



Munich Personal RePEc Archive

Economic Development, Inequality and Climate Change in Vietnam

Dang, Vinh and Do, Trang and Nguyen, Cuong and Phung,
Thu and Phung, Tung

20 January 2013

Online at <https://mpra.ub.uni-muenchen.de/54190/>
MPRA Paper No. 54190, posted 07 Mar 2014 08:16 UTC

Economic Development, Inequality and Climate Change in Vietnam

Vinh Dang
Trang Do
Cuong Nguyen
Thu Phung
Tung Phung¹

Abstract

From 2011 till 2013, Vietnam has been experiencing an economic slowdown and macroeconomic problems such as high inflation, bad debt from commercial banks and the inefficient operation of state-owned companies. The poverty reduction rate has slowed down and poverty incidence in remote and mountainous areas remains high. Inequality in income and socio-economic development between different geographic and ethnic groups is still significant. Climate changes such as escalating frequency of extreme weather events rising sea levels can have an increasing effect on the livelihoods of the poor. This study reviews the recent economic development, inequality and climate change issues in Vietnam.

Key words: Economic slowdown, poverty, livelihood, enterprises, labor, labor shift, sector shift.

JEL classification: O10, E17, E24

¹ Authors are from Mekong Development Research Institute, Hanoi. Contact email: thuphung@mdri.org.vn.

1. Introduction

After a decade implementing the Socio-Economic Development Plan (SEDP) for the period 2001-2010, Comprehensive Poverty Reduction and Growth Strategy (CPRGS) and Millennium Development Goals (MDGs), Vietnam has successfully achieved its goals, and has been praised for this by the international community. Vietnam's economy has obtained high growth rates with rising living standards, and strong economic integration. The GDP growth rate reached 7.9 percent annually during the period 2000-2008. Within the period 2008-2012, under the impact of the global financial crisis, GDP growth rate slowed down but remained stable at 5.89 percent in 2011 and 5.03 percent in 2012. Total GDP increased steadily within the period 2008-2012 and reached USD141.7 billion in 2012. GDP per capita in 2012 was USD1.596 (World Bank, 2012), increasing nearly fourfold as compared with 2000. Vietnam has successfully transformed itself from one of the poorest countries in the world into a lower-middle-income country.

Vietnam's commitment and efforts in promoting economic development, social development and poverty reduction have brought about impressive results. The poverty rate dropped from 18.1 percent in 2004 to 10.7 percent in 2010 in accordance to the Government's poverty line for the period 2006-2010. Using the new poverty line for the period 2011-2015, the poverty rate also decreased considerably from 14.2 percent in 2010 to 9.6 percent in 2012. Social security has been paid special attention to protect the citizens' welfare. Living standards of the poor have been improved significantly. Positive changes have been brought to rural and mountainous areas. The quality of healthcare at health facilities and preventive medical care, epidemic diseases control has been markedly improved. Education also experienced considerable progress. Many newly built and renovated schools, together with policies regarding education fee exemption and infrastructure investment, have helped enhance the quality of teaching and learning. Vietnam's Human Development Index (HDI) has increased from 0.46 in 1990 to 0.53 in 2000 and reached 0.59 in 2011.

Vietnam has completed a number of targets in MDGs such as *MDG 1* 'eradicate extreme poverty and hunger', *MDG 2* 'achieve universal primary education', *MDG 3* 'promote gender equality in education and health-related indicators such as reducing child mortality and maternal mortality ratio'. In 2011, Vietnam achieved its target on

malaria and tuberculosis control. Vietnam is determined to achieve targets in universal access to reproductive health services, improving maternal health and combating HIV/AIDS combat by 2015. Much effort is required to complete MDG 7 in ensuring environmental sustainability and MDG 8 in achieving global partnerships for development.

From 2011 till 2013, Vietnam has been experiencing an economic slowdown and macroeconomic problems such as high inflation, bad debt from commercial banks and the inefficient operation of state-owned companies. Even though the economy has stabilized recently, Vietnam still encounters many difficulties due to a lower growth rate and bad debt problem. The poverty reduction rate has slowed down and poverty incidence in remote and mountainous areas remains high. Inequality in income and socio-economic development between different geographic and ethnic groups is still significant. The impact of climate change on the community illustrated through escalating frequency of extreme weather events, as well as rising sea levels, has had an increasing effect on the livelihoods of the poor. These problems pose huge challenges for Vietnam in its efforts to boost economic growth, ensure sustainable social development and achieve the MDGs.

This report provides an update of the Vietnam economic situations in three important aspects: (i) Economic development, (ii) Welfare inequality, and (iii) Climate changes. The report is structured into five sections. The second section presents the updated economic development in Vietnam. The third section discusses inequality between rural-urban areas and between different regions. The fourth section presents the challenges in climate changes to Vietnam. Finally, the last section concludes.

2. Economic development

During the period 2010-2013, Vietnam continued to mobilize domestic resources and foster international cooperation to speed up the progress of achieving the MDGs. However, complex changes in the domestic socio-economic environment, combined with complicated movements of the world economy and the global environmental changes, have posed serious challenges for the implementation of development programs. Therefore, a comprehensive overview of the development background of the

country is crucial to the improvement of current program implementation, as well as to the orientation and formulation of future programs. This section presents the current development context via the analysis of key themes: economic development, inequality in socio-economic development and climate change.

Macroeconomic environment

Over the past two decades, Vietnam’s economy has experienced rapid and relatively stable growth. The scale of the economy has expanded and productivity in almost every sector has improved. GDP increased consistently during the period 2000-2008, at an average growth of 7.9 percent per annum. Despite having been affected by the global economic crisis since 2008, Vietnam’s economy maintained GDP growth at 6.31 percent in 2008, 5.89 percent in 2011 and 5.03 percent in 2012. Average GDP per capita increased by 150% during 2008-2012, from USD1.070 in 2008 to USD1.596 in 2012, which is four times higher than the 2000 figure.

Table 1: Macroeconomic indicators

	2008	2009	2010	2011	2012
Real GDP (percent change)	6.31	5.32	6.78	5.89	5.03
GDP (in billions of USD)	91.1	97.2	106.4	123.7	141.7
Per capita GDP (in USD)	1.070	1.130	1.224	1.408	1.596
CPI	19.9	6.5	11.8	18.1	6.8

Source: The World Bank and GSO

Vietnam has faced huge economic challenges in recent years. The impact of the global economic crisis, compounded by internal economic problems has driven down consumption, increased inventories, undermined purchasing power, and caused significant increase in bad debts from enterprises. The problems in the real estate industry have not been solved. Bad debts from commercial banks and ineffective operation of a number of state-owned enterprises have posed major obstacles to the economic development process. Many enterprises were forced to cut back on production, cease operation or go out of business.

The Government has implemented various economic policies such as tightening monetary policies to control inflation, stabilize the macro-economy, and maintain growth at a reasonable level, while trying to restructure the economy over the past two years. The GOV has issued a number of resolutions to manage the economy, such as Resolution 11/2011/NQ-CP, Resolution 13/2012/NQ-CP on solving problems in the production business and supporting the market. At the beginning of 2013, Resolution 02/NQ-CP was issued to fix the problems of inventories, assist enterprises, promote production business and repair bad debts.

Vietnam has currently regained macroeconomic stability, successfully controlled inflation and contained volatility in the financial sector. Inflation has declined substantially: CPI in 2012 had fallen to the lowest level in three years, standing at 6.8 percent, meeting the target (below 10 percent) set out by the National Assembly. The CPI in 2012 met the national target of “standing below 10 percent.” The exchange rate has been stabilized and the financial market has been reinforced after the State Bank of Vietnam provided liquidity and facilitated the merger of small banks. Interest rates have decreased and credit balance has resumed its growth. Operation of credit institutions and liquidity has improved.

The country’s export sector shows strong performance. Export value increased by 18.2 percent in 2012, surpassing the national target of 13 percent. Exports in the first eight months of 2013 increased by 14.7 percent from the previous year. The import of primary resources and materials, and machines for investment and production have increased. Foreign direct investment inflow remains strong, with total investment reaching USD12.63 billion, a 19.5 percent increase from 2012. The continual growth of agriculture, especially in rice and fisheries, reinforces its significant role in national economic growth. Nevertheless, in 2013, agricultural growth has been slowing down, partly due to the declining price of exported goods.

The growth rate for 2013 is projected to be 5.4 percent. This figure indicates a positive signal as the economy is starting to recover after the economic slowdown. Nevertheless, the economy will continue to face multiple challenges in the coming years, particularly in the financial sector and state-owned enterprise sector. It is important to strengthen and build a more effective monetary policy system, as well as to restructure state enterprises to maintain the competitive advantage and stability of Vietnam’s economy.

Poverty reduction

In the context of many abundant social and economic challenges, including the global economic crisis and national economic slowdown, poverty reduction efforts still garnered notable progress. Job and employment policies as well as strong support from the Government and development partners have contributed significantly to poverty reduction progress. Poverty reduction policies have been constantly improved, applying a more systematic approach to ensure their accessibility and effectiveness towards targeted poor households, including ethnic minorities. In the context of multiple socio-economic challenges, allocation of resources for poverty reduction and social protection policies is always put among key priorities of the Government. 70,868 billion VND was allocated for poverty reduction for 2011 and 2012.² A comprehensive policy coverage has been provided for the poor and disadvantaged in every important aspect of living: health, education, nutrition, housing, legal services, culture and information, as well as vocational training support, and job creation for the disadvantaged as well as investment in public infrastructure.

According to the new Government poverty line for 2011-2015, the poverty rate dropped from 14.2 percent in 2010 to 11.8 percent in 2011 and 9.6 percent in 2012. This trend indicates a 2.3 percent reduction in poverty rate per annum, surpassing the Government's target of 2 percent per annum. In the period 2010-2012, some hardship areas, such as the 62 districts of Program 30a, have had good success in poverty reduction. The poverty rate in especially economically disadvantaged areas has plummeted from 58.3 percent in 2010 to 51.0 percent in 2011 and 43.9 percent in 2012, marking an average of 7 percent reduction in the poverty rate per annum³ during the period 2010-2012. These remote areas still experience high poverty rates, but high rates of poverty reduction prove high levels of effectiveness in poverty alleviation.

The most recent period bears witness to the completion of Program 135 Phase II (P135-II)--the largest and the most important poverty reduction program. The Program has been successful in its poverty reduction efforts and in its endeavors to raise the living standards of the poor. Upon completion of P135-II, the poverty rates in targeted

² Report on Implementation result of National Target Program on Sustainable Poverty Reduction 2011-2012, MOLISA

³ Report on Implementation result of National Target Program on Sustainable Poverty Reduction 2011-2012, MOLISA

areas declined; household income also increased by approximately 20 percent over the period 2007–2012. The living standards of targeted households have been improved by increased ownership of durable assets. Productivity for major staples and industrial crops also increased over the same period.

Influence of the economic slowdown on development agenda and MDGs

During 2008-2012, the world faced four major challenges, including the global financial crisis, fluctuating food and fuel prices on a global scale and the Euro zone sovereign debt crisis. The world economy fell into the deepest recession since the Great Depression in 1929. The global economic crisis has had negative impacts on Vietnam's growth rate, decreased available resources for poverty reduction and social development policies, and posed a threat to the sustainability of MDGs implementation results. The GDP growth rate during 2009-2012 was about 5.76 percent, which is considerably lower than the growth rate of the 2006-2008 period at more than 7.67 percent. As macroeconomic instability continued, the economy witnessed ongoing high inflation rates in 2009 and 2011, resulting in the weakening of enterprises' operations, the job creation ability of the whole economy, and slowing down Vietnam's ability to achieve the MDGs.

The analytical results using data extracted from the Vietnam Household Living Standard Survey, the Labor and Employment Survey and Enterprise Census during 2008-2012 show that the economic slowdown had negative impact on the growth rate of enterprise operations, employment and household income. The number of enterprises increased but the rate of increase is much lower than that of the pre-slowdown period. The newly established firms however are mainly small enterprises (with less than 10 workers). Firms' revenue, profit and size have dramatically declined. The number of firms shifting their main business into other sectors has risen. The economic slowdown and macroeconomic instability have depressed decent work opportunities and income for labourers, consequently lowering household income growth. There is a large proportion of labour shifting from industrial sectors to agriculture. Underemployment seems to be on the rise.

Impact on household income

Household real average income increased insignificantly at the rate of 3.5 percent during 2010-2012⁴, which is much lower than the rate of increases during the period 2006-2008 (at 17 percent). The economic slowdown has more negative impacts on urban and developed areas where the service and industry sectors are located, as compared to the rural areas where agriculture is the main economic activity. Household income in rural areas increased by 7.6 percent, while it slightly decreased by 0.5 percent in urban areas. Over the last two years, the average income of households in the Southeast dropped by 9.2 percent. Meanwhile, the average income of households in the Red River Delta increased by 4.2 percent, which is much lower than the economic potential of this area.

Table 2: Household income and poverty rate by regions

Regions	Average income (thousand VND/year per capita)		Change in income (%)	Poverty rate (%)		Change in poverty rate (%)
	2010	2012		2010	2012	
Total	1574.6	1629.7	3.5	14.0	11.8	-2.2
<i>Rural/Urban</i>						
Rural	1219.3	1311.5	7.6	17.9	15.1	-2.8
Urban	2383.9	2372.2	-0.5	5.1	4.0	-1.1
<i>Regions</i>						
Red River Delta	1735.1	1807.6	4.2	7.2	6.0	-1.2
Northern Midland and Mountainous Areas	991.0	1128.7	13.9	33.1	29.0	-4.1
Central Coastal Area	1119.4	1274.4	13.8	20.6	15.5	-5.1
Central Highlands	1267.6	1555.3	22.7	18.3	15.9	-2.4
South East	2715.9	2465.7	-9.2	1.9	1.8	-0.1
Mekong River Delta	1348.3	1435.4	6.5	12.1	10.6	-1.5

Note: Average income is measured based on the prices in January 2010.

Source: Calculation from VHLSS 2010 and 2012

Although average income has increased insignificantly, there has been progress in poverty reduction in both rural and urban areas, as well as across six geographic regions including poor areas. The poor's⁵ living standards improved within the period 2010-2012. However, the economic slowdown has had adverse effects on sustainability of the poverty reduction efforts. The regions with high out-of-poverty rates also

⁴ Author's calculations based on VHLSS 2010 and 2012

⁵ 'Poor' are defined as people living below the poverty line

experience high fall-into-poverty rates. The economic slowdown has had stronger effects on households working in the non-agriculture sectors.

Impact on labour and employment

Contrary to forecasts about higher unemployment rates as the result of to the economy's inability to fully absorb an increasing newly-joined labour force in Vietnam⁶, the unemployment rate slightly decreased during 2008-2012. However, the average working hours per week in all sectors dropped. In particular, the average number of working hours per week dropped from 46.2 hours in 2008 to 42.1 hours in 2012⁷, an 8.5 percent decrease. This signals a rising trend for underemployment.

According to the *Rapid Impact Monitoring Report* in 2011, firms might change their employment strategy if the economy continues its slowdown. Inventories have considerably increased in recent years with firms currently adopting a temporary strategy--accepting orders just to keep their workers employed. The concern is that if the economic slowdown worsens, firms will lay off their employees. In that scenario, the unemployment rate in the formal sector will greatly increase.

Table 3: Average working hours per week by economic sector (hours/week)

	2008	2010	2012
Agriculture	42.6	42.1	37.6
Manufacturing	50.4	48.9	47.5
Electricity, water and mining	46.3	45.2	44.1
Construction	51.6	49.0	47.5
Wholesale and retail trade	50.9	49.0	48.3
Transportation	50.8	48.6	48.1
Hotels and restaurants	48.8	48.0	47.2
Financial intermediation, banking, insurance and real estate	45.0	44.3	43.7
Scientific activities and technology, education and healthcare	44.3	43.6	41.3
Other service activity	48.5	47.2	46.2
Others	45.0	43.9	41.3
Total	46.3	45.2	42.1

Source: Labor and Employment Survey 2008, 2010 and 2012

⁶ Warren-Rodriguez (2009), Nguyen et al. (2009)

⁷ Author's calculation based on *Labor Force and Employment Survey 2008-2012*

The quality of employment has fallen. The percentage of labourers with labour contracts declined from 43.4 percent in 2011 to 41.1 percent⁸ in 2012. The proportion of workers with remuneration benefits such as social insurance and health insurance fell slightly, especially workers in agriculture and sectors with a high concentration of informal labour such as wholesale and retail, restaurants and other service activities. According to the *Labor and Employment Survey 2012*, only 2-7 percent of the workforce in these sectors has health insurance and 13-25 percent has social insurance.

Workers in agriculture are more vulnerable during the economic slowdown. In the period 2008-2012, the average number of working hours per worker in agriculture, the lowest among all sectors, experienced the strongest drop from 42.6 hours/week in 2008 to 37.6 hours/week in 2012. The labour shift from industrial and service sectors to agriculture resulted in an increase in the proportion of labourers working in agriculture (from 44.4 percent to 46.9 percent). The average hourly wage in agriculture decreased from VND10,100 to VND9,000 per hour (a 10 percent decrease). Total labour income in agriculture dramatically declined as the result of both cutting working hours and reducing the average hourly wage. These phenomena not only show negative impacts of the economic slowdown (to nearly 50 percent of the national labour force), but also signal that underemployment in agriculture is substantially increasing.

Workers were more likely to change to jobs in other sectors within the period 2011-2012. Workers in state-owned enterprises were strongly affected by the economic slowdown and the existing internal weaknesses of this sector; 26.5 percent of workers from state-owned enterprises transferred to other sectors in 2012. The proportion of workers remaining in agriculture was the highest at 88.8 percent. Agriculture attracted labour from other industries. This fact indicates that when employment in other sectors becomes difficult, workers are more likely to turn to less sustainable, lower-productivity activities in agriculture.

Impact on enterprise and business environment

⁸ Author's calculation based on *Labor Force and Employment Survey 2008-2012*

By the end of 2011, there was in total 340,000 firms, an 18 percent increase from the 2010 figure.⁹ However, this growth rate was much lower than the 32 percent growth rate of the pre-slowdown period in 2008; the increase in 2011 is mainly attributed to the substantial increase in small-size enterprises (with less than 10 labourers). Small-size enterprises¹⁰ made up 66 percent of the total number of enterprises; these enterprises had an annual average growth rate of 20.8 percent.¹¹ However, small-size enterprises were the most vulnerable to economic shocks. The number of small-size enterprises that have closed down or gone bankrupt¹² constitutes more than 80 percent of the total bankrupt/inactive enterprises. Average size of an enterprise also dropped substantially from 47.4 workers in 2007 to 32.6 workers in 2011 (decreased by over 30 percent). Even though the number of enterprises increased, the economy's ability to create jobs was limited and unsustainable.

The average revenue of enterprises during the period 2008-2011 experienced a downward trend. In 2011, the average revenue per enterprise was VND12.5 billion, a 15.8 percent decrease from 2008 revenue.¹³ The fuel price crisis and high inflation in recent years increased operational costs and reduced the average profits of enterprises. The average profit in 2011 was merely equal to 50.8 percent of the pre-slowdown value. Profit declined in every sector, including those with high revenues such as electricity, water supply, finance and banking.

Table 4: Average revenue in 2008 and 2011 by economic sector

	Revenue 2008 (million VND)	Revenue 2011 (million VND)	Change in revenue (%)
Agriculture	3,974	4,696	18.2
Manufacturing	25,783	26,118	1.3
Electricity, water and mining	4,707	18,679	296.8
Construction	7,850	7,380	-6.0
Wholesale and retail trade	17,564	13,826	-21.3
Transportation	13,683	8,350	-39.0
Hotels and restaurants	3,847	3,111	-19.1
Financial intermediation, insurance and real estate banking	28,672	32,544	13.5

⁹ Enterprise Census 2011, GSO

¹⁰ According to Decree No. 56/2009/ND-CP, micro-enterprise is an enterprise that has the average number of labourers of less than 10 people.

¹¹ Author's calculation, based on Enterprise Census 2007-2011

¹² Author's calculation, based on duplicate data of Enterprise Census during 2007-2011

¹³ Author's calculation using Enterprise Census 2007-2011

	Revenue 2008 (million VND)	Revenue 2008 (million VND)	Change in revenue (%)
Scientific activities and technology, education and healthcare	3,121	2,241	-28.2
Other service activity	999	976	-2.3
Others	8,561	6,548	-23.5
Total	14,852	12,507	-15.8

Note: Revenue is calculated based on 2007 price

Source: Enterprise Census 2007, 2008, 2009, 2010 and 2011

In comparison to the pre-slowdown period in 2007-2008, firms had higher tendencies to change their main business in 2010-2011. While only the service sector had more than 10 percent of firms shifting their businesses to other sectors in 2008, this figure in 2011 was seven out of ten sectors. The rate of change is highest in the science, technology and services sectors. There are tendencies for firms to move into the wholesale and retail sectors, partly because wholesale and retail are easy to enter and require low fixed investment. Enterprises that changed their main business to trade and processing achieved strong growth in revenue. This indicates that appropriate business strategies in response to the economic slowdown have had positive impacts on enterprises' activities.

The global economic crisis has depressed the revenue, profit and size of enterprises, even though the extent of the impact has yet to be serious. Employment and household incomes increase, albeit at a low rate. However, the impact of the economic slowdown might be long-term and have some lag. If the economic slowdown continues, negative impacts on enterprises, employment and households' welfare will increase over time. Poverty reduction is unsustainable without economic growth. If the economy shows no signs of recovery, enterprises could change their employment strategies and cut down the number of jobs; this would worsen the employment situation in the country. An increase in unemployment with a reduction in household average income might put more pressure on household expenditures. Households would have to lower their expenditures on basic needs such as food, nutrition, health and education. In the long-term, these difficulties will result in problems such as reduction in nutritional intakes, child and maternal mortality, and decreases in school enrolment rates; therefore lowering the sustainability of Vietnam's MDG outcomes.

3. Inequality in socio-economic development between geographic regions and ethnic groups

Inequality between rural-urban areas and between different regions

Empirical evidence has shown that inequality in income and expenditure has been rising at the national level, albeit at a modest level. The ratio of means per capita incomes of the top 20 percent income group and the bottom 20 percent income group has increased from 7 times in 2004 to 8.5 times in 2010. The Gini Index calculated using expenditure was relatively stable at around 0.35–0.36 during the period 2006–2008, but increased to 0.393 in 2010.¹⁴

One of the key factors contributing to the recent rise in income inequality comes from the increasing inequality in rural areas. For rural areas, the rate of growth in the 10 percent poorest households was less than half of the income growth rate among the 10 percent richest households. The difference in income between these two groups in rural areas has increased by 25 percent from 2004 to 2010. The Gini coefficient of income inequality in rural areas also rose from 0.365 to 0.413 in 2010.¹⁵ This phenomenon shows that there is an increase in income inequality between the rich and the poor in rural areas.

There are a number of reasons for the rise in income inequality in Vietnam. *Firstly*, the rate of poverty reduction and socio-economic development of the ethnic minority groups cannot catch up with that of the Kinh majority. *Secondly*, there is significant variation in growth patterns and speed of growth among different geographic regions. Specifically, agricultural and nonagricultural growth across regions contributes to a difference in growth rates. The movement from agriculture into nonagricultural sectors, as well as the transfer from low-skill to higher-skill work in nonagricultural sectors, has changed the income distribution of Vietnam over time.

Besides increasing inequality in income, there exists relatively significant disparity in poverty rates and living standards between rural and urban areas. According to the Government poverty line for the period 2011–2015, poverty rates in 2010 in urban

¹⁴ VHLSS 2004, 2006, 2010 by GSO

¹⁵ Well Begun, Not Yet Done: Vietnam's Remarkable Progress on Poverty Reduction and the Emerging Challenges, the World Bank, 2012

areas stood at 6.9 percent, while the corresponding rates in rural areas reached 17.4 percent.¹⁶ More than 90 percent of poor households and 94 percent of extremely poor households live in rural areas. In 2010, poverty gap by expenditure in rural areas was 7.8 percent, which is five times higher than the corresponding figure for urban areas (1.4 percent) (see Table 5). Multi-dimensional child poverty rates between urban and rural areas show clear disparity: the rate in urban areas was 15.9 percent while the corresponding rate in rural areas was 34.5 percent in 2010.¹⁷

There exist huge gaps in living conditions between rural and urban areas. In terms of housing conditions, in 2010, 7.2 percent of rural households lived in temporary housing, while this figure for urban areas was 1.9 percent. Access to water and sanitation is also different between the two areas. The percentage of urban households with access to clean water was 10.4 percent higher than that of rural households. The respective difference in access to sanitary toilets was 26.7 percent.

Inequality in education indicators between rural and urban areas is no longer significant as Vietnam has obtained universal primary education and is moving towards universal lower secondary education. Literacy rates of population aged 10 and older in urban areas was 3.9 percent higher than that of rural areas, but both regions have literacy rates greater than 90 percent. In fact, the quality of education in rural areas is substantially lower than education quality in urban areas. School dropouts occur more frequently in rural and remote areas. The quality of learning and teaching, as well as school facilities in rural areas, is highly inadequate as compared to the conditions in urban areas.

With respect to healthcare, there is huge inequality in maternal health indicators and child mortality rates between rural and urban areas. For instance, under-one and under-five mortality rates/1000 live births in rural areas are twice as high as those of urban areas. Other health indicators in MDG 4 and MDG 5 all display significant disparity between rural and urban areas.

¹⁶ GSO 2010

¹⁷ UNICEF

Table 5: Socio-economic indicators between rural and urban areas

	Urban area	Rural area
Poverty rate in 2010 according to new poverty line (%)	6.9	17.4
Poverty gap in 2010 (by expenditure) (%)	1.4	7.8
<i>Living conditions (in 2010) (%)</i>		
Households living in temporary houses	1.9	7.2
Households using clean water	97.7	87.4
Households using sanitary toilet	93.8	67.1
Households having garbage disposed by cart/truck	79.6	21.4
<i>Education (%)</i>		
Literacy rate of population aged 10 and older in 2010	97.0	92.6
Literacy rate of population aged 10 and older in 2012	97.5	93.6
<i>Health (in 2012)</i>		
Under-1 mortality rate/1000 live births	8.9	18.3
Under-5 mortality rate/1000 live births	13.4	27.6

Source: VHLSS 2010, 2012 by GSO

The poverty rate has decreased across every geographic region but poverty reduced faster in more developed regions such as the Red River Delta and the South East. Unequal progress among different regions resulted in huge changes in poverty distribution across regions; poor households are concentrated primarily in the Northern Mountains, the Central Highlands and Mekong River Delta, the Northern Central and Central Coastal Area. Inequality in poverty level tends to intensify in the Central Highlands, the Northern Mountains, the Northern Central and Central Coastal Area (Table 6).

Table 6: Poverty rate by geographic regions

	2011		2012	
	Poverty rate (%)	Poverty rate in each region as compared to national average (times)	Poverty rate (%)	Poverty rate in each region as compared to national average (times)
<i>Total</i>	11.8		9.6	
North East	21.0	1.79	17.4	1.81
North West	33.0	2.81	28.6	2.97
Red River Delta	6.5	0.55	4.9	0.51
North Central	18.3	1.55	15.0	1.56
Central Coastal Area	14.5	1.23	12.2	1.27
Central Highlands	18.5	1.57	15.0	1.56
South East	1.7	0.14	1.3	0.13
Mekong River Delta	11.4	0.97	9.2	0.96

Source: MOLISA

The huge discrepancy in living conditions, access to education and healthcare reflects unequal progress in realizing MDGs among geographic regions. The Northern Midland

and Mountainous Areas, the Central Highlands and the Mekong River Delta have lower living standards as compared to the average national living standards, while the Red River Delta and the South East have living standards above the national average. The Northern Midland and Mountainous Areas, the Central Highlands, and the Mekong River Delta have the lowest access to clean water and sanitation. The percentages of households living in temporary housing in these three regions are the highest in the country; in 2010 the Mekong River Delta had the highest percentage at 16.8 percent. Disparity in access to education among geographic regions has been narrowed down but access to healthcare facilities and quality of healthcare service shows notable inequality. Under-one and under-five mortality rates per 1000 live births in the Northern Midland and Mountainous Areas, the Central Highlands, the Northern Central and Central Coastal Area are higher than the national average and the rates in other geographic regions (see Table 7).

Table 7: Socio-economic indicators by geographic region

	Red River Delta	Northern Mountain	Central Coastal	Central Highlands	South East	Mekong River Delta
<i>Living conditions (2010) (%)</i>						
Households living in permanent and semi-permanent housing	92.8	76.4	93.3	91.7	94.1	62.4
Households living in temporary housing	0.1	8.9	3.1	2.0	3.0	16.8
Households using cleaned water	98.6	80.3	91.0	82.8	98.1	81.5
Households using sanitary toilet	89.6	60.8	81.9	62.1	92.0	47.6
<i>Education (%)</i>						
Literacy rate for population aged 10 and older in 2010	97.3	88.9	93.6	90.9	96.4	92.6
Literacy rate for population aged 10 and older in 2012	97.6	89.6	94.7	92.9	97.1	93.6
Net enrolment rate at lower secondary education in 2012	94.9	86.8	89.3	83.9	87.1	78.6
<i>Health</i>						
Pregnant women receiving at least 3 antenatal care sessions in 2011	94.2	75.4	86.4	81.3	89.1	86.3
Under-1 mortality rate/1000 live births in 2012	12.3	23.5	17.1	24.6	9.2	12.0
Under-5 mortality rate/1000 live births in 2012	18.4	35.7	25.8	40.2	13.7	18.0

Source: GSO

It is notable that the North West, the Northern Central and Central Coastal Area are more heavily affected by extreme weather events and natural disasters as compared to other regions. Therefore, the goal of lifting living standards and reducing poverty in these regions are big challenges in the upcoming years.

Slow progress for ethnic minorities

Ethnic minorities are better off nowadays than they were a decade ago due to support from the Government and development partners. Nevertheless, the gap in living conditions and poverty rates between the Kinh and the ethnic minorities have widened. Ethnic minorities account for approximately 15 percent of the national population¹⁸, but statistics show that they account for an increasingly large proportion of the poor population. The ethnic minorities comprised 20 percent of the poor in 1993; this figure rose to 29 percent in 1998 and reached 50.3 percent in 2010. According to a report from the Committee on Ethnic Minority Affairs, the average income of ethnic minority households in poor and remote areas is only one-sixth of the national average. The fact that the concentration of minorities among the poor and extremely poor has increased substantially in recent years, while the national poverty rate has been declining indicates that the speed of poverty reduction for ethnic minorities is far below the national standard and the Kinh's.

Disparity in the level of poverty between different demographic and geographic groups has risen in recent years. The Government's report on poverty reduction progress shows the highest level of poverty rates in the regions where the ethnic minorities reside: the North West, the North East and the Central Highlands regions. In the Central Highlands, the poverty rate in 2010 was 1.5 times higher than the national average, while the rate in 2012 was 1.6 times higher. For the Northern Uplands, the poverty rate in 2010 was 2.3 times higher than the national average, and the corresponding figure in 2012 was 2.5. In 2010, the multi-dimensional poverty rate in the North West was the highest at 60 percent.¹⁹

Table 8 demonstrates a huge disparity between the Kinh and the ethnic minorities in a number of socio-economic indicators. The 2010 poverty rate by expenditure for the ethnic minorities stood at 66.3 percent, five times higher than that of their Kinh counterparts at 12.9 percent. Disparity in living standards between poor Kinh households and poor ethnic minority households is also huge. The poverty gap is much higher for the ethnic minorities as compared to the Kinh (24.3 percent and 2.7 percent in

¹⁸ 2009 Population and Housing Census

¹⁹ UNICEF

2010 respectively). Huge inequality also exists with regard to education. There was a 16.4 percent difference in literacy rates for population aged 10 and older in 2010 between the Kinh and the ethnic minorities. School attendance rates for children aged 6-14 in 2010 was 5.1 percent higher for the Kinh than the ethnic minorities. Access of the ethnic minorities to public utilities such as the national electric power grid, improved water and sanitation were significantly lower than that of their Kinh counterparts (Table 8).

Table 8: Socio-economic indicators by ethnicity (%)

	Kinh/Hoa	Ethnic minority
Poverty rate in 2010 (by expenditure)	13.0	66.3
Poverty gap in 2010 (by expenditure)	2.7	24.3
Literacy rate for population aged 10 and older in 2010	96.2	79.8
School attendance rate for children aged 6-14 in 2010	95.0	89.8
Households with access to electricity grid in 2010	90.9	69.6
Households with access to improved water in 2010	69.2	18.4
Households with access to improved sanitation in 2010	98.9	83.2

Source: GSO, VHLSS 2010

4. Climate Change

Challenges

Climate change is emerging as one of the biggest challenges Vietnam has to deal with in development progress. As its profound and far-reaching impact can significantly undermine socio-economic achievements in Vietnam, it is essential to fully understand the characteristics of climate change and to develop suitable adaptation strategies for sustainable development.

International and domestic research has ranked Vietnam as one of the countries most affected by climate change, and is being used to urge the government to take more comprehensive actions against this threat, as well as call for international cooperation and support on this global issue. At the regional level, Vietnam is situated in the Mekong Basin, which has been ranked as one of the few ‘global hotspots’ of climate-

related vulnerability.²⁰ According to the 2011 impacts of climate change mapped by Center for Global Development²¹ covering 233 countries and other political jurisdictions in the world, Vietnam ranks fifth in terms of extreme weather direct risks (physical climate impact), and eighth in terms of sea level rise direct risks. Climate change in Vietnam is taking place at an alarming rate. The frequency of days and nights classified as ‘hot’, a major indicator to evaluate climate change, has witnessed a dramatic increase of 29 days in 1960 to 49 days in 2003. The Flood Risk Map in Asia-Pacific in 2011 by UNEP/GRID-Europe showed the Mekong River Delta placed in the extreme flood risk area. In Maplecroft’s *Climate Change Vulnerability Index 2013*, Ho Chi Minh City ranks sixth in the list of the most vulnerable cities facing extreme risk.

In Vietnam, the impact of climate change is more serious due to the natural characteristics of its topography and the dependence of the economy on agriculture. Vietnam has a diversified topography. However, mountains constitute three quarters of the total national area²² and terrain under 1,000m in height dominated 85 percent of the total area. This mountainous geography and coastal frontage, together with its location in the regional centre of tropical typhoons and storms, make Vietnam extremely exposed to sea level rise and extreme weather events such as floods, landslides and heavy rainfall. Moreover, agriculture accounts for 20 percent of its GDP and agricultural labour amounts to 48.4 percent of its workforce²³, so the impact of climate change in Vietnam is more damaging than that in other developed economies.

Table 9: The impact of climate change in Vietnam in 2010 by percentage of GDP

Impact of climate change	% of GDP
Damages and losses on labour productivity	4.4
Damages and losses caused by sea level rise	1.5
Damages and losses on fisheries	0.5
Damages and losses on agriculture	0.2
Damages and losses on heating and cooling caused by climate change	0.1
Damages and losses caused by floods and landslides	0.1
Damages and losses on biodiversity	0.1
Damages and losses by drought	0.1

Source: DARA International

²⁰ USAID (US Agency for International Development) (2010) Asia Pacific Regional Climate Change Adaptation Assessment Final Report Findings and Recommendations. Washington, DC: USAID

²¹ <http://international.cgdev.org/page/mapping-impacts-climate-change>

²² <http://chinhphu.vn/portal/page/portal/chinhphu/NuocCHXHCNVietNam/ThongTinTongHop/dialy>

²³ <http://www.gso.gov.vn/default.aspx?tabid=387&idmid=3&ItemID=12847>

The impact of climate change adversely affects the progress of reaching MDGs and threatens to undermine the achievements of Vietnam, as well as the sustainability of MDG programmes. In 2010, the total economic loss caused by climate change in Vietnam was estimated to be 5 percent of its GDP.²⁴ With regards to health, climate change has also led to the increase of illnesses relating to temperature and hunger in both severity and amounts. The average number of people affected by the worsening effect of climate change on hunger is estimated to be over 800,000 people each year. In terms of infrastructure, the transportation sector of Vietnam suffered damage worth VND 2,571 billion due to extreme weather events during the period of 2001-2005.

Table 10: The impact of climate change in Vietnam

Impact of climate change	2010
Contraction of biological zones (km2)--yearly average	-150
Additional land degraded due to climate change (km2)--yearly average	-3,500
Additional/reduced energy load due to climate change (GWh)--yearly average	1,500
Additional CO2 generated/reduced for heating and cooling due to climate change (kt CO2)--yearly average	550
Share of workforce particularly affected by climate change (%)--yearly average	48%
Additional land lost due to climate change (km3)--yearly average	150
Additional water losses/gains due to climate change (km3)--yearly average	-1

Source: DARA International

The most recent analyses and forecasts have given Vietnam strong warnings about the challenges the country has to be prepared to deal with. Without prompt action and suitable strategies, Vietnam will have to bear an increasing cost due to losses as a result of climate change, which is estimated to be 11 percent of GDP in 2030. Another study by the Asian Development Bank estimates that the cost of additional stresses and potential losses from climate change will be 1-3 percent of real GDP in 2050. With regards to infrastructure, an increase of 1 m in mean sea level can result in the submergence of 11,000 km of roads. Inundation is a serious threat to 695 km of national highways, 495 km of which are in the Mekong River Delta.

²⁴DARA International and the Climate Change Forum (2012) Climate Change Vulnerability Report 2012 A Guide to the cold calculus of a hot planet. Spain: DARA International.

Table 11: Projections of the impact of climate change in Vietnam in 2030

Impact of climate change	% of GDP
Damages and losses on labour productivity	8.6
Damages and losses caused by sea level rise	2.7
Damages and losses on fisheries	1.6
Damages and losses on agriculture	0.4
Damages and losses on heating and cooling caused by climate change	0.3
Damages and losses caused by floods and landslides	0.1
Damages and losses on biodiversity	0.1
Damages and losses by drought	0.1

Source: DARA International

Vietnam in response to climate change challenges

Over the last five years, the (Government of Vietnam) GOV has proactively developed and implemented many policies and programs to respond to climate change. The climate change response has been actively integrated into national policies and programs such as Vietnam's *Socio-economic Development Strategy for 2011-2020*. In 2008, the GOV ratified the *National Target Program on Response to Climate Change (NTP-RCC)* and committed a budget of VND985.5 billion to the program.

In 2011, the *National Climate Change Strategy* and a comprehensive plan to deal with the impact of climate change were established; the plan covers a wide range of issues such as vulnerability and low carbon. The GOV also defines the responsibilities and requires the participation of all related government departments, formulating a comprehensive coordination mechanism among government departments and local authorities. Additionally, the GOV has promoted international co-operation, launching the Support Program to Respond to Climate Change with the participation of development partners such as Japan, France and international development organizations such as the World Bank. As a result, Vietnam has mobilized a considerable amount of funds from different sources to support and execute policies and models to respond to climate change, reaching more than USD500 million in 2010.

Although Vietnam has taken these initial steps towards climate change response and adaptation, the enormous challenge of climate change surpasses the experience and capability of the country itself. On the one hand, Vietnam has to continue its successful initiatives such as increasing the awareness of local communities, building climate-adaptation capacities for local people, concentrating on improving resource management and restructuring the economy on a sustainable basis. On the other hand, Vietnam needs to foster international cooperation, promote the exchange of knowledge and experience in dealing with climate change as well as increase the effectiveness of international aid. Domestic commitments and international coordination are key to the challenge of climate change adaptation in a global context.

5. Conclusions

In the context of economic slowdown, the Government of Vietnam (GOV) has implemented different economic policies and measures to stabilize the economy, maintain a reasonable growth rate, and prioritize poverty reduction, as well as support activities in social, economic and environmental fields. Vietnam has gradually stabilized its macro-economy, and controlled inflation. Exports display strong growth and agriculture continues to play an important role in economic growth. GDP per capita reached USD1.596 in 2012, which was four times higher than GDP per capita in 2000. The national poverty rate fell from 14.2 percent in 2010 to 9.6 percent in 2012.²⁵ The poverty rate in the economically disadvantaged regions such as 62 poor communes in Program 30a (a program for supporting the 62 poorest districts nationwide) fell from 58.3 percent in 2010 to 43.9 percent in 2012. Vietnam has implemented several environmental protection policies, while building a comprehensive policy and legislative framework to tackle climate change. The climate changes will have serious impacts on people as well as the economy if the government do not have appropriate coping strategy and policies.

²⁵ Poverty rate is calculated based on the Government's poverty line for the period 2011-2015

References

DARA (2012), Climate Change Vulnerability Report 2012 A Guide to the cold calculus of a hot planet”, DARA International, Spain.

GSO (2012), Statistical Year Book, General Statistical Office of Vietnam (GSO), Vietnam.

Nguyen Viet Cuong & Pham Thai Hung & Phung Duc Tung, (2009). "Evaluating the Impacts of the Current Economic Slowdown on (Un)employment in Vietnam," Working Papers 01, Development and Policies Research Center (DEPOCEN), Vietnam.

USAID (2010), “Asia Pacific Regional Climate Change Adaptation Assessment Final Report Findings and Recommendations”, US Agency for International Development, Washington, DC: USAID.

Warren-Rodríguez A. (2009), “The impact of the global crisis downturn on employment levels in Viet Nam: an elasticity approach”, UNDP Viet Nam Technical Note, February.

World Bank (2012), “Well Begun, Not Yet Done: Vietnam’s Remarkable Progress on Poverty Reduction and the Emerging Challenges”, the World Bank, Vietnam.