adult Vietnamese in 2010 was 4 centimetres taller than in 1975. The average adult weighed 8 kilograms more in 2010 compared with 1975 (National Institute of Nutrition and UNICEF, 2012). However, the increase in height and weight of adult Vietnamese is still low, partially because of maternal and infant malnutrition.

planting, manufacturing, slaughter, processing and distribution. There are increasing numbers of cases of food poisoning. According to the Food Safety Department (Ministry of Health), there were 164 cases of food poisoning during the first 11 months of 2012 affecting about 5,400 people, of whom 33 died. (Labour Newspaper, 2012).

Safe practices in food production (for example following the VietGAP – Good Agricultural Practices standards) are still limited. Intensive production often leads to excessive use of chemical fertilisers, pesticides and growth stimulators. Vietnamese farmers use about 15,000-25,000 tons of pesticides a year, many of which contain highly toxic ingredients. Oxfam and AAV (2012a) found abuse of pesticide in some of their rural monitoring points. Many households use pesticides as a 'preventative' measure, often spraying 10 or even 15 times per crop. Some pesticide sales agents recommend farmers spray different types of pesticide at the same time. Frequent spraying or improper use of sprays damages plants and does not kill pests. Poor households also choose cheap low-quality pesticides that can be harmful. In addition, excessive chemical fertiliser also causes rapid soil degradation.

Control of imported foods, especially from China, is still weak. Controlling imports of dairy products, confectionary, fresh fruit and vegetables, and pig and poultry internal organs are particularly important due to the likelihood of high levels of dangerous substances and the use of dangerous chemicals for preservation. (Box 9).

BOX 9. CONTROLLING ILLEGAL WASTE CHICKEN IMPORTS FROM CHINA

Illegal imports of non-quarantined chicken with high levels of chemical residue are causing problems for people's health and food safety. The FAO and RUDEC (2009) found that it was difficult to control the illegal import of poultry and poultry products to Vietnam through the border with China. The main commodities imported from China included: (i) waste chicken (chickens that have been kept for egg production or become old and those with antibiotic residues in their meat); (ii) chicks and ducks; (iii) eggs; (iv) slaughtered chickens and ducks; (v) chicken ovaries; (vi) duck feathers. These products are transported to Bac Giang, Hanoi, Thai Nguyen, and Lang Son provinces. It was estimated that the amount of waste chicken imported from China to Lang Son has reached 10-15 tons a day at the highest, and 1-2 tons a day at the lowest. The peak period is from October to March. The report found that this activity has made it difficult to control the spread of disease, especially the H5N1 bird flu virus.

Recently, there have been widespread reports of illegal imports of waste poultry in the mass media. Dan Tri newspaper had a report on 1 February 2013 entitled 'Illegal imported waste chickens are full of antibiotics and H5N1 virus', quoting the results of sample test carried out by MARD. It showed that 20 per cent of the chicks sampled and 58 per cent of waste chickens (35 out of 60 samples) tested positive for H5N1 virus. More dangerous was the fact that 19 out of 20 waste chicken samples were found to have residues of sulphadiazine, which can cause serious food safety problems

Source: Duong, H. (2013).

9. Food safety was a hot issue that received many questions from the members of the National Assembly at the meeting session held by the end of 2012 (National Assembly website: http://www.na.gov.vn/htx/vietnamese/default.asp?Newid=60592#1nq6lhuVReLW)

Policy implications

5

Table 6. Land use planning to 2020

	2020	CHANGE ON 2010
Agriculture land	9.59 million ha	-580,000ha
Forest land	16.2-16.5 million ha	+879,000ha
Aquaculture land	0.79 million ha	+ 99,700ha
Rice land to remain stable at 3.812 million ha, using advanced intensive measures to reach 41-43 million tonnes.		

Source: Decision No. 124/QD-TTg on 2 December 2012

Food security is best achieved through inclusive and sustainable development in both rural and urban areas. This requires a multi-dimensional approach, including policies on poverty reduction and social protection (cash transfers), and on rural and urban (small town) development. Focusing only on intensive rice production will not necessarily ensure food security for all.

5.1. Poverty reduction and social protection policies

Building a comprehensive social protection system is a big challenge in Vietnam, which has limited local capacity to implement such policies. The coverage of social grants (cash transfers) and welfare support is still narrow and levels of support are low. Beneficiary households are still largely identified on the basis of a single list of poor households. As this list does not reflect the different needs of different vulnerable groups and the multi-dimensionality of poverty, it has made the implementation of effective social protection measures difficult.

Poverty reduction in rural areas

According to Oxfam and AAV (2012a), the five years from 2007 to 2011 were a difficult period for poverty reduction in Vietnam. Continuing challenges included high inflation, the global financial crisis and economic degradation, natural disasters, and disease. These have directly affected people's lives, and worsened the disadvantage of the poor. Despite this, the poverty rate has reduced during recent times. Thanks to government investment, the poor have got better access to infrastructure facilities, education, healthcare, loans, agricultural and forestry extension services, and permanent housing. At the household level, the monitoring points saw improvements often linked with a household labour allocation strategy based on the combination of agriculture (diversification, intensification), non-agriculture (including labour migration), and children's education. The challenge now is addressing the multiple dimensions of poverty and the diverse ways in which disadvantage is experienced by different groups.

Poverty reduction has been slow among ethnic minority groups, especially in the remote and mountainous areas, leaving poverty rates there still rather high. The income and child malnutrition gaps among the ethnic minorities are widening. Despite Vietnam being a big rice exporter, there are still households facing food shortages in the mountainous and central highland areas where most of the ethnic minorities live. This makes it especially important to narrow the poverty gaps between regions and various population groups, and even within a community (Oxfam and AAV, 2012a).

Poverty reduction in urban areas

Multi-dimensional poverty is a serious challenge in urban areas. Lack of skills, education and social capital and limited access to public services, inadequate and unsafe living conditions are the main disadvantages of the urban poor. Poor migrants also face specific disadvantages, including disproportionately higher costs of living in the cities and limited access to public services and social security systems. However, most of the urban poor have little access to social security systems as they often work for small private enterprises and work in the informal sector. Insurance policies and cash transfer programmes face difficulties in reaching target groups, and the level of support they give is often insufficient (Oxfam and AAV 2012b). The growing concern on inequality focuses especially on migrants and their access to urban services. Moreover, while poverty reduction policies can improve food security, there is also a need for specific interventions on maternal and child nutrition. The government needs to increase the resources (human and material) for the effective implementation of the national strategy on nutrition (National Institute of Nutrition, 2012).

5.2. Rural and urban development policies

Rapid urbanisation is increasing the pressure on agricultural land. As Vietnam plans to become an industrial country by 2020, to sustain food security by 2020 and the vision towards 2030 (implementing the Government's 2009 *Resolution No.63/NQ-CP*[10]

10. Resolution No.63/NQ-CP on ensuring national food security - http://www.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?class_id=509&mode=detail&document_id=92364

on food security), the Prime Minister signed *Decision No. 124/QD-TTg* on 2 December 2012[11], approving agricultural production development planning by 2020 and towards 2030. This accepts that there will be a small decrease in the amount of agricultural land as it is converted to other uses, but aims to keep the amount of land available for rice farming stable at 3.812 million hectares. It plans to use advanced intensification techniques to reach a total production of 41-43 million tons of rice by 2020 and 44 million tons by 2030 (Table 6).

There are two aspects to food security: (i) sustaining production and growing enough food for all (as Vietnam is doing now) and (ii) ensuring everyone has enough access to food. The question is whether food security can only be sustained through maintaining large areas of land dedicated to rice. A high proportion of farmers in Vietnam still farm rice, partly because the state restricts what land can be used for. This has mainly been applied to the rice production areas in the Mekong and Red River Deltas (Markussen, T. *et al*., 2009). Except for the Mekong Delta, rice farming is mainly for local consumption and small trading, and is not a primary source of income. According to the 2008 VHLSS, 72 per cent of poor households in Vietnam engaged in rice farming, and about 90 per cent of the rice they produced was for household consumption and only 18 per cent for sale.

Other sectors can generate more value than agriculture, and even within agriculture, rice production generates less value than other crops like fruit. In 2010, the added value generated by labour in the manufacturing and service sectors was five times higher than that generated by agriculture. Productivity in the manufacturing and service sectors was twice that of the agricultural sector in 2012 (Badiani, R., 2012). Indeed, rural development and non-agricultural diversification drove poverty reduction in the 1990s (World Bank, 2012). Most rural households continue to farm on a small scale and in recent years some of them have been able to improve their living conditions by expanding their production of seasonal crops. Many rural households, however, would benefit more from diversifying their livelihoods, converting from rice farming to cash crops and non-agricultural activities. In contrast to the end of the 1990s, the last decade has been marked by the rapid expansion of opportunities to earn non-agricultural income, including in the industrial zones and small towns.

Research in the Mekong Delta area and elsewhere has shown that promoting agricultural development is far more effective if there is sustained interaction between farmers and urban centres, especially the local market towns that provide opportunities for income diversification are (Hoang, X.T. *et al*., 2008). Promoting the role of small towns as distribution/service hubs is an important option. This requires increased investment in infrastructure facilities to make it convenient to connect rural areas with large cities such as Can Tho, HCMC or Hanoi. Better access to urban markets stimulates production and can contribute to food security through increased rural incomes, and availability and access for urban consumers. However, it does not necessarily increase access to food for the poorest urban and rural groups.

5.3. Managing risk and the impacts of climate change

The National Target Programme of Response to Climate Change was approved by the Prime Minister in 2008. The government has also stipulated various programmes and policies such as national programmes on community-based natural disasters and risk management, a law on the prevention, avoidance and mitigation of natural disasters which is expected to be passed by the National Assembly in 2013, a national framework on the adaptation and response to climate change, and disaster and risk management. The 2011 scenario on climate change has been adjusted with specific data for every province, to help provinces work out appropriate action plans.

In addition, policies on poverty reduction and social sponsorship have been created in order to enable people to manage risks and respond to the challenges of climate change. The government's *Resolution No. 11* aims to provide solutions for coping with the impact from macro-economic instability. There are also national targeting programmes to realise the implementation of policies on poverty reduction and social sponsorship.

Even though climate change has been mentioned in many documents and policies, specific guidance is still limited. There are policies on forest planting, but they have often led to over-planting that leads to soil erosion. There are policies on the development of animal husbandry, based on intensification, semi-intensification and industrial feeds but they have not considered coping with climate change. As a result, disease occurrence is becoming a problem (Mai, T.S. *et al*., 2011). At the moment, most of the scenarios and policies on climate change are about coping with rising sea levels and its negative impacts on the Mekong Delta and the coastal areas. The policies on response to climate change in the mountainous areas are about infrastructure construction, livelihood development, capacity building, and job training for the ethnic minority groups belonged to the national targeting programmes. These policies contain some limitations, however: i) the solutions are mainly

11. Decision No. 124/QD-TTg on 2 December 2012 on Approval of the master paln to develop the production of agriculture to 2020 with a vision to 2030 - http://www.chinhphu.vn/portal/page/portal/chinhphu/hethongvanban?mode=detail&document_id=154513

technical and do not take any account of indigenous knowledge; and ii) management officials have a low level of awareness about the risks of climate change.

Integration of climate-change mitigation policies with broader policies on poverty reduction and rural development is still very limited. A recent report into the organisation and arrangements for climate change response concluded that:

"It is still a weakness of Vietnam to combine relevant authorities in disaster and risk management, and in development work. However, the multi-scale framework created by the flood prevention system and the Partners for natural disaster mitigation in the centre of Vietnam was one good example on coordination for development" (Chaudhry, P. *et al.*, 2007).

There is limited finance for these climate change response plans. As the impact of climate change has not yet been clearly felt, the budget priority is still poverty reduction. As a result, food security is not comprehensively included in climate change and risk reduction plans.

5.4. Migration policies

The regulations on permanent residence registration (the hukou system) mean that most migrants do not have the same access to public and social services as permanent residents. Although these regulations have been loosened recently, there are still barriers and constraints. Some researchers have recommended replacing the system of permanent residence registration with a population management system based on a single ID code (Dang, N.A. *et al.*, 2003, 2006).

Migrants play a key role in urban development in Vietnam. Undesirable impacts of migration such as increased burdens on urban infrastructure or overloaded public services should be considered challenges to be overcome rather than reasons not to support migrants. Support should include assistance in securing safe employment, accessing social security, and reducing daily urban expenses. Current policies regulating prices need to be strictly implemented, landlords who do not raise rents should be given tax incentives, accommodation for the poor and urban migrants needs to be provided and the monitoring of employees' rights to contracts and insurance should be strengthened. The 'social capital' of migrants can be strengthened by creating more opportunities for community activities, services, and group activities for people from the same regions or sharing housing. Organisations, trade unions and the authorities could help disseminated life skills and legal information.

Oxfam and AAV (2012b) also recommend higher investment in urban poverty reduction in order to contribute to rural poverty reduction. Rural-urban linkages are very important to rural people. Jobs in the urban areas mean remittances to rural home areas. This is an important part of income diversification and rural labour re-allocation. Therefore, urban poverty reduction programmes need stronger policies and more resources as they can also help rural poverty reduction.

Climate change, migration and resettlement

Environmental problems can act as a push factor for migration depending on the nature of the risk. According to UNDP and MARD (2012), the erosion of river banks placed more pressure on households to move than floods, because erosion made it impossible to stay put. One-off support to households after disasters in the form of cash, food, and in-kind support is good, but it is not sufficient to build up households' resilience to environmental risks. In order to strengthen preventive measures, warning systems need to be upgraded to be early-warning systems that exceed the existing system of daily repeated announcements through loudspeakers. Warning messages need to be appropriate for individual provinces. Specific information about timing and methods should be prepared in advance for households. The current structure with volunteers from the Red Cross and Youth Union can be used as a part of the early warning system for disseminating information and assisting community members.

Climate change resettlement programmes aim to remove populations out of reach of serious risks from natural disasters and unfavourable weather effects such as erosion, salinisation and flash floods. The nature of the loans from resettlement programmes has resulted in debt burdens for poor households who cannot not pay them back. It is more practical to combine programmes of cash provision and paid work. It may be useful to make practical adjustments to loans, such as increasing the loan duration and adding more livelihood support as part of the resettlement programme in order to enhance households' ability to repay. In rural areas these should be combined with rural poverty reduction programmes in the communes affected by resettlement programmes (UNDP and MARD, 2012).

The process of resettlement planning and implementation can lack transparency. In some cases grants for removals and loans for house building were handled inconsistently. It is common for communities not to be involved in resettlement planning and implementation. The comments and concerns of community members should taken into account throughout the whole resettlement process. It is necessary to develop clear and transparent mechanisms for financing resettlement construction. The community should be able to select a design of house from various options in order to avoid monopoly and high prices.

Conclusions

6

This review of existing policies highlights the fact that currently food security is not an integral component of poverty reduction and resilience-building initiatives and programmes. The evidence reported in the previous sections does however suggest that food security in Vietnam should be seen as a key element of development and adaptation to climate change. This is even more important in light of the fact that while Vietnam has a high level of exposure to the impacts of climate change, it has also achieved remarkable rates of poverty reduction since the 1990s, and has become a rice exporter. These macro-level successes should not however hide the fact that inequality among the country's population has increased and that access to food is not guaranteed to all. Ethnic minorities living in remote mountain areas remain poor and are disproportionately vulnerable to extreme events.

Overall, Vietnam can be defined as a food secure country, especially with regards to rice, the staple food. At the same time, 55 percent of rural households and 92 percent of urban households are net rice buyers. In the past decade, growing food insecurity has been the result of increasing food prices but also of the prices of agricultural inputs, which has affected producers as well as consumers. Moreover, the extensive loss of assets following more frequent and severe natural disasters has affected both rural and urban populations. Food insecurity in both rural and urban areas is closely linked to poverty, and social protection policies are essential for vulnerable groups.

Since the mid-1980s, migration has become an important livelihood strategy for many Vietnamese households. However, the net benefits of economic migration documented in the past decades seem to have started to diminish. While migrants cash contributions are in many cases an important element of economic development in rural areas connected to urban markets, migrants to the cities have been negatively affected by the financial crisis of the past few years, and in many instances it has become more difficult to support relatives in rural areas, especially in those areas where floods and hurricanes have devastated local economies and livelihoods. Nevertheless, mobility remains an important response to crisis, and migrants should be supported rather than penalised, as is still too often the case.

Finally, the experience of Vietnam suggests that production in itself is not a guarantee of national food security. Access is equally if not more important, and is perhaps better supported by rural development and agricultural policies that promote the diversification of agricultural production and of income sources (farm and non-farm) as these are more likely to increase resilience and reduce poverty.

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Despite its modest contribution to climate change, Vietnam is expected to be heavily affected by its impacts. Although at the national level the country is self-sufficient in rice, the main staple, and one of its main global exporters, environmental change has a disproportionate impact on the food security of the most vulnerable groups, thus slowing Vietnam's progress in poverty reduction. Environmental conditions have also become an important contributing factor in migration. Stronger rural-urban links, including the development of small town that ensure access to urban markets, often through small-scale traders, and remittances from migrants to the cities, contribute to food security by supporting both production and access. However, high food prices have affected the growing number of net food buyers in both rural and urban areas, and the financial crisis has reduced migrants' ability to send money home. This suggests that food security in Vietnam should be seen as a key element of development and adaptation to climate change.

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