



Policy Study on the Challenges and Responses to Poverty Reduction in China's New Stage



FOREWORD

This report presents the findings and recommendations from policy studies on the challenges and responses to poverty reduction in China at this important juncture of the country's development. This joint research was undertaken over the course of the past year and a half, by the United Nations Development Programme (UNDP) and the International Poverty Reduction Centre in China (IPRCC), to inform China's poverty reduction efforts for the next ten years.

This year marks the beginning of China's new ten-year poverty reduction strategy and represents the last decade for achieving an all-round Xiaokang society by 2020. The year 2011 also marks the commencement of the 12th Five-Year Plan. And this year also constitutes the beginning of the last 5 years of the Millennium Development Goals. This is clearly a significant juncture for human development, both for China and for the whole world.

Over the past thirty years, UNDP has witnessed China's outstanding performance in poverty alleviation, achievements which have exceeded even the greatest expectations of China's many observers. However, as China has developed, her challenges have become more complex, and further poverty reduction will undoubtedly prove more difficult to tackle than in previous years.

One reason for this is that reducing the absolute number of poor people often masks increases in relative poverty. As a result, poverty reduction efforts will need to be redirected towards the substantial number of people that have been left behind. This includes the elderly, children, ethnic minorities, migrant workers, people living in remote areas, etc.

Contemporary poverty in China has also shown signs of some typical "transitional poverty" characteristics, either toward or away from residual poverty largely determined by the suitability of macro-economic frameworks and the quality of institutional governance. It is therefore crucial that these issues be addressed as the contours of China's development shifts from a largely exported-oriented growth model to one based more on domestic consumption.

To compound the challenge, many of China's poor live in or around ecologically fragile areas that are highly sensitive to the effects of environmental and climate change. Thus, addressing these vulnerabilities in the context of sustainable livelihoods and equitable growth will require the integration of climate change and poverty reduction strategies with immediate effect.

As the complexity of China's poverty reduction challenge increases, it is all that much more important that China moves beyond the global obsession with income as the main measure of human progress. Income poverty measures such as per capita income and poverty gap indices are useful but only provide us with part of the picture. What is required is a more sophisticated and multi-dimensional measures to analyze poverty. Only then can we hope to identify the appropriate policy combinations required to adequately address the challenge of reducing poverty and its devastating effects.

In this regard, the present study tackles several important, relevant topics in the formulation of China's national poverty reduction strategy. Building on the outcomes of intensive consultations between UNDP,

IPRCC and Chinese State Council's Leading Group Office of Poverty Reduction and Development (LGOP), and in close collaboration with the Chinese Government and key think tank organizations, a number of policy and programmatic options were explored in the areas of: i) multi-dimensional poverty, planning and targeting; ii) rural governance that ensures more equitable distribution of development outcomes; iii) integrated rural-urban poverty reduction strategies on migration, urbanization and the demographics of an aging population; and iv) climate change, ecosystems and poverty reduction.

UNDP engaged a largely national consultancy team for this analysis, but also involved international poverty reduction experts. An advisory panel, with both senior national and international advisers reviewed the intermediate and final results of this research.

To validate the conclusions and recommendations, UNDP, IPRCC and LGOP organized an international workshop in Beijing on 25 February 2011 with the Government, other UN agencies, academia and NGOs.

In concluding, I would like to take this opportunity to express my sincere appreciation to all the members of the consultancy team and to the IPRCC, for their dedicated efforts and valuable contributions to this most important endeavor. I would also like to express my gratitude to LGOP, and in particular, to Vice Minister Zheng Wenkai, for his invaluable insights and strategic guidance in support of this work.



Renata Lok-Dessallien

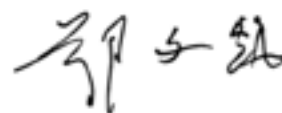
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Beijing, May 2011

PREFACE

In the past ten years, the government at all levels has made efforts to ensure smooth implementation of the National Guideline of Rural Poverty Reduction and Development 2001–2010 and achieved remarkable progress. Poverty in China has been dramatically reduced. Progress has also been substantial in terms of human development indicators. The infrastructure in rural areas has been upgraded, while deterioration of ecosystem is being contained. This period also witnessed rapid development of county level economy and improvement of social landscape. It is recognized poverty reduction in many ways continues and in some respects has become more demanding in the next stage. China still has a large number of poor people. Disparity is getting wider. People getting out of poverty are still vulnerable to the risks of returning to poverty. Poverty reduction work in the next stage is undoubtedly more difficult than before.

The study identified the key topics in poverty reduction in the next ten years and proposed a number of policy options based on consensus of UNDP, IPRCC/LGOP, and the findings and policy recommendations in the areas of multi-dimensional poverty measurement and targeting, rural governance and poverty reduction, poverty reduction in the process of urban-rural integration, and climate change poverty reduction were presented in the international workshop, held in Beijing on 25 February 2011 with participants from the Government, other UN agencies, academia and NGOs. These findings and conclusions are of high value to formulation of the national guideline of poverty reduction for the next 10 years. I am very pleased to share the study with more people in the endeavor of poverty reduction.



Zheng Wenkai

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Leading Group Office of Poverty Reduction and Development, State Council

Beijing, 1 August 2011

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The working team comprised the following members: Li Xiaoyun, team leader, Dean and Professor of College of Humanities and Development, China Agricultural University; John Taylor, Professor and Director of Development Research at London South Bank University who is responsible for the references to international experiences and case studies; and Wang Sangui, national consultant responsible for the overall study, Professor at School of Agricultural Economics and Rural Development, Renmin University of China. Within the working team, Wen Tiejun, Dean and Professor at the School of Agricultural Economics & Rural Development, Renmin University of China and his assistants Dr. Yuan Xiaoxian and Dr. Yang Shuai, were responsible for the study on rural governance; Wang Haimin, Professor at the Centre for Integrated Agricultural Development (CIAD) of the China Agricultural University, for the study on multinational poverty and targeting; Lin Wanlong, Professor at the School of Agricultural Economics and Management, China Agricultural University and his assistants, Associate Professor Chen Tianheng and Dr. Qi Gongshen, for the study on rural-urban integration; Qi Gubo, Professor at CIAD of China Agricultural University, for the research on climate change and poverty, and Daniel Wang Dexiang, technical coordinator of the study, Socio-economic Policy Advisor of the UNDP China Poverty Reduction and Social Inclusion Team;

The advisory panel includes following distinguished members: Wang Pingping, Director, Department of Household Surveys of the National Bureau of Statistics; Pu Yufei, Deputy Director General, Comprehensive Management Department of State Information Center; Prof. Zhao Shukai, Deputy Secretary General of the China Development Research Foundation; Prof. Feng Kaiwen, College of Economics and Management, China Agricultural University; Dr. Dong Zhong, Deputy Director General of the State Council Policy Research Office; Professor Du Yang and Professor Li Zhou, Chinese Academy of Social Sciences; and Professor Lin Erda, China Academy of Agricultural Sciences.

Several international institutions and individuals provided additional assistance during the research and preparation of the report. A number of key advisors from the Asia and the Pacific Region were invited to join UNDP China, IPRCC and the working group in round-table discussions on the research framework, issues and experiences related to the initiative of this policy consultation. They are: Jomo Sundaram, UN Assistant Secretary General from UNDESA; Shantanu Mukherjee, Microeconomic Policy Advisor from the Poverty Group of UNDP Bureau of Development Policy; T Palanivel, Senior Advisor/ Head MDGI; Omar Noman, Chief of Policy and Programmes and Anuradha Rajivan, Practice Leader of Poverty Reduction Unit at the UNDP Regional Centre in Bangkok; Aynul M. Hasan, Section Chief of Development Policy, UNESCAP. Experts from selected countries in the Region were also invited to provide inputs on ideas, experiences and on how some of the key issues Raised in the report are being addressed in their respective countries. They are Dilli Khanal, Chairman of the Institute for Policy Research and Development, Nepal; W.D. Laxman, Senior Advisor, Ministry of Finance and Planning, Sri Lanka; Le Dang Doanh, Research Fellow, Hanoi National University, Vietnam; K. S. Murshid, Author-Bangladesh case study and Economist; and Jayati Ghosh, Professor of Economics at Jawaharlal Nehru University, India, Wan Guanghua, Co-Author of the China Study, ADB.

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Acronym and Abbreviation

- ADB** – Asian Development Bank
- BPL** – Below the Poverty Line
- CAPA** – Capabilities Approach to Project Analysis
- CCB** – Climate, Community, and Bio-diversity
- CCCPC** – Central Committee of the Communist Party of China
- CCTs** – Conditional cash transfers
- COHD** – College of Humanities and Development Studies, China Agricultural University
- CPC** – Communist Party of China
- CPI** – Consumer Price Index
- DEFRA** – Department of Environment, Food, and Rural Affairs, UK
- DFID** – Department for International Development, UK
- DPIP** – District Poverty Initiatives Project
- GDP** – Gross Domestic Product
- GOWB** – Government of West Bengal, India
- GTZ** – Deutsche Gesellschaft für Internationale Zusammenarbeit
- IFAD** – International Fund for Agricultural Development
- ILO** – International Labour Organization
- IPCC** – Intergovernmental Panel on Climate Change
- IPRCC** – International Poverty Reduction Center in China
- IVDP** – Integrated Village Development Project
- LGOP** – Leading Group Office of Poverty Alleviation and Development, State Council
- MDGs** – Millennium Development Goals
- MoEP** – Ministry of Environmental Protection of the People's Republic of China
- NBS** – National Bureau of Statistics of China
- NDRC** – National Development and Reform Commission, P. R. China
- NGOs** – Non-government Organizations
- NTRCMCS** – New Type of Rural Cooperative Medical Care System
- PA** – Poverty Alleviation
- PADO** – Poverty Alleviation and Development Office
- RMB** – Renminbi (Yuan)
- STEP** – Strategies and Tools against social Exclusion and Poverty
- UK** – The United Kingdoms
- UN** – The United Nations
- UNDP** – United Nations Development Programme
- WHO** – World Health Organization

Unprecedented Achievements and New Challenges

Since its reform and opening in the late 1970s, China has made unprecedented progress in the area of poverty alleviation. The number of poor, measured in terms of income and welfare parameters, has been reduced significantly. This is one of the most substantial achievements in the field of poverty reduction in Chinese history. Human and social development indicators for both poor areas and the poor population have shown a noticeable improvement. China has not only contributed significantly to global poverty reduction, but has also provided a basic foundation for the timely fulfillment of crucial UN Millennium Goals.

Although China has made substantial progress in poverty reduction, increasing inequality in income distribution has begun to limit the effects of economic growth on poverty alleviation. In the coming period, China needs to pursue an economic growth which is more inclusive, combining greater equality of opportunity and enhanced social protection with sustainable growth. Inclusive Development emphasises the importance of economic growth leading to improvements in both levels of poverty and inequality. In recent years economic growth in China has succeed in reducing poverty, but this growth has been accompanied by increasing levels of inequality, as has occurred in other rapidly growing Asian economies. This has been the case in relation not only to the distribution of income but also in relation to access to health care and educational opportunity, and more generally in relation to access to assets such as land, and markets. Inclusive Development occurs when both average achievements in these areas improve and inequalities are reduced. The importance of achieving a more inclusive development in China is clear: increasing levels of inequality in opportunity potentially can offset the positive effects of growth, as significant groups begin to feel deprived relative to others in relation to areas of human development and access to assets. China currently has a low level of household consumption as a percentage of its gross domestic product (GDP). Relative to other middle and high income countries, China also has an unusually high rate of investment much of which is undertaken directly or indirectly by the Government. The consequences of this GDP structure is that Government's expenditure fills the gap of inadequate investment of business sector. Government investment creates some employment opportunities, but this investment structure is dependent on resources and is focused on infrastructure development. However, some of this money could also be used to increase levels of social expenditure in areas such as health and social protection, to enable a more balanced development of the economy, shifting government expenditure from resource-dependence investment to social security and income-generation, with a focus on poorer households.

There are many specific challenges for the coming years. On the one hand, China still has about 150 million people below the poverty line of US\$1.25 set by the World Bank (WB), which is a considerable number. On the other hand, from the multi-poverty perspective, the issue of poverty has become more complicated. Deficiencies in income, nutrition, health, capacity and rights are not only the result of poverty, but also are an important cause of poverty. A single dimensional poverty alleviation strategy is inadequate for solving these complicated issues.

Furthermore, in the developing process of social and economic transformation, new vulnerable groups have emerged, and greater attention should be devoted to them. Aging and feminization of the rural population have also led to new challenges for poverty alleviation in rural areas, such as difficulties in developing effective mechanisms for mobilization and organization. In the process of urbanization, increasing numbers of landless peasants and migrant workers have to confront the risks of marginalization, given the absence of an urban-rural integrated social security system and appropriate poverty alleviation policies. These groups could become an important factor threatening social stability. Poverty in China no longer has primarily a rural focus, since it occurs in both rural and urban areas.

Finally, the risk of global climate change has increased, and forms a major threat to poor people living in ecologically vulnerable areas. The adverse impacts of climate change could also lead to reversals in the progress of poverty alleviation. Additionally, the 2008-2009 global economic crisis and subsequent downturn has brought uncertainties into the Chinese economy, and this downturn could still have a longer-term impact on poverty in China.

Urgent Need to Adjust China's Current Poverty Reduction Strategy and Policies

Facing new challenges under new circumstances, China needs to adjust its poverty reduction strategy for the next ten years.

Firstly, considering overall trends in urban-rural integration and globalization, China needs to change its current system and policies, which emphasize rural poverty with separation between rural and urban areas, to an inclusive strategy integrating protection and development; it also needs to consider and address the issues of multiplicity and mobility in current poverty occurrence, so that basic livelihoods can be secured and pro-poor policies can benefit the poor population appropriately and timely, no matter where poor people are located. Secondly, it needs to integrate policies formulated by different government divisions into a multi-dimensional poverty reduction strategy framework, so that a “macro level poverty alleviation” mechanism can be created. Thirdly, China needs to refine its priorities in poverty alleviation and improve the accuracy of its targeting of poor households. To a large extent, this will depend on institutional arrangements for the poor population, in particular on improvements in village governance. Fourthly, China should also develop a risk prevention and mitigation mechanism on the basis of an enhanced understanding of the potential risks caused by climate change, to avoid vulnerable people succumbing to the poverty trap.

The Aim of the Report

This report does not aim to produce a comprehensive analysis of poverty issues in China and the country's poverty alleviation policies, since there is already substantial important researches addressing these topics. Rather, it focuses on relevant issues that have not been addressed adequately in previous discussions, yet which will have a considerable impact on the future performance of poverty reduction. Additionally, the report provides a number of previews for the Chinese government as it formulates its poverty alleviation strategy for the next decade. Four major issues-multiple poverty, groups of particular relevance in transitional poverty, village governance in developmental poverty alleviation, and climate change and vulnerability-have not been given sufficient attention in research thus far, nor are they reflected adequately in China's national poverty alleviation strategies. However, these four issues will have a substantial impact on the progress and sustainability of poverty alleviation in the coming years. Consequently, they are the main concern of this report (See the policy framework in Table One).

1. Basic Profiles of China's poverty

1.1 Changes in the Poverty Landscape

Remarkable progress has been made in the work of poverty alleviation in China. Based on the US\$1 per day PPP definition, the poor population in China has declined from 730 million in 1981 to 106 million in 2005; in other words, the poor population has been reduced by 624 million in less than thirty years. According to the new poverty line of US\$ 1.25 per day set by the WB, the poor population has declined from 835 to 208 million in this period, which means that 627 million people have been lifted out of poverty. Based on the line of US\$2 per day, poverty has declined from 972 million to 474 million, which means that 498 million people have moved above the poverty line (Chen & Ravallion, 2008a). Therefore, it is safe to claim that in a period of twenty-five years, China has lifted at least 500 million people out of poverty.

The poverty incidence rate has been reduced even more dramatically, according to relevant data. Based on the line of US\$1 per day, poverty incidence has declined from 73.26% in 1981 to 7.95% in 2005, a reduction of 65.31 percent. Based on the line of US\$1.25 per day, poverty incidence has declined from 83.8% to 15.6%, equal to a reduction of 68.2 percent. Based on the line of US\$2 per day, poverty incidence has declined from 97.8% to 35.7%, equivalent to a reduction of 62.1 percent.

China has also made remarkable progress in social and human development. The Human Development Indicator (HDI) for China has risen from 0.533 in 1980 to 0.772 in 2007, with an increase of 45 percent (UNDP 2009). From 1978 to 2007, the primary school enrollment rate increased from 94% to 99.5%, and the junior middle school enrollment rate increased from 87.7% to 99.9%. By the end of 2007, national coverage of nine-year compulsory education stood at 99.3%. Both boys' and girls' primary school enrolment rate rose to above 99.5% with little gender difference. The mortality rate for children under five years-old declined from 64‰ in 1980 to 18.1‰ in 2007; the infant mortality rate declined from 50.2‰ in 1991 to 15.3‰ in 2007; and the maternal mortality rate declined from 9.5 per ten thousand in 1990 to 3.7 per ten thousand in 2007. The under-weight rate for children under five years-old declined from 19.1% in 1990 to 6.9% in 2005; the growth retardation rate for children under five years-old declined from 33.4% in 1990 to 9.4% in 2005. The rate of safe water accessibility increased from 67% in 1990 to 88% in 2006 (Ministry of Foreign Affairs, UN China agencies, 2008).

1.2 China's Contribution to Global Poverty Reduction

China has made a substantial contribution to poverty alleviation globally. Based on the line of US\$1.25 per day, the global poor population has declined from 1.896 billion in 1981 to 1.377 billion in 2005, which is equivalent to a 519 million reduction in the absolute poor population. The poverty incidence rate has declined from 51.8% to 25.2%, equivalent to 26.6 percent. In the same period, excluding China, the poor population in the rest of the world has increased from 1.061 billion to 1.169 billion, equivalent to 108 million in absolute terms. The rate of poverty incidence has declined from 39.8% to 28.2%, equivalent only to 11.6 percent. Based on the US\$2 per day line, in areas other than China, the poor population has increased by 525 million (Chen & Ravallion, 2008b). These figures show that progress in poverty alleviation at the global level has been to a significant extent due to the substantial poverty reduction achieved in China.

China has already achieved four of the main UN Millennium Development Goals, namely, to halve the population below the poverty line of US\$1 per day, to halve the population living in conditions of food scarcity, to ensure that all children can complete junior

education, and to reduce by two thirds the mortality rate for children under five years; Other goals are likely to be completed before 2015 (Ministry of Foreign Affairs, UN China agencies, 2008). China's achievements in poverty reduction and its overall development are thus making a substantial contribution to the success of the UN in achieving its Millennium Development Goals.

1.3 The Poverty Issue is still serious in China

China is now classified as a middle income country. In 2008, its average GDP per capita, based on current prices, reached US\$3,267; average national income per capita is US\$2,940, and national income per capita is US\$6,010, based on PPP. The majority of middle income countries adopt a poverty line above US\$2. Based on this poverty line of US\$2, China has a poor population of 474 million people, which means that one third of the total population is living on less than US\$2 per day. In the 92 countries with supporting quantitative data, the poverty incidence rate in China is higher than that of 51 countries and is close to that of Honduras, Nicaragua and Kenya, yet relatively lower in some social and human development indicators.

2. Future challenges for China's Poverty Alleviation Program

There are a number of new problems and challenges that China will have to face in the next ten years to achieve its goal of large scale poverty alleviation. Poverty will become more multidimensional; new transitional poverty is emerging in the process of urban-rural integration, and this will become more prevalent; economic transformation and urbanization will lead to large scale migration, weakening rural human and material resources, and this will in return adversely affect village governance and the performance of rural developmental poverty alleviation programs. Additionally, climate change will trigger more natural disasters in ecologically vulnerable areas, which in turn will result in households falling back into poverty.

2.1 Macro level economic and social constraints

Future poverty reduction performance in China will also depend on macro-economic and social conditions. On the one hand, China's economy is encountering the "middle level income trap". The global market which has been one of the major driving forces for China's economic growth may stagnate due to the financial crisis. This situation is forcing China to adjust its economic structure more towards internal demand. Yet consumption remains limited within the rural population. Furthermore, increasing labor costs may reduce the competitiveness of China's industrial goods in the global market. On the other hand, with an aging population and an increased need for social protection programs, government expenditure on these items is likely to increase, affecting the capacity of the state to invest in other areas of the economy.

2.2 Multidimensional Poverty and Poverty Targeting

Although poverty incidence measured by income and consumption is declining, viewed from a multidimensional poverty perspective, poverty remains a serious issue for China, particularly according to non-economic indicators. Conventional understanding often takes for granted that low income is the main cause of poverty; however, poverty almost always has more complex causes.

Recently there have been important developments internationally in the measurement of multidimensional poverty. This is being done via the use of a "Multidimensional Poverty Index" (MPI) with three dimensions—health, education and living standards,

measured through ten indicators. These indicators are based on available data and participatory assessments. The MPI defines a household as multi-dimensionally poor if it is deprived in a combination of indicators whose sum exceeds 30% of all deprivations. Using the MPI, China currently has 7% of its population living in poverty (Compared, for example, with India at 55%, Pakistan 51%, Indonesia 21% and Brazil 8.5%). Using the MPI indicators also reveals that the highest contributor to overall poverty in China is deprivation in education. One of the most useful ways in which the MPI could be used in China might be via its use in identifying “types” of multidimensional poverty. The MPI can be “decomposed” by population sub-group, or by area. This has already been done in a number of countries, such as Bolivia, Kenya and India. These studies have revealed striking differences within each country. China has adopted multidimensional approaches in its village poverty reduction programs during the last ten years, but more specific use of multidimensional indicators could enable types of poverty to be more clearly specified.

2.2.1 Nutrition and Health related poverty

During the 18 years between 1990 and 2008, there have been large scale improvements in levels of child malnutrition in China. Yet currently, 14% of children are still suffering from slow-growth during puberty; and in poor villages this figure is 20%, falling within the middle severity category. In poor villages, rates of slow growth during puberty and numbers of under-weight children below the age of five are noticeably higher than those in normal villages and cities. A survey in poor areas in Guangxi on nutritional conditions among 1324 children under age six has shown: 22.18% children suffering from slow growth in puberty, 28.17% under-weight, 11.12% with marasmus, and 16.19% with anemia-in which children at the age of 12 months suffer from the highest rate of slow growth during puberty, under-weight and marasmus. The main factors contributing to these outcomes include low intake of dairy and meat products, thin food composition, and excessive intake of snack food. These all lead to insufficient provision of energy and protein (Fang Zhifeng, 2010). A report by the WHO has also indicated that anyone who suffers from malnutrition can potentially lose 10% of life income. This statement underlines the inherent linkage between lack of nutrition and low income or poverty.

Although China has made considerable progress in poverty alleviation in the last thirty years, it has also experienced a health crisis affecting poor households (Dummer and Cook 2007). The decline in public provision of medical and health care caused by the segregation of urban and rural policy frameworks has led directly to an increasing gap in health care resource allocation between urban and rural areas, which has further increased the cost to migrant workers of using urban health care services. In the public health sector, as a result of inadequacies in information provision and the increasing gap between rural and urban incomes, the majority of poor rural areas and the low-income population have become the target of low-quality food and medicine sellers, making poor people more susceptible to potential harm.

Illness-related poverty has become a widespread phenomenon in rural areas, within the poor population and amongst urban low-income groups. The problem of ‘difficulties in seeing a doctor’ is acute for many people in poor rural areas. Firstly, healthcare resources are concentrated in urban areas, and this has caused difficulties in accessing these services for those living in distant villages (particularly in relation to referrals for major and serious diseases). Meanwhile, because poor villagers normally cannot afford the high costs of medical care, they often try to avoid incurring costs by delaying and trying to cope with their health problems. This results in a vicious cycle of ‘ignoring the minor disease, waiting until it is more serious, and when it becomes too serious, waiting to die’.

In addition, due to poverty, lack of knowledge of health and low awareness of self-care, poor people are more susceptible to disease. These factors form a cycle of illness and poverty, resulting in a continual return to poverty. Lack of medical security is a serious barrier for rural people, especially those living in remote poor areas, in achieving their socio-economic goals. Although the Chinese Communist Party Central Committee and the State Council have proposed to 'gradually establish a new rural corporate medical system' in the official document on 'Some Decisions on further strengthening rural hygienic work', the participation rate of poor rural households is still low in many areas. Even in those projects which have a relatively high poor household participation rate, the problem of low compensation rates is still significant (Xie Huiling et al 2008). Research shows that illness as an external factor may not necessarily lead to persistent poverty, yet its impact might last for about 20 years. Finally, it is important to stress an additional key fact that children, the elderly and women are more likely to suffer particularly from illness-related poverty.

2.2.2 Education and Poverty

Educational equity has become a national issue. The main reason for education-related poverty is the high costs associated with education. High costs can lead to families and individuals falling into the poverty trap. The issue of education-related poverty has been eased to some extent following the introduction of the cost reduction policy on compulsory education, but this in itself is not sufficient. It is estimated that currently there are 5 million children of school age who cannot complete their compulsory education, and these children are mainly located in poor areas in western China. In non-compulsory education, the high cost of tuition has restricted access by many children from poor households; children from low-income and poor households drop out of school and lose educational opportunities, resulting in insufficient investment in human resources.

In particular, along with the enforcement of the 'higher education expansion' policy, and the marketization and globalization of higher education in the 21st century, higher education has become a crucial issue in education-related poverty and social stratification. In addition to the impact of increases in tuition fees not being adequately monitored, the limited schooling loan and scholarship system has also resulted in an 'inverted stimulation', namely, it does not support vocational or higher level vocational education, but is confined to post-graduate degree education. This system undoubtedly increases the social costs for poor households hoping to alleviate their poverty through educating their children.

2.2.3 Targeting: A Key Issue

The issue of targeting in China's poverty alleviation program contains two aspects: Firstly, income-oriented targeting does not take into account multiple poverty; it thus misses significant non-income poverty conditions. Many households above the income-based poverty line are actually poor because they are disadvantaged in non-income areas. The design and selection of poverty alleviation plans and projects must focus more on the income earning ability of households. Even those projects concerned with the improvement of the infrastructure, and with capacity building, are also oriented toward the goal of income growth, and do not take into account multiple development goals including nutrition, health, education, income and the equal rights of the poor population. The monitoring of poverty is also based on income and consumption and lacks a more comprehensive system for monitoring other dimensions of poverty. Secondly, income-oriented poverty alleviation projects do not benefit the poor population equally, and the problem of resource leakage is prominent. Village level development has improved the

targeting rate of poor villages; but within a village, the middle income and rich households still benefit more than the poor ones.

In recent years, there have been widespread discussions internationally on targeting mechanisms within poverty reduction programme. Many researchers have concluded that targeting in poverty reduction programs contains serious problems. For example: targeting often fails to fully cover poor households; targeting in participatory programmes frequently results in elites capturing benefits; decentralized targeting often is characterized by corruption, thereby worsening inequality locally.

Until recently, most poverty reduction programs used approximate indicators to identify poor households. These indicators varied from estimates of basic needs to calculations of average incomes in a particular village, area, or region. Using poverty mapping techniques, and combining this with data from household surveys (thereby allowing linkages between consumption levels and household characteristics) is a much more rigorous approach, and this has been introduced recently in some countries, notably in India, Indonesia and the Philippines. Targeting has undoubtedly been most successful where it has been based on multidimensional poverty indicators and where it aims to promote sustainable development out of poverty. The index of participatory poverty reduction adopted in the village-based poverty reduction programmes in the past ten years is considered an accurate targeting tool. However it has not been widely used due to high costs of implementation and uses of complicated techniques.

2.3 'Transitional Poverty' in the Process of Urban-Rural Integration

'Transitional poverty' is closely related to the process of urban-rural integration. In the past thirty years, China has experienced the largest population migration in its peacetime history (WB 2009). This has created about 150 million migrants and their overall numbers are still increasing. This process of migration will continue for the next fifteen to twenty years. While the workforce in rural areas moves to cities and forms large numbers of migrant workers, it also creates a considerable number of "left-behind" people in rural areas, notably the elderly, children and women. This remaining "left-behind" population currently includes about 58 million children, 20 million old people and 47 million women, totaling 125 million people¹ - a little less than the total number of rural migrant workers. On the other hand, rapid growth in the production of non-agricultural goods in the rural economy, and the rapid growth of urbanization have also increased demands to convert agricultural land to other uses, resulting in approximately 40 to 50 million farmers losing their land (Han Jun 2005).

In China, transitional poverty groups mainly include: migrant workers who work in cities yet lack adequate job security and protection from work injuries, health risks and experiencing inadequate security in elderly life; farmers who lose land, who do not benefit equally from appreciation in the value of land, and have insufficient access to the social security system; children and elderly who are left behind in the rural areas and are unable to be cared for by parents or sons and daughters; and women who are informally employed and lack adequate rights protection.

The risks that vulnerable groups have to face in the process of urban rural integration differ from the risks faced by groups experiencing conventional income poverty. Transitional poverty is generated in the process of moving from urban to rural areas. Specifically, it has the following characteristics:

¹ The above data are quoted from National Women's federation Children Department (2008), Ye Jingzhong et al (2008) and China Communist Party News Network (2008)

Firstly, identifying the population in transitional poverty necessarily involves a degree of uncertainty. Since the main risk for this group is vulnerability, only some of them will actually fall below the poverty line due to difficulties in coping with risks.

Secondly, transitional poverty is multi-dimensional, and thus those who fall into this category may not present as low income, rather they will be socially excluded, lacking equal access to public services, experiencing a meager spiritual life, and be short of development opportunities.

Thirdly, the territorial distribution of those in transitional poverty is uneven. Migrant workers and landless peasants are mainly concentrated in the south-east coastal area and in large and middle-size cities, particularly the latter. On the other hand, the left-behind population are concentrated mainly in the rural areas in the middle and west of China.

Fourthly, transitional poverty will leave some of the temporarily-impoorished population in a permanent poverty trap.

Fifthly, policy-related poverty is a key aspect of the transitional group. Problems such as insufficient social security provision, inadequate medical provision, discrimination in the job market, and difficulties in enjoying the advantages of urbanization should all be considered as policy related issues.

Sixthly, women's poverty is also prominent. Both those women who work in mobile positions and those left-behind face many problems-such as severe deprivation of their rights, psychological problems, hardship and poor health care. These problems not only affect the wellbeing of women themselves, but also reinforce inter-generational transmission of poverty.

Finally, transitional poverty is not permanent, but policy-sensitive. The main cause of transitional poverty is deficiency in the policy system rather than the inability of the poor. It is the macro-level policy system that defines urban-rural segregation, public service policy, and anti-poverty policy approaches, and which cannot cover adequately vulnerable groups emerging in the process of urban-rural integration. This population is thus unable to cope with the risks associated with poverty. Therefore, improving the policy framework of urban-rural integration is key to solving the issue of transitional poverty.

2.3.1 Poverty Risks facing Rural Migrant Workers

Unstable employment and heavy workloads: Surveys show that in 2009 of those rural migrant workers who worked as employed staff, only 42.8% had a signed contract with their employers; 89.8% had a weekly working time in excess of 44 hours (regulated under the "labor law"); those who are employed in the hotel and catering industries work more than 60 hours per week.

Lack of medical and personal safety guarantee: In 2009, only 7.6% of employers paid pension insurance for rural migrant workers; 21.8% paid work injury insurance; 12.2% paid medical insurance; 3.9% paid unemployment insurance; and 2.3% paid reproduction insurance. The percentage of insured migrant workers in the eastern region is noticeably higher than in the middle and western areas.

Risks from illness: Rural migrant workers have problems with low income, poor living conditions, hygiene and safety conditions, low awareness of HIV/AIDS prevention, lack of access to medical care, and insufficient guidance on how to cope with HIV/AIDS. In addition, migrant workers normally have greater mobility, and since urban and

rural medical services are not well connected, this makes it more difficult to trace the prevalence of HIV/AIDS. Once infected, it becomes not only a serious problem for the patient and family, but increases society's burden. (Li Shaoqiang 2009). Consequently, HIV/AIDS prevention and treatment for rural migrant workers will also be an important health risk and management issue in poverty alleviation and economic development in the next ten years.

Social exclusion: In practice, discrimination against migrant workers is not only experienced at the level of legal and institutional arrangements, but also through bias and exclusion at conceptual, psychological and cultural levels. (Xuyong, 2006). Furthermore, the latter is normally more lasting and thus more difficult to eliminate than the former. Social exclusion reinforces the segregation of social strata, and thereby functions to keep rural migrant workers at the bottom of society.

Inter-generational poverty risk: Children of rural migrant workers cannot enjoy educational rights equal to those of children of residents in cities; this will result in an increased educational gap between rural and urban children. Poverty can thus be transmitted from one generation to another.

Particular risks faced by female rural migrant workers: According to the large-scale survey carried out by the National Coordination Team on Women and Children's Rights (2007), in 2006, only 36.4% of work units enforced the full length of legal maternal leave for female migrant workers; only 12.8% reimbursed the costs associated with reproduction; 64.5% did not pay for maternal leave; 58.2% of female workers needed to go back to their original place to have pregnancy checks instead of having these in their place of employment; this not only caused them considerable inconvenience, but also increased women migrant workers' 'economic burden' and difficulties in accessing jobs. Female migrant workers have stated that very often they feel exhausted, with 46.3% being 'extremely tired'. This figure is 18 percentage higher than that for male migrant workers, and 11.5 percent higher than that for women remaining in villages.

2.3.2 Poverty Risks for Landless Farmers

Risks from unemployment and reduced incomes: Some landless farmers have obvious disadvantages in job markets due to their lack of non-agricultural skills, and a large proportion remain unemployed or semi-unemployed. Surveys show that the most difficult task that landless peasants face is to obtain new skills for other occupations. Additionally, the unemployment rate among the elderly who cannot easily adapt to new economic requirements and the number unskilled is increasing (State Council Development Research Center, 2009).

Lack of social security system: Only a relatively small number of landless peasants can enjoy the same social security service as urban residents. Most form a marginal group living in a social security vacuum.

Deprivation of social capital: Land deprivation also disaggregates the social system that is tied to the land such as the ties between distant relatives, neighbors, lineage members and community members; thus, whilst farmers lose their land, they also gradually lose their former social capital. A survey shows that 48% of interviewed landless farmers do not identify themselves as urban citizens (Yu Xiaohui, Zhang Haibo, 2006).

2.3.3 Poverty Risks for Those Left-behind

Psychological problems: Many of the left-behind children have much looser contact with their parents than their peers, thus they are inclined to experience more psychological problems and pressures (National Women of the left-b Children Work Division, 2008).

Some left-behind women cannot stand the loneliness, and divorce rates increase (China Communist Party News network, 2009). Because children are not at their side and in most villages public cultural facilities and activities are scarce, nearly 50% of the left-behind elderly feel under pressure, and one third of them often feel lonely, and are frequently anxious, irritable and depressed (Ye Jingzhong 2008).

Health risks: The health conditions of many of the left-behind elderly are poor, and they lack caring in their daily lives and have heavy workloads. Many do not have sons or daughters at their side to take care of them when they are ill. Given the prominent trend of feminization of agriculture work (Zhen Yan 2008), the work intensity of left-behind women is increasing dramatically, and this not only seriously affects their health but also increase their susceptibility to disease; Yet many are unable to afford medical costs (Ye Jingzhong 2008).

Inadequate pension system: Surveys have shown that 81% of the left-behind elderly are still engaged in agricultural production; only 8% have obtained support from the state in cash or kind; and only 1% have social endowment insurance (Ye Jingzhong et al, 2008). This situation can only be improved when new rural endowment policies are enforced.

2.4 Governance Mechanisms: An Important Factor Influencing the Poverty Issue in the Future

Given the Chinese Central Government's aim of taking income redistribution as a new agenda in its development strategy, various departments will sooner or later be involved in the overall development planning process, with social protection as its main concern. Therefore it is likely that more governmental agencies will take part in the poverty alleviation program in the future; consequently, there will be a growing demand for the establishment of efficient coordination across bureaucratic boundaries and a sound governance mechanism.

In rural areas, prior to the abolition of agricultural taxes, village organizations had clear behavioral goals, structure and functions, and also had the legitimacy and means to mobilize funding and resources. With fee reform and the ending of agricultural taxes, rural areas entered a new post-tax era. This change has had important consequences for village governance. On the one hand, village public facility construction has experienced difficulties due to the pressure of grass-roots level debt and limits on expenditure; on the other hand, the connections between farmers and village cadres have become looser, and the behavioral choices of village elites have focused less on the overall needs of the village community. Furthermore, the material foundation of village administrative authority has weakened, and there appears to be a "vacuum" in village public authority (Tian Xianhong, 2006). This situation seriously affects the ability of the grass-roots community to mobilize resources and is also the root cause of village rent-seeking and the unequal distribution of resources.

2.4.1 Deterioration in Village Governance affects the Effectiveness of Rural Poverty Alleviation

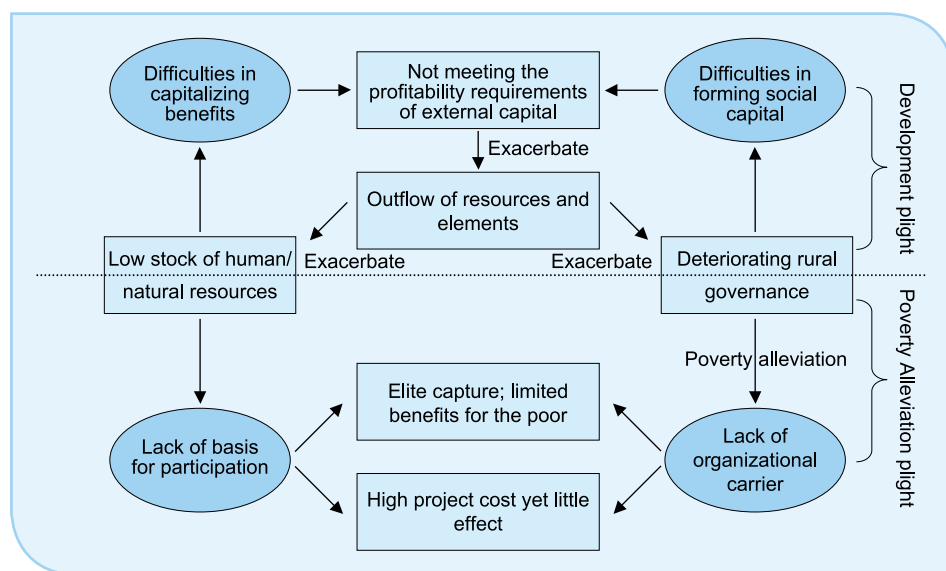
The impact of weak village governance on poverty alleviation is mainly manifested as 'elite capture'- atomized villagers lack organizational carriers and junior officials come to dominate resource allocation. Considerable research has been carried out internationally on elite capture in recent years. It has been analyzed as resulting from a combination of factors: unequal access to economic resources, knowledge and manipulation of political processes, higher levels of educational attainment and privileged networking. As a result of the dominance of village elites, poor groups comprised mainly of women and the

elderly cannot effectively participate in various projects due to their limited capacity and lack of access to resources. This situation has entrenched existing difficulties in poverty alleviation: on the one hand, due to the lack of existing organizational carriers, there are high costs associated with re-organizing weak groups in villages who are short of human, material and natural resources, and on the other hand, this will in turn affect the efficiency of poverty alleviation work.

2.4.2 Limited Capacity of the Poor Population for Self-Development

In the post-tax era, since the poor population formed largely of women and the elderly has limited capacities and access to use of natural resources, they have limited assets. Focusing on villagers use of assets - financial, physical, natural, social and cultural - is an approach used increasingly in poverty reduction programs internationally. It enables implementing agencies to target funds more directly to particular aspects of household's livelihoods to facilitate the capacity of household members to lift them out of poverty. In the context of poor village governance it is difficult to mobilize weak groups to form multi-functional and multidimensional social capital, and thus difficult to match the requirements and demands of external capital investment.

Fig. 1: How Deteriorating Rural Governance Affects Poverty Alleviation in the Post Agricultural Tax Period



This situation aggravates the outflow of resources from poor areas, which in turn lowers resource storage in villages and undermines the foundations for good village governance. This cycle limits the development capacity of women and the elderly, and puts them in a continuously self-weakening situation, constraining the possibilities for sustainable development of the village economy. Figure one illustrates this resource flow – governance – poverty alleviation interaction mechanism.

2.5 Climate Change and Environmental Deterioration: The Causes of Poverty as Defined by Vulnerability

Many of China's poor areas are also highly sensitive to climate change. In 2008, the China Environment Protection Ministry issued 'Guidelines for National Ecologically

Vulnerable Areas Protection and Planning', in which eight ecologically vulnerable areas are circumscribed. These are: northeast forest-grassland ecotone, northern farm-pastoral ecotone, northwest oasis-desert ecotone, southern hilly region of red soil, karst rocky deteriorated mountains region, southwest mountain farm-pastoral ecotone, complex erosion region in Tibetan Plateau, coastal water-land ecotone (MEP 2008).

Most of China's poor population lives in these areas. In 2005, there were 223.65 million poor people nationwide, of which more than 95% lived in the old revolutionary areas, ethnic minority areas, distant areas and poor areas, where ecological conditions are also extremely vulnerable (MEP 2008). Amongst the 592 key poverty alleviation counties, which are scattered in middle and western areas, more than 80% are located in ecologically vulnerable areas (MEP 2008). Green Peace and Oxfam have jointly issued a report showing the high degree of overlap between poor counties and ecologically vulnerable areas in China. This report on the Chinese situation reflects conclusions reached internationally on the impact of various aspects of climate change causing households to succumb to poverty, often rapidly with the onset of landslides and flooding.

2.5.1 Climate Change Intensifies the Vulnerability of People in Poor Areas and Increases the Risk of Returning to Poverty

Climate change has triggered a series of natural disasters in China, such as intensified drought, the withering of forest vegetation, worsened soil erosion and extreme climate incidence. These natural disasters inevitably result in a deterioration of the environment in ecologically vulnerable areas. Poor households in these areas have particular difficulties in dealing with climate change, since they face challenges in many aspects such as natural capital, human capital, technical equipment and alternative livelihoods. Poor rural households become more and more affected by the negative influence of climate change, and since they have limited ability to adapt to new situations, their livelihood vulnerability increases. This increasing vulnerability results in a relatively high rate of poverty incidence recurrence. Frequent natural disasters triggered by climate change have gradually become the main cause of poverty incidence and recurrent poverty.

There are three main factors causing poverty recurrence: namely, natural disasters, major illnesses, and population pressure. Within these, 70% of poverty recurrence is caused by natural disasters (Li Jiayan 2005). Data from the National Statistical Bureau in 2003 showed that 55% of households returning to poverty in that year had suffered from natural disasters (Nie Zhongqiu 2007). Natural disaster may easily lead to a vicious cycle of 'disaster-poverty-more disasters-poorer' in ecologically vulnerable areas where the level of economic development level is already low.

The impact of this cycle has been assessed comprehensively in international research. During the last decade, considerable research has been undertaken in both developed and developing countries on the impact of climate change on poverty conditions. The vast majority of assessments conclude that poverty is one of the most powerful influences on household's abilities to deal with the impact of climate change. Additionally, it has been concluded that poor households appear to rely more heavily on climate-sensitive resources than non-poor households

2.5.2 The Single-Dimensional Policy Objective: A Negative Impact on the Poor Population

In the process of seeking an effective method to deal with climate change, on the one hand constrained by many factors, the poor population has limited ability to cope with climate change risks; on the other hand, the current policy framework does not

adequately include their contributions to reducing the impact of climate change.

Effective policies, such as function-zoning, emission reduction and land conversion, sometimes may have the external effect of restricting the diversification of poor household's production, and raising the cost of their livelihoods, thereby make them even more vulnerable. Policies for nature reserve areas have a multiple impact on local residents. Many natural reserve management regulations are not only about protection, but also about ecological compensation and the promotion of alternative livelihoods; however, these policies often do not take into consideration the vulnerability of the poor population, and thus may actually exclude these people to some extent.

Additionally, some measures initiated by poor groups themselves, such as cultivation regulations in drought periods and water-concentration techniques, are often not fully utilized due to resource constraints, lack of funds and technical support.

3. Recommendations for China's Poverty Reduction Strategy to Meet These Challenges

The issue of poverty has evolved with economic development and changes in social structure. The task of poverty reduction remains complicated and enduring. It requires focusing on long, middle and short term strategies, and on specific policies to deal with the constraining factors on the poor population's development and poverty reduction; and finally to achieve the goal of poverty elimination. Focusing on the four major issues discussed thus far, the following aspects should be included in future poverty alleviation strategies and related policies.

3.1 Long-term Poverty Reduction Strategy

3.1.1 Establish an Inclusive Urban-Rural Integrated Development Pattern to Benefit the Entire Poor Population

From a long-term perspective, China must establish a policy framework and development model which can benefit vulnerable groups and enable them to share the fruits of urban-rural integrated development, avoiding current problems such as the increasing income gap, segregation, and tensions between rich and the poor groups commonly evidenced in the process of urbanization in many developing countries. Specifically, recommended policies include:

(a) Fully developing labor intensive industries to provide adequate job opportunities for the large number of rural migrant workers; Extending training programs for migrant workers. These programs have proven successful not only in China, but in many other countries, notably in Andhra Pradesh, India, providing employment options for vulnerable young laborers, linking them to jobs in urban and semi-urban areas, following a three month training programme with staff from industries acting as mentors. In Bangladesh, similarly successful short-term programs have been implemented for poor rural households, preparing them with skills training for work in urban and semi-urban area, and with food assistance.

(b) Establishing urban-rural unified and equal production factor markets. Enforcing the 'de-elitized' household registration reform, enabling most people who are employed in cities to register. Entitle rural land with complete ownership, equalize the right and price of rural and urban land; and guarantee fair 'compensation' for landless farmers.

(c) Establishing an urban-rural integrated rather than a segregated or 'fragmented' public service policy framework, and treating urban and rural residents together as one group;

set up a livelihood safety network covering and unifying urban and rural vulnerable groups at the national level. As outlined in the sub-report, international experience in this area stresses the need for policies to be “portable”. Many migrants enroll in social insurance schemes but then withdraw at a later stage because they cannot take the insurance benefits with them when they move. Additionally, often when they withdraw they can only take out their own contributions to these funds, whereas their employer’s contributions remain. To address migrant’s problems, not only must existing schemes be extended, but new independent programs must be created to meet the specific needs of rural-urban migrants. Considering the varying levels of economic development in different provinces and the current condition of fiscal transfer payments, it is suggested that each province be encouraged to unify the urban-rural public service systems within their jurisdiction, with support from the central government, to pave the way for a national integrated system as the next step.

(d) Establish a fiscal transfer payment institution which addresses the dimensions of poverty, together with a dual system of person and location affiliation. Public services such as education, medical care, pension provision and poverty alleviation should have stronger compensation mechanisms, emphasizing beneficiaries rather than their attributed locations.

(e) Fully consider the accessibility of the rural left-behind to basic public services. In the allocation of fiscal funds, address the increasing financial need to provide urban public services resulting from increasing urbanization and the need for the rural left-behind to access public services, and ensure this benefits left-behind groups, rather than maintaining or extending their marginalization when making fiscal transfer payments.

3.1.2 Reducing Multidimensional Poverty: The Goal of the Poverty Alleviation strategy

The concept of multidimensional poverty needs to be integrated into national poverty alleviation strategies, possibly via the use of the Multidimensional Index and its accompanying monitoring system. Mitigating and eliminating multidimensional poverty must become a specific objective, in relation to nutrition, health, education, income and rights, as inter-related issues for achieving the overall strategic goal. As with the UN Millennium Development Goals, it is essential to put forward a time framework, outlining specific steps and milestones for achieving the task of eliminating multidimensional poverty.

Since multidimensional poverty refers to many areas, including politics, economy, society and environment, it is necessary to establish a more effective governance structure at the macro-level to ensure that strategy and policy be inter-related and that a good partnership be established between the various departments. It is suggested to set up a responsive monitoring and evaluation mechanism to keep track of all departments in relation to their mandates and actual performances. It may also be necessary to strengthen the authority of the State Council Poverty Alleviation Leading Group and to improve the functioning of the Poverty Alleviation Office, so as to enhance its organizational capacity for coordination, and to put it in charge of monitoring and evaluation.

3.1.3 Village Governance: Taken as an Important Aspect in Rural Poverty Alleviation

From a longer-term perspective, current macro-level governance mechanisms should be reformed, based on the new challenges discussed above. The aim of reform is to establish an “overall” poverty alleviation governance system to effectively integrate

administrative and financial resources. At the same time, the anti-poverty campaign first needs to guarantee the basic livelihoods of poor and vulnerable groups, and further, to support their demands for sustainable development and diversification.

The emphasis must be on enhancing the organizational level of vulnerable groups, improving the governance system and satisfying their social and cultural needs. Consequently, it is necessary to comprehensively relate governance issues with other requirements for achieving sustainable development, such as environmental protection, and incorporate these elements into the overall policy framework for rural poverty alleviation. If we can establish an organizational structure that can absorb and utilize resources in the same process of human resource development, then it will be possible to upgrade labor resources into multi-functional and multi-dimensional social capital which can not only maintain basic livelihoods, but also promote sustainable agriculture and rural development in less developed areas.

3.1.4 Enact Focused Policy to Deal with Climate Change Risks

Poverty alleviation strategies should be sensitive to climate change risks; these strategies must be suitable for mitigating the livelihood vulnerabilities of the poor population in ecologically vulnerable areas, and enhancing their capacity for sustainable development. The contribution that the poor population makes to reducing climate change (nature reserves/ development prohibition zones, grassland ecological construction projects and food safety projects) must be recognized and fully compensated.

The importance of drawing on community-based knowledge in assisting poor households in adapting to the adverse economic and social aspects of climate change is stressed repeatedly in many commentaries internationally. Communities often have detailed time, place and event specific knowledge of local climate hazards and of how such hazards can affect their assets and productive activities. They also have the capacity to manage local social and ecological relationships that will be affected by climate change. Communities typically incur lower costs than external actors in implementing development and environmental projects. Community knowledge has been shown to be invaluable in a range of projects, from reforestation programs to fisheries renewal, nature reserve management, and in the protection of coastal areas.

In ecologically vulnerable areas, special poverty alleviation models should be established and special fiscal budget and transfer payments should be put in place. The amount and form of transfer payment needs to be formulated, taking into consideration the aim of eliminating the threat caused by climate change risks. It is important to improve local resident's ability to cope with climate change risks in ecologically vulnerable areas where ethnic minorities are concentrated, such as the south-west karst mountainous area and stony desert covering areas of Sichuan, Yunnan, Guizhou, Chongqing and Guangxi; the south-west mountainous agriculture and pasture intersecting areas of Aba, Ganzi and Liangshan in Sichuan, Diqing, Lijiang, Nujiang in Yunnan and Liupanshui in the north-west Guizhou (containing approximately 40 cities and counties) and the Tibetan Plateau complex erosion area in Tibet and Qinghai. It is also necessary to consider the cultural development and activities of these ethnic minority communities.

3.2 Medium-term Poverty Alleviation Strategy

3.2.1 Establish an Urban-Rural Integrated Poverty Monitoring and Alleviation Policy System

Firstly, an urban-rural integrated poverty alleviation coordination and organizational institution needs to be established. It is essential to put poverty alleviation work in

both rural and urban areas into one unified framework and bridge the institutional gap previously existing between the two areas; and this demands necessary reforms of the administrative system and adjustments of the functional divisions between departments.

Secondly, considering the gap in the cost of living between rural and urban areas and its variation amongst different regions, it is necessary to devise a dynamic rather than a static poverty measuring system to effectively compare rural and urban poverty.

Thirdly, the poverty monitoring mechanism needs to be adjusted, and urban and rural residence integrated into one system in order to provide complete and coherent basic data for integrated poverty alleviation policy formulation.

Fourthly, more attention needs to be paid to vulnerable groups, in relation to transitional poverty, emphasizing poverty risk factors and taking transitional poverty as an important element in enhancing development capacity and increasing the development opportunities of vulnerable groups in future macro-level strategic planning. The new national poverty alleviation guidelines should incorporate transitional poverty and the population as a crucial part of the anti-poverty agenda. This requires a change in poverty alleviation and development guidelines from those previously aiming only at the rural areas, to adopt a wider scope covering the whole country, and specifically, to integrate the urban poor, migrants and the rural poor into a unified poverty alleviation framework, and to organically consolidate the work of poverty alleviation and development, social service and social security.

3.2.2 M&E and Policy Formulation on Multidimensional Poverty

Firstly, monitoring and evaluation systems must be adjusted, based on the concept of multidimensional poverty. This adjustment should also bear in mind international research stressing the efficacy of participatory approaches in multidimensional poverty monitoring. Adjustments will require a division of tasks and coordination between member units under the Leading Group of Poverty Alleviation (LGOP). Aiming at the strategic goal of multiple poverty alleviation in the new era, it is necessary to define specific poverty alleviation targets and monitoring methods for different sectors, and to form a monitoring and evaluation system which reflects specific conditions and tasks in different departments and provinces, and which can be implemented regularly. Secondly, formulate specific plans and projects aimed at addressing multidimensional poverty. This demands coordination between the particular poverty alleviation and development policies formulated by various departments. Policy synergies will undoubtedly promote the process of multiple-poverty alleviation.

3.2.3 Enhance Vulnerable Groups' Organization: Good Governance

The stock of human and natural resource is generally low in poor areas and amongst vulnerable groups who are mainly women and the elderly. Additionally, capitalization of this type of human resources usually only generates low profits and it is thus difficult to afford the huge organizational costs incurred in the initial stage of organization.

Consequently, foundations for good governance can be set up in cultural and social areas with lower cost and easier access for women and the elderly, to facilitate the establishment of social organizations to reduce transaction costs. Beyond this, when conditions are more mature, it will be possible to enable vulnerable groups to help each other and coordinate with each other in the areas of production, purchasing and selling, and funding. They will be able to realize their objectives of diverting risks and stabilizing profits on the basis of comprehensive cooperation, and thus establish a basic foundation for sustainable development.

Given that the poor population usually has relatively small-scale economic activities and a low-level of commoditization, it is recommended that special institutional arrangements be put in place to ensure equal accessibility and potential benefit in the process of establishing rural community corporative organizations. Possible options could include organizing poor households to form ‘mutual help teams’ and jointly input their labor, or the state providing financial and technical support to households via rural co-operatives.

3.2.4 Strengthen Risk Management for Climate Change, Policy Support and Capacity Building

Firstly, take climate change risk analysis and evaluation as an important element in poverty alleviation planning. Take the ecologically vulnerable area as the scope of analysis and evaluation, integrating indicators such as rainfall variation, drought and flood frequency into the existing statistical system so as to provide data bases for risk evaluation.

Secondly, internalize social protection measures into the adaptation strategy, and quantify the policy support needed to realize the potential of self-initiated adaptation measures, and put this into a national budget entitled ‘special fund to support climate change adaptation in poverty alleviation’. Specifically, this includes: technical support for production structure adjustment, expertise and funds for alternative livelihoods, market information support, employment information for migrant workers, techniques and network support, support to prevent and cope with natural disasters, etc.

Thirdly, promote capacity building, including leadership skills, capacity of information provision, technical and funding services, and create an active local commercial environment for the development of sustainable livelihoods. In recent years, internationally, there has been considerable discussion of micro-insurance organizations and their role in protecting poor household’s assets against losses resulting from the impact of climate events. In India, for example, smallholder farming households participate in a “weather-index” insurance scheme providing compensation when the shortfall in precipitation becomes severe². Index-based insurance has also been introduced in recent years in other countries – Thailand, Mexico, Malawi and Mongolia. In each case payments are made as a result of changes in a public index triggered by climate events, such as rainfall recorded on a local rain gauge. Experiences in these countries indicate that payments can be calculated and disbursed quickly, often through the use of local microfinance organizations, without households’ filing insurance claims. Such rapid payments are useful particularly when households are poor with limited financial assets, but their assets can be pooled via co-operation.

3.3 Short-term Poverty Alleviation Policy

3.3.1 Improve Policies to Meet the Challenges of Transitional Poverty

In the near future, adjustment should begin with relevant policies aiming to benefit the transitional poor population to a greater extent than previously.

Firstly, improve the existing connections between urban and rural public service policies, in order to make preparations for a rural-urban integrated public service policy system. There are many cases of integration from which experiences can be drawn

² See, for example, P.O.Manuamorn, “Scaling up Microinsurance: The Case of Weather Insurance for Smallholders in India”, Agriculture and Rural Development Discussion Paper no.36, World Bank, Washington DC, 2007. More generally, see also, B.J.Barnett and O.Mahul, “Weather Index Insurance for Agriculture and Rural Areas in Lower Income Countries”, Department of Applied Agricultural and Applied Economics, University of Georgia, 2006.

internationally. The Strategic Initiative Report on appropriate anti-poverty policies for the rural-urban transition, for example, cites a number of relevant examples, notably from the UK, USA, Germany, South Korea and Chile.

Secondly, there is a need to strengthen the poverty sensitive agricultural preferential policy as a counterpart to the current agricultural preferential policy. Building on this improvement, the Leading Group Office of Poverty Alleviation of the State Council should evaluate the effectiveness of poverty reduction (including that of relative poverty) through the robustness of current agricultural preferential policies and adding new initiatives. It is suggested that international donors provide technical support for the evaluation of effectiveness of these services and policies in poverty reduction.

Thirdly, on the basis of such an evaluation, new policies in poverty alleviation can be formulated, which can compensate for the 'poverty alleviation deficiency' prevalent in both universal subsidy and income-oriented agricultural preferential policies. Specific policy measures include: expanding rural medical support coverage; establishing a production support fund for small households, in particular by further developing village level pilots via the 'mutual help fund'; Carrying out a comprehensive training program for vulnerable groups employed in cities; set up intervention projects for those left behind in the villages, such as on medical care for the elderly.

Finally, begin household registration reform in large and middle size cities, to promote social inclusion of rural migrant workers in cities.

3.3.2 Implement Multidimensional Poverty Intervention Projects

Launch early childhood nutrition intervention programs (e.g. early-stage children's food supplement); full implementation of the boarding school free nutritious meal plan; providing health care services for women and children in poor areas; Integrating early childhood education as a part of the public education system and providing special financial funding for it; expansion of compulsory education from nine years to twelve years; providing conditional cash transfer payments to enable children in poor households to receive education in order to address the issue of income poverty resulting from insufficient schooling.

There is now a wealth of international experience on the use of conditional cash transfers on which China can draw, notably from the renowned Bolsa Familia Program in Brazil - currently covering almost 50 million people, or a quarter of the population, and requiring health clinic and school attendance. Similar larger-scale schemes have been implemented in other Latin American countries such as Mexico and Nicaragua. In Asia, Indonesia and Bangladesh have such programs, and Cambodia and Pakistan have pilot cash transfer schemes. Currently, Africa's most notable Cash Transfer scheme is in Zambia, providing basic subsistence funds dependent on regular school attendance. Chapter 4 discusses these programs, also noting their limitations, particularly in relation to issues such as sustainability and improved learning outcomes. It is also crucial to enhance the rights awareness of the poor population by improving village governance.

It is recommended that the Leading Group Office of Poverty Alleviation (LGOP) develops a research framework for multidimensional poverty alleviation strategy, and that international development donors provide technical support to develop an indicator and monitoring/evaluation system for multidimensional poverty policies and their implementation.

3.3.3 Improve the Poverty Reduction System and Village Governance

Firstly, efficiency improvements should be made in the traditional top-down poverty alleviation system. On the one hand, it is essential to improve the structure and functioning of current village level administration, particularly the capacity building of village institutions; on the other hand, professional civil organizations are needed and farmer organizations should also be further developed, particularly in relation to their role in bridging different stakeholders. In the next poverty alleviation program, the task of building capacity for village committees should be stressed, and the development of multiple civil organizations for poverty alleviation should be supported.

Secondly, efforts should be continued to reinforce multiple inputs into villages that have completed integrated village development planning, and increase financial inputs to support their social and cultural activities, and to enhance the organizational level of rural vulnerable groups. More policies should be enacted and conducted to support and promote rural social and cultural organizations that have broad yet limited group participation, to transform them into comprehensive and multi-functional community cooperatives. Furthermore, on the basis of the development of multiple social organizations, good village governance will be achieved, which will ensure sustainability for poverty alleviation.

Thirdly, on the basis of a full consideration of funding coverage and safety, the robustness of rural financial corporations should be reinforced in the process of integrated village development and village level mutual-support collectives. Policies and mechanisms should be enacted to enable groups with limited capacity to participate in financial cooperation initiatives. Specifically, the following should be included: cancellation of policy barriers on peasant cooperative finance; enacting policies to encourage rural cooperative finance organization development; providing “seed funding” for peasant cooperative financial organization via fiscal funds. In areas with mature conditions, the establishment of cross-village economic collectives should be encouraged. It is suggested that international donors identify the development of farmer organizations in poor areas in China as an important agenda in their specific country programme, with an emphasis on supporting pilots in different areas.

3.3.4 Strengthen Policies and Measures to Improve the Ability to Adapt to Climate Change

Firstly, since basic infrastructure is crucial for improving the ability of the poor population to adapt to climate change, construction of these facilities remains an important measure. However, when building, maintaining, or improving infrastructure, more attention should be paid to ecologically vulnerable areas, integrating this with policies on relocation.

Secondly, it is suggested that the Ministry of Finance establish a “climate change risk fund” to cope with natural disasters and reduce disaster damage, and to provide support for the poor population to enhance their capacity to adapt to climate change. Taking funds from the emission tax can be a first step in the development of this fund.

Thirdly, establish micro-insurance mechanisms in areas with high climate change risk, so that when households encounter assets losses caused by the negative effects of climate change, a maximum level of compensation can be provided, and the incidence of returning to, or falling into poverty, can be reduced. It is recommended to implement small scale micro-insurance pilot projects in poor areas, with reference to international experience, and that international development organizations provide support for the necessary research on livelihood safety insurance mechanisms in China’s rural areas, particularly via undertaking projects piloting community-based micro-insurance institutions.

Fourthly, it is recommended that the current ecological compensation system be reformed and a policy on the purchase of environmental services be formulated, for which international development organizations can design and implement pilot projects.

Fifthly, the agenda for improving the ability to adapt to climate change risk should be integrated into the twelfth five-year poverty alleviation plan, and its implementation and monitoring/evaluation system. Through the methods used in village participatory development planning, groups at particular risk (from disease, accidents etc.) and groups at symbiotic risk (loss due to drought or flood) should be targeted as particular groups to diagnose, and for which feasible solutions and coping strategies can be proposed.

Table 1: Challenges for China's Future Rural Poverty Reduction Strategy and Recommendations

Future challenges for China's Poverty Alleviation Program	
Multiple Poverty and Poverty Targeting	<ul style="list-style-type: none"> • Nutrition and Basic Health Care related poverty • Health and Illness related Poverty • Education and Poverty • Targeting: A Key Issue
Transitional Poverty in the Process of Urban-Rural Integration	<ul style="list-style-type: none"> • Poverty Risks faced by Rural Migrant Workers • Poverty Risks for Landless Farmers • Poverty risks for those left-behind
Village Governance and Rural Poverty Alleviation in the Post-Tax Era	<ul style="list-style-type: none"> • Deterioration in Village Governance affects the effectiveness of Rural Poverty Alleviation • Limited Capacity of the Poor Population for Self-Development
Climate Change and Vulnerability	<ul style="list-style-type: none"> • Climate Change can increase the vulnerability of people in poor areas and enhance the risk of returning to poverty • Single-dimensional policy objectives have a negative impact on the poor population
Recommendations for China to Respond to These Challenges	
Long-term poverty reduction strategy	<ul style="list-style-type: none"> • Establish an Inclusive Development Pattern to benefit the entire poor population • Ensure that reducing Multidimensional Poverty is the clear goal of the Poverty Alleviation Strategy • Take the issue of Village Governance as an important aspect in rural poverty alleviation • Enact focused policy to deal with Climate Change risks
Middle term Poverty Alleviation Strategy	<ul style="list-style-type: none"> • Establish an urban-rural integrated poverty monitoring and alleviation policy system • Monitoring & Evaluation and Policy Formulation should be based on assessing levels of Multidimensional Poverty • Enhance the Organizational Level of Vulnerable Groups and set up Good Governance • Strengthen Climate Change Risk Management, Policy Support and Capacity Building
Short-term Poverty Alleviation Policy	<ul style="list-style-type: none"> • Improve current policies to meet the challenges of Transitional Poverty • Implement Multidimensional Poverty Intervention Projects • Implement Multiple Inputs and improve Village Governance • Strengthen policies and measures to improve the ability to adapt to Climate Change

1. Introduction

1.1 The concept of multidimensional poverty in China

Multidimensional poverty is poverty caused by deficiency or lack of well-being (including social services). It reflects the poverty situation during the socioeconomic transition between the failure of original welfare mechanisms and the gradual establishment of a new welfare supply system. When a family cannot afford basic non-income welfare with its income, these results in an ever-increasing “social cost externalization” on society that ultimately is the result of conflicts in policy. Then multidimensional poverty emerges.

The concept of multidimensional poverty was first put forward in the mid-to late 1990s, and has been adopted for China’s poverty alleviation strategies and practices since the beginning of the 21st Century. The pluralism of poverty has been taken into account by the eight identifiable indicators of poor groups in the Whole-Village Poverty Alleviation Strategy and by Participatory Poverty Assessments. An empowerment mechanism has been adopted for select projects with villager participation. The China State Statistical Bureau has used the term “multi-dimensional poverty” in China Rural Poverty Monitoring Reports since 2007.

As China progresses from an overall “well-off” (Xiao Kang) stage to an all-around “well-off” stage, the basic social contradiction between people’s growing material and cultural needs on the one hand, and limited social productivity on the other, is becoming increasingly acute. More specifically, as society progresses to new stages, individuals will no longer be satisfied with basic subsistence; rather, their needs will increase further.

Individual needs differ according to circumstances, such as those of endowment, employment and basic social insurance. However, fundamental rights granted to every citizen by the Constitution (including equal rights to education and health, the right to know, and the right to participation), have become a part of people’s basic needs. Many needs related to well-being cannot be purchased with income. Thus, a strict income-poverty concept does not address people’s basic needs of well-being, nor can it adapt to the building of an all-round, well-off society where common progress is required to meet political, economic, social, cultural and ecological needs.

As the first poverty alleviation and development program 2001-2010 is coming to the end, we need to clarify the concept of multidimensional poverty and adopt it for the country’s new policy system. It should be clearly stated that as society advances, besides income poverty, we need to consider poverty caused by inadequate health, education, employment, etc. This means a broader concept of poverty with connotations beyond monetary aspects.

The scientific study of poverty has been undertaken for more than 100 years in China. Only a few western countries use the concept of multidimensional poverty since the welfare distribution in these countries is sufficiently well established to reach most citizens, and the extra income received by each individual is regarded as earnings. It is particularly important to introduce multidimensional poverty and related indicators in China, for the following reasons: firstly, multidimensional poverty can reveal inequalities

Multidimensional poverty

Concept of multidimensional poverty and its evolution

Gaps between poverty alleviation practice and real demands

in the supply of basic social services and the degree of poverty; secondly, since the multidimensional activities implemented in poverty reduction practice have not been formally integrated into national policy, it is important to do so in order to provide policy safeguards for poverty reduction in the new era, and thus to promote consistency between policy and activities in poverty reduction.

1.2 The connotation of multidimensional poverty

The concept of multidimensional poverty involves the basic needs of income necessary for people-centred development, and the realization of entitlements for the development of an all-round well-off society. The concept of multidimensional poverty has three aspects, as follows:

1) Multidimensional poverty is a socio-political concept and is not limited to the field of economics. People are often influenced by the poverty line standard proposed by mainstream economists and accustomed to considering poverty as a strictly economic issue. While formal rules in an economic system are defined and guaranteed by political systems, so political systems include variables that determine economic performance. This has been proven by the achievements in China's poverty alleviation which have been "guided by the government with participation by the whole of society" since China's Reform and Opening.

2) The concept of multidimensional poverty contains a strategy for the pursuit of equality. Equality means equal opportunities, and begins with equal basic conditions, access to equal processes for development, and finally equality in results that lead to common prosperity. This is a process focusing on livelihoods and development achievements that are shared by the people.

3) Well-being is usually realized through consumption, including consumption of both private and public goods. However, as public goods such as education and medical services are transformed into quasi-public goods due to inadequate supplies, or monopolised into private goods due to limited resources, a large number of ordinary people will no longer be able to afford an adequate level of social well-being, due to their limited incomes. This will give rise to a reverse wealth formation process that could further increase the numbers within the low-income or underprivileged stratum.

If no effective preventive measures are taken before these "stratum" solidify into "classes", a more equal society may only be realized via a "revolution". This runs counter to the idea of building a harmonious society. Therefore, the concept of multidimensional poverty has connotations of policy sensitivity that precede the ossification of underprivileged "stratum" into such "classes".

1.3 Why multidimensional poverty alleviation policies in China?

Based on the challenges of poverty alleviation, China's population dynamics, and current international conditions, we view this as an opportune time for China to adopt multidimensional poverty alleviation policies.

Firstly, China has achieved world renown in the area of poverty alleviation during the last 30 years; however, the present challenges arising in poverty alleviation for a well-off society are different from problems faced during the "subsistence poverty" period, in that *the previous poverty alleviation policy system has failed to meet the actual needs in the current stage. This is not purely a technical problem of targeting.* This is a problem of replacing the old system with a new one that meets needs in the new stage. Additionally, there is a general institutional problem experienced by many developed countries, that underprivileged groups cannot enjoy benefits due to the lack of a clear means for testing

Challenges

Institutional problems cannot be solved only by instrumental measures

Population dynamics and future trend

and monitoring horizontal transfer payments for multidimensional poverty alleviation. The previously set criteria for one-dimensional poverty (that took income and consumption as leading factors) cannot reflect the actual status of poverty, and can hardly facilitate effective resource allocation or poverty monitoring for poverty alleviation. It is an arduous long-term task for China to further eliminate poverty and realize common prosperity.

Secondly, from the perspective of China's future and the development of human well-being, forward-looking strategic research is needed. In the past 250 years along with the progress of industrialization, less than 1 billion of the population has been modernized, and these people are concentrated mainly in the developed countries. In the future 50 years, the world modernized population including those from China may exceed 2 billion or more; however, research must be conducted focusing on the resource and environmental problems emerging during the process of population modernization, and a feasible path must be explored for sustainable development and poverty reduction.

Thirdly, China now has entered into the "inclusive growth" era, but there is no widely recognized indicator system for this period. Economists focus on indicators such as head count ratio of poverty population, Gini coefficient, expenditure of public education and healthcare, employment and the gaps between urban and rural areas. However, here we are proposing a **more inclusive** analytical poverty framework in order to contribute to inclusive growth. We recognize poverty alleviation is an improvement in the status of well-being, which at least in principle includes the following: 1) material living standards (income, consumption and assets); 2) health; 3) education; 4) individual activities including work; 5) political voice and governance; 6) social connections and relationships; 7) the environment (current and future conditions); 8) economic or physical (in) security. Since well-being is multidimensional, poverty alleviation must be adapted to the variational requirements of well-being.

Fourthly, understanding of the multidimensional poverty concept has been sufficient until now but it still rests on operation and monitoring levels. There is still a strong need for a breakthrough at the policy level. According to studies and analyses of poverty alleviation and China's development, the opportune time to develop a policy system for multidimensional poverty is during the transition from traditional to inclusive growth. This will be crucial for development and poverty alleviation in the new era.

Fifthly, China's model of poverty alleviation is worthy of study by other countries. One of the most notable outcomes of China's peaceful rise is its poverty alleviation. Peaceful development is an important objective of global poverty alleviation. In case-study examples from Yunnan Province we can see that China is ranked highly in multidimensional poverty alleviation. It is necessary for us to sum up China's experiences in multidimensional poverty alleviation, combine future multidimensional poverty alleviation objectives with sustainable development objectives, and further explore the systematic and operational concept of multidimensional poverty alleviation. This would be a great contribution to global poverty alleviation. Based on China's active involvement in poverty alleviation and international exchange and cooperation in the development field, China is ideally positioned to make international contributions to this field, by adopting multidimensional poverty alleviation strategies.

2. Analytical Framework for Multidimensional Poverty and Tentative Indicators

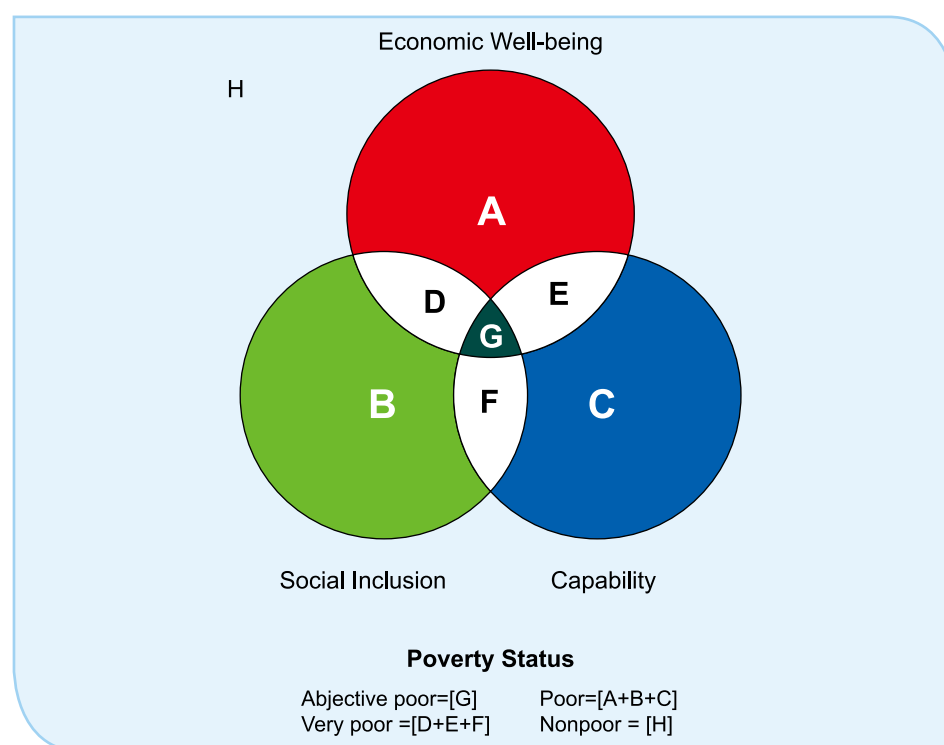
Poverty alleviation is an integral part of a country's overall development strategy. Based on the target of eliminating absolute poverty in China by 2020, as well as the experiences learnt from the Minimum Livelihood Safeguards scheme that education and

Degree of poverty measured in three core dimensions of individual capabilities, social inclusion and economic well-being

healthcare are key fields with low security, this report will mainly explore the core issues of multidimensional poverty related to human development: namely healthcare, nutrition, education, employment of disadvantaged groups and problems related to provision for the elderly.

We use a simplified three-dimensional diagram to explain the concept of multidimensional poverty (as shown in Fig. 2). Individual poverty in a given area is influenced by individual capabilities, the social environment and overall economic well-being. Deficiency or deprivation in any one dimension indicates being poor (the areas marked with A, B and C). Deficiency or deprivation in any two dimensions indicates being very poor (the areas marked with D, E and F). Deficiency or deprivation of all three dimensions indicates abject poverty (the area marked with G). Any status not restricted by these conditions is defined as non-poverty (the area marked with H).

Fig. 2: The multidimensional poverty space



Source: Adopted from Udaya R. Wagle (2008). *Multidimensional poverty: An alternative measurement approach for the United States?* *Social Science Research* 37 (2008) 559–580.

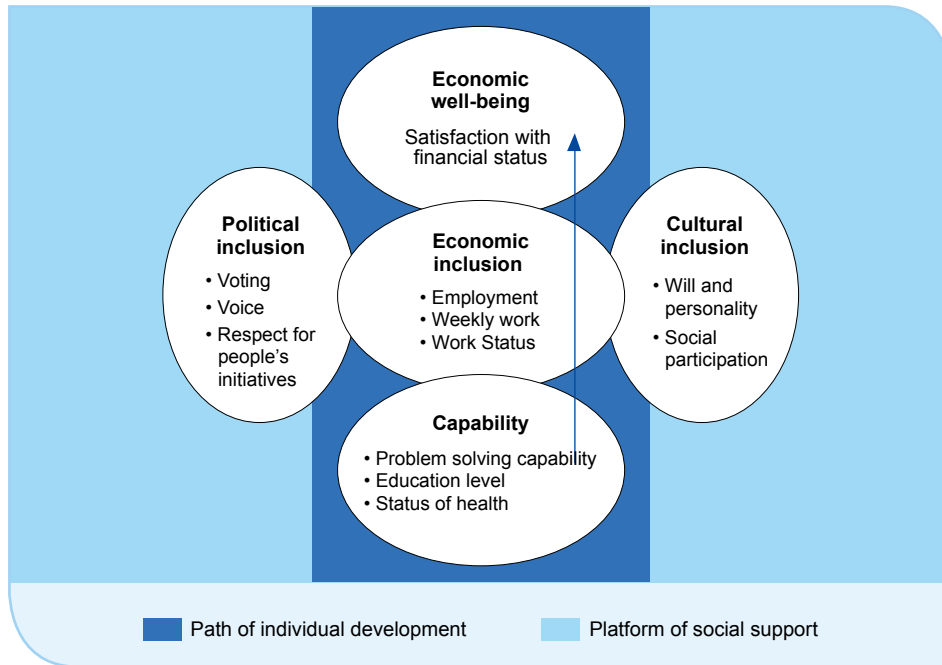
Figure helps to understand the concept of multi dimensional poverty

From the above figure, we can see that poverty is the result of the interaction of multidimensional factors. The more dimensions that are involved, the more severe the poverty will be, and the more efforts that will be needed for poverty alleviation. If the poorest of the poor (in the core area marked “G”) are to be lifted out of poverty through poverty alleviation, those obstacles that are preventing them from getting ahead in each dimension must be removed. While the aspiration is good, if the external macro-circumstances are unchanged, then attempts can only be made to change the systems of capability, social inclusion and economic well-being in order to achieve an ideal result. This is a great challenge.

Fig. 3 is an analytical framework presenting multidimensional poverty in its international perspective, but also modelled on China’s conditions. According to Dimension B in

Fig. 2, the abstract factor of social inclusion is divided into two subsystems including political inclusion and cultural inclusion. Economic well-being is divided into economic inclusion and economic welfare. Many factors in these subsystems are interrelated, with “capabilities building” as the foundation. The key point is to find suitable jobs in the economic inclusion dimension, since farmers without jobs mean people without earnings and satisfactory well-being. The platform for social support is referred to as the “hardware” of social infrastructure and the “software” of social services, while longitudinal factors form a development path for individuals to gain well-being.

Fig. 3: Analytical model of multidimensional poverty



This model clearly presents a people-centred development path, and shows that it is the government’s responsibility to provide software and hardware support for development in any external or integrated poverty alleviation environment. From the perspective of multidimensional poverty and flowing individual development paths, remove some indicators which are difficult to measure and hold other indicators, which are more easily to monitor. Strategic poverty alleviation indicators can be screened and identified based on the following principles: “adhering to people-centred development, securing and improving people’s livelihoods, establishing a social safety-net covering all residents, paying attention to solving problems related to education, labour employment, medical health and sanitation, safeguards for the aged and shelter; realizing the outcome of development for the people, relying on the people and shared by the people.”

Some indicators that are difficult to use in measurement have been removed from the model, but not because these indicators are unimportant. Only the most significant indicators are selected for this research in order to clarify the concepts of multidimensional poverty and multidimensional poverty alleviation and to make them simpler and easier to use. Three of the dimensions - capabilities, economic inclusion and economic well-being in Fig. 3 should be included in future policy, poverty measurement and targeting.

Only some indicators in these three dimensions are adopted: the *status of health and education level* in individual capability dimension; the *status of work* in economic

The tentative indicators of multidimensional poverty

inclusion system, and the two interrelated indicators of *household income and degree of satisfaction with financial status* in economic well-being. Three indicators on political inclusion and social participation are selected (see Table 2), as a basis for measuring economic inclusion and individual capabilities.

Table 2. Tentative indicators of multidimensional poverty

Dimension	Indicator
Individual Capabilities	<u>Health Status</u> <ul style="list-style-type: none"> • Nutrition and development (of infants, babies, schooling children and middle school students) • Medical healthcare (mortality of pregnant and lying-in women, mortality of newborn and children under five years old, motherhood and infants healthcare; coverage of children immunization, and medical safeguards) • Safe drinking water (proportion of rural population who use tap water) • Accidental injury and deformity (production safety monitoring and information disclosure, custody of left-behind children, relief and support for disabled, integrated prevention from AIDS/HIV and treatment of patients). • Provision for the elderly (safeguards for the elderly and related social arrangements rather than pure commercial endowment insurance)
	<u>Education level</u> <ul style="list-style-type: none"> • Educational equity (the gaps between rural and urban education shall be narrowed in the following aspects: pre-school education, registration rates of schooling children and the graduation rates) • Household affordability for students' education expenses (monitoring the proportion of students tuition fee and related fees in the total household net/disposable income) • Establishment of rural special schools (e.g., school for disabled) and service provision • Proportion of government sponsored education expenditure in total local governmental fiscal expenditure • Number of county-level regions with free education for students from grades 1-12.
Economic inclusion	<u>Work status (employment)</u> <ul style="list-style-type: none"> • Employment rates according to international statistical standards • Wag/salary incremental status of the employed • Employment training and employment arrangements for vulnerable groups
Economic well-being	<u>Household income</u> <ul style="list-style-type: none"> • Operational incomes from agriculture and non-agriculture • Salary/wage incomes • Asset/capital incomes • Transfer income • Income from governmental policy subsidies • Income from tax de-rating
	<u>Satisfaction levels with financial status</u> <ul style="list-style-type: none"> • Household gross income • Household gross expenditure • Status of savings and liabilities • Individual judgments of household financial status (theoretically, level of satisfaction or happiness index = utility/expectation)

Political inclusion	<u>Respect for people's initiatives</u> <ul style="list-style-type: none"> • What has been achieved by the masses with assistance rather than by government imposition
	<u>Voices of the masses</u> <ul style="list-style-type: none"> • Monitoring indicator of channels through which the mass's voices can be heard by governmental agencies • Representativeness of "people's voice" in the livelihood impact appraisal during the formulation of government policies (indicator for soliciting people's opinions-attention to people's livelihoods must be based on people's voices) • Number of representatives from rural areas and ethnic minorities as a percentage of total representatives in the National People's Congress
	<u>Participation in voting</u> <ul style="list-style-type: none"> • Proportion of mass representatives of the total representatives participating in the voting for governmental leaders at county and township levels.
Cultural inclusion	<u>Social participation</u> <ul style="list-style-type: none"> • Dissemination and communication channels of regulations, policies and business information • Statistics of masses participating in social cultural activities.

The problem of housing is an important strategic issue, but it is dependent on institutional arrangements for land, ownership of which is the object of long-term reform. Additional constraining factors will need to be included in discussions on poverty alleviation, regarding housing, a domain related to government provision of social services; consequently, it will not be discussed for the moment in this report.

Eight of the nine selected indicators from the five dimensions are objective. The "degree of satisfaction with financial status" indicator is subjective, and is based upon individual household income and the country's macro policies (e.g., policies for tax, prices, subsidies, etc.). Degree of satisfaction with financial status is the result of the interaction between private investment and interpersonal relations (prior to and after transfer income or payment) and a country's tax policy and degree of inflation, which have a strong impact on people's satisfaction, their well-being, and mental health. Therefore, this indicator can play an influential role during the process of building a harmonious society.

Among these dimensions, gender perspective is an implied prerequisite, though it is never directly reflected in the indicators. Every dimension needs to be considered and analyzed from a gender perspective. Data can be obtained directly from related departments, since the Central Government published its *"Key Indicators in Gender Statistic for Programme for the Development of Women and Programme for Development of Children in China"* by the General Office of the State Council (the State Council [2006] No. 1).

Since poverty reduction activities depend to a considerable extent upon location, the above tentative indicators currently are used mainly in guiding the planning /regional targeting process in poverty reduction. These indicators, unlike those used in former income-based poverty reduction, are closely related to overall national socioeconomic development targets. With regard to indicators to be used in sectoral poverty reduction and poverty effect evaluation, detailed indicators should be designed after the multidimensional poverty concept has been incorporated into national policy. Additionally, within the indicators set, those belonging to the first three dimensions (in individual capability, economic inclusion and economic welfare) are core indicators for measuring poverty, and those belonging to the political inclusion and social inclusion group can be used as auxiliary indicators.

Financial status can show more than income alone

Gender perspective in multidimensional poverty

Specifications on indicator application

3. Status and Analysis of Multidimensional Poverty in China

3.1 Status of multidimensional poverty in China

Since the founding of the People's Republic of China, and especially after Reform and Opening-up, China's economy has been developing rapidly. People's living standards have continued to improve, and the number of poor has substantially decreased. According to the poverty alleviation standards set by the Chinese Government, the number of rural poor in China has declined from 250 million in 1978 to 35.97 million in 2009, from 30.7% rural population to 3.6%. China is the first country to meet UN Millennium Development Goals (MDGs) by halving its extremely poor population. China is making a significant contribution to global development and poverty alleviation.

However, the task of poverty alleviation remains very challenging since China is still a developing country, with lower per capita income and severely unbalanced development; there is still a large poor population with relatively severe, deep-rooted poverty. There are numerous factors causing impoverishment. The core issues of multidimensional poverty in China are mainly those of nutrition, health, education and the slow rate of increase in family possessions for disadvantaged groups.

3.2 International research and experiences of multidimensional poverty alleviation

3.2.1 Research progress on multidimensional poverty

Generally, research on multidimensional poverty focuses on methods and operations. Research concerning institutions and policies is mostly focused on MDG-based poverty alleviation strategies, and their monitoring and evaluation initiated by the UN system. Since poverty differs from one country to another, most research on institutions and policies of poverty alleviation, with the exception of certain case studies, is focused on methodological discussions. More methodological research, however, has been conducted since the beginning of the 21st Century.

A recent UN report on Rethinking Poverty: Report on the World Social Situation 2010 confirmed an urgent need for strategic change, a shift from the market fundamentalism, policies and practices of recent decades to sustainable development and equality-oriented policies suitable for different countries. It also indicated that an analytical method of social exclusion would not only place people at the center, but would also be used to analyze the root causes of poverty.

The UNDP's 30 countries assessment of the challenges of achieving the MDGs shows that economic growth cannot transform into development achievements without effective and responsible rules, systems, processes, and political will. In addition, gains achieved through hard work and efforts may be overturned when funds are withdrawn or a financial crisis occurs. MDGs will only be meaningful achievements for the development of humanity if they can be sustained beyond 2015.

Paul Clements establishes the significance of the Capabilities Approach to Project Analysis (CAPA), which includes the fundamental requirements for developing human capabilities such as nutrition, health and education. Clements points out that if international organizations replace the cost-benefit analysis approach with CAPA, then development intervention would do more for human development in affected countries. As a rule, investing in the development of people's capabilities can help with economic growth, and the latter is dependent upon the former. This can lead to an economy

The United Nations has proposed an analysis method of “social exclusion” for the issue of poverty

Achieving MDGs needs responsible systems and political will

As a metaphor-human capability results in Economic growth should be seen as “dog wags tail but not tail wags dog”

that can grow on a more equal basis, and which in turn lays a more people-oriented foundation.

Studies on multidimensional poverty have been conducted in many disciplines such as education, medicine and psychology. Most of the research focuses on the measurement of multidimensional poverty. A standard method for analyzing multidimensional poverty is to monitor the sub-goals in the MDGs. However, some critics have pointed out that MDGs are technocratic formulations with too many assumptions; for instance, the availability of funds. Recently, the International Fund for Agricultural Development (IFAD) developed the Multidimensional Poverty Assessment Tool, which measures rural poverty. It has been tested in Gansu Province, China and in India. This tool includes ten thematic indicators, but it is still a open question as to what extent this set of indicators can be made adequately operational (for instance, in sensitivity tests for grain and nutrition), and whether the assumptions of agricultural and non-agricultural assets can be effective at the same time. Sabina et.al developed a multidimensional poverty index focused mainly on international poverty comparison, with indicators closely related to the indicators of the MDGs, which thus is not strictly relevant for poverty reduction in China.

3.2.2 Experience in multidimensional poverty alleviation in some countries

Malaysia is now a middle-income country. As a multicultural developing country, Malaysia adopted a unique mode of development with equity in the 35 years from 1971 to 2005, which set National Unity as the ultimate development goal. In the process of continuous and fast economic development, a dual strategy of poverty elimination and social reconstruction was adopted to achieve this goal. Between 1970 and 2005 the poverty rate in Malaysia decreased from 49.3% to 0.5%, respectively.

In this example, the most important point for China is to learn from Malaysia's special attention to solving the problem of development in rural areas while maintaining rapid economic growth. From 1971 to 1990, expenditures by the Malaysian Federation Government on the poor population and the development of rural areas took up 19.1% of the total expenses on development (MYR\$172.1 billion in total). From 1991 to 2000 the percentage increased to 22.5%.

Japan and the Four Asian Tigers (Hong Kong, Taiwan, South Korea and Singapore) are also recognized as countries and regions that have successfully engineered a leap from middle-income status to high income status. It took Japan and South Korea about 12 years to become high-income countries. Compared with the comparatively long process of industrial revolution experienced by Western developed countries, we can learn more from Japan and South Korea. In addition to upgrading the industrial structure, both countries paid considerable attention to people's livelihoods and trying to narrow income gaps.

Despite the financial crisis, the U.S. is still the most advanced country in the world. It's continuous economic growth has benefited from extensive government investment and emphasis on education. For example, the National School Lunch Act issued in 1946 as a national security measure, supported basic healthcare and nutrition. China can learn from the United States in the areas of income distribution, poverty alleviation and employment training.

3.3 Analysis of China's multidimensional poverty

Poverty is a multidimensional phenomenon, and poverty alleviation requires a set of integrated strategies to link regional and national economic growth, for instance, pro-poor growth for poverty alleviation. Historically, domestic and foreign experiences indicate

Method and tools for measurement of multi-dimensional poverty

Malaysia pays much attention to poverty alleviation

Emphasis on agricultural development

Experience of Japan and South Korea

Experience of the U.S.

Nutrition and health, education and employment are main

aspects of multi-dimensional poverty

Starting from fundamental needs may reduce inflation and absolute poverty

Public goods best provide equity for sustainable progress and development

Poverty alleviation is a status change of well-being

Paying attention to the main aspects of poverty in China may provide approaches to multi-dimensional poverty alleviation

that limited access to basic education, training and healthcare services in the process of population growth will lead to negative societal gap between economic growth and social well-being. Nutrition, basic healthcare, education, and training are indispensable for people's health and decent employment, and are core issues of multidimensional poverty in China. The five main reasons for this:

(1) To eliminate poverty and meet the fundamental needs of the people, on a macro-level, provision of basic social services can reduce inflationary pressures while satisfying people's basic needs. On a micro-level, providing adequate social services can prevent a vicious circle in which poor farming households cannot afford the required public goods and services with their income.

(2) Provision of basic public facilities and services such as healthcare and education is affected by wide range of factors such as politics, economics, culture and society, thereby reflecting the interests of fairness. In the short term, these may not have remarkable effects on economic growth, but in the long run, these services have permanent and sustainable benefits for society. The rapid economic growth after China's Reform and Opening would have not been possible if basic education and medical services had not been supported so strongly since the founding of the People's Republic of China. This has been proven again in the case of free medical services in Wuqi County, Shaanxi Province.

(3) Poverty alleviation is a complex non-linear process of seeking the change of the well-being of the poor groups. It is still not known whether the linear thinking originating from reductionism in Western countries- especially the goals of development and poverty alleviation initiated by neoliberal thought-can be realized, or to what extent these thoughts can be shaped into the objectives of improved well-being, even if they are realized. Therefore, analysis of multidimensional poverty in China should be conducted in the context of China's situation.

(4) The capability approach proposed by Amartya Sen provides a philosophical and social basis for poverty alleviation. However, due to its being deliberately incomplete in its operation and with a slow effect on education, this approach has proven to be too abstract to guide operations in poverty alleviation practice. Most of the indicators developed based upon this approach devote more attention to objects rather than people. This emphasis makes them unsuitable to guide specific and comprehensive poverty alleviation practices in China in the near future. Analyzing poverty alleviation in China from the perspectives of basic nutrition and health, education and employment is at the heart of the issue. Other needs originated from different individual situations and capabilities are not within the scope of poverty alleviation. Instead, these needs will be met in the process of all-around people-oriented economic and social development.

(5) In the development arena, the concept of poverty has often been too broadly defined and has led to the stigmatization of disadvantaged groups. This in turn harms the formation of a harmonious society. Poverty is defined as the gap in economic and social development goals (groups and regions that have not realized the goals are defined as poor), is impartial and beneficial to reducing the stratification of social groups and ossification of social strata, so as to help build a well-off society in an all-around way. This has been proven by the effectiveness in the practice of targeting health and education and funds allocation in the urban minimum living standards program in China.

3.3.1 Nutrition and health

- **Poverty caused by poor nutrition and basic healthcare**

The malnutrition rate for children in China decreased substantially during the 18 years from 1990 to 2008. However, the rate of growth retardation is presently about 14%, and nearly 20% in rural areas, which puts it at a level of intermediate severity. In poor rural areas, rates of growth retardation and low body weight for children under five years old are notably higher than those in ordinary rural and urban areas. Experts are calling for the inclusion of child nutrition indicators into the monitoring system for poverty reduction. We will put enhancing early-stage supplementary food and breast-feeding on an equal footing and work out anti-poverty strategies targeting early childhood development.

A survey of the nutritional status of 1,324 children under six years old in poverty-stricken areas in the Guangxi Zhuang Autonomous Region showed that the rate of growth retardation for children was 22.18%, a rate of low body weight of 28.17%, an emaciation rate of 11.12% and an anaemia rate of 16.19%. Among all the surveyed children, the 12-month-old category had the highest rates of growth retardation, low body weight, and emaciation rate. These children take in less than necessary amounts of milk and meat and have limited food variety. However, their relatively high snack food intake resulted in insufficient energy-protein intake, which is an important cause of child malnutrition.

The World Health Organization (WHO) stated in a report in 2008 that “the possibility of decrease in income for any malnourished individual would be higher than 10% in his/her life.” This indicates that lack of nutrition is interrelated with and affects low income or poverty.

Though China has made significant achievements in poverty alleviation in the past 30 years, it has also experienced a rural health crisis. The gap in healthcare resource allocation between urban and rural areas has become wider, which further increases the cost of medical services for the migrant population. The current system for allocating healthcare services is no longer suitable for the balanced development of both urban and rural areas. People in poverty-stricken rural areas are victims of poor-quality food, due to asymmetric information and the widening income gap between urban and rural areas. This phenomenon is related to China’s public health safety policy, and also reflects the extreme vulnerability of poor groups.

It is estimated that by 2040, the population over 60 years old will reach 430 million in China, accounting for 30% of the total population; and the population over 65 years old will reach 320 million, accounting for 22% of the total population. Consequently, health and general welfare provision for the elderly must be incorporated into the agenda for inclusive social growth.

One of the main tasks of population and social development in China, and also a requirement of the MDGs, is to reduce the maternal mortality ratio, infant mortality rate and under five mortality rate. The Government of China’s Programme for the Development of Women in China (2001-2010) and Programme for the Development of Children in China (2001-2010) both stated that by 2010 the maternal mortality ratio in China will decrease by one fourth, to 39.8 per 100,000 persons compared with the rate in 2000. Infant mortality rate and under five mortality rate will decrease by one fifth compared with those in 2000 to 25.8‰ and 31.8‰ respectively. The UN Millennium Summit set the goals that reduce the maternal mortality by three quarters to 22.2 per 100,000 persons, and under-five mortality rate by two thirds to 20.3‰. At the United Nations Special Session on Children held in 2002, it was proposed that by 2010, all three “mortality rates” should have decreased by one third compared with those in 2000, to 35.3 per 100,000 persons, 21.5‰ and 26.5‰ respectively. Compared with the goals set in the above-mentioned programmes in China, the goals set by the UN have brought

The rate of growth retardation for rural poor children is nearly 20%

The Guangxi case

Low income is related to malnutrition

Backward healthcare services and increased vulnerability of poor groups

Problems of the aged

Gap between the reality and goals of the MDGs

Disease-induced impoverishment” has become the biggest challenge to livelihood

The new rural cooperative medical system is not a panacea

Chronic diseases raise the possibility of chronic poverty

Migrant workers are a HIV/AIDS vulnerable group

Non-compulsory education is the field where social stratification takes place

Deficiency in educational mechanism

forward higher requirements and new challenges, which make them more difficult to realize.

- **Health and illness-induced impoverishment**

Impoverishment caused by ill-health has been a common phenomenon among poor rural populations and low-income urban groups. Generally, it is difficult for farmers in poverty-stricken mountainous areas to see a doctor. Medical resources are concentrated in urban areas, so that farmers in remote areas cannot access those services (especially in the case of serious and stubborn diseases). More importantly, poor farmers cannot afford high medical fees.

Inadequacy of medical service has become a serious hindrance for rural economic and social development, especially for the development of remote and poverty-stricken areas. Although the Central Committee of the Communist Party of China (CCCPC) and the State Council announced a new requirement in October 2002 in the *Decision on Further Strengthening Health Work in Rural Areas* that “a new rural cooperative medical system be gradually established”, by 2007 the participation rate of poor farming households had remained low in many areas. Even in project areas with higher participation rate, the reimbursement rate was quite low.

Illness is a type of external impact that may not necessarily lead to persistent poverty, unless it is internalized, becomes chronic, the negative impacts cannot be eliminated within at least 20 years.

- **Prevention of AIDS among migrant workers**

The number of migrant workers in China has exceeded 200 million thus far. Of those, 120 million are migrant workers working in other provinces. They are poorly educated without professional skills, and have low-incomes, low ability to acquire resources, and live in low-security, poor quality conditions with poor hygiene conditions and a weak awareness of HIV/AIDS prevention. They have insufficient access to medical services and AIDS-related guidance. Therefore, migrant workers are a large vulnerable population.

Once infected with HIV, infected migrant workers and their families suffer heavily. Given the difficulty in detecting and treatment of HIV/AIDS there will also be a heavy burden on the whole society. Therefore, HIV prevention in migrant workers is a key health risk to be addressed in the process of poverty alleviation and development in the new stage.

3.3.2 Impoverishment caused by poor education

Within the nation, there has been a focus on educational equality. However, even though the situation has become better for compulsory education with tuition fees reduced or removed, the impoverishment caused by poor education still remains. In poverty-stricken areas in western China, there are still many school-aged children who cannot complete compulsory education. It is estimated that there are still 5 million dropout children.

High tuition fees for non-compulsory education prevent many students from rural households from continuing their education. With enlarged enrolment of higher education and the commercialization and internationalization of higher education in the new century, many poor households can't afford the higher education, which causes-education related impoverishment and social stratification.

Education policies are deficient in supervision and monitoring such issues as high tuition fees, and educational loans and scholarships only provide “reverse incentive” in China

which is completely opposite to the American system. In contrast to the American system, vocational and higher vocational education is discouraged in China, while college degree education and post graduate education are given more resources. Such a system has definitely increased the social cost of poverty alleviation for students of poor families, and they are unable to change such a system.

3.3.3 Slow increase in disadvantaged groups' family possessions

Due to deficiencies in basic medical services and education, vulnerable groups are disadvantaged in getting vocational training, thus they can only obtain positions with relatively lower income. Increase of family assets requires income accumulation and comparatively stable earnings or cash flows. Ordinary families often choose to sell off some possessions to pay for necessities of life or services when funds are needed. However, poor families that have no possessions to sell can only live on loans.

Even families temporarily moving out of poverty are quite likely to return poverty, when they need to pay high medical fees or tuition fees for their children. Under such circumstances, the risk of impoverishment for vulnerable groups is higher.

3.3.4 The root of fundamental multidimensional poverty

Domestic and foreign studies on poverty analyze internal and external causes, including factors such as the external environment, institutional factors, investment factors, and social, cultural and personal factors. Starting from the path of development, we explore the root causes of fundamental multidimensional poverty in China from the perspective of the economics of income redistribution.

- **Development paradigm and path**

The Chinese Government has denied the so-called “Beijing Consensus” and has put emphasis on building an all-around, “well-off” society. Though different in discourse, China has adopted the same development paradigm as the West, especially since the period of reform and opening. This paradigm is similar to the Western growth-based paradigm.

Throughout this process, it is not difficult to see that China has adopted a catch-up strategy (See [Appendix One](#)) of economic growth since Reform and Opening. Nonetheless, in order to truly realize sustainable development we have to avoid the problems that Western countries have experienced during their development, such as “over exploitation” of natural resources, or the “pollution first, treatment later” practice.

The notion of Developmentalism, as developed in some western countries, prioritizes high-speed economic growth. No one can deny that economic growth plays a role in increasing social wealth, but this doctrine of growth sees economic growth as a superstructure over human needs and environmental survival. It constructs growth as an ideology that excludes policy options, since the doctrine of growth has presumed that policy options have been determined by market demands and economic growth.

Such a development path with economic growth as its goal has proven to be a failure. Since conditions, basic economic systems, and social and cultural situations differ from one country to another, efforts to realize development and poverty alleviation simply by depending on the power of liberal markets often end in market failure, contrary to expectations. Under development with economic growth as the goal, public services such as education and healthcare often put too much emphasis on efficiency and overlook people's basic needs.

Falling back into poverty and vulnerability

Though different discourses, China has the same development paradigm as the West

The growth strategy overlooks people's basic needs

• Economics of income distribution

Historically in China, each dynasty in its rising stages focused on the issue of distribution. In the process of production–exchange–distribution–consumption, distribution is the key point. In this context, distribution can only be optimized through government intervention, while other problems will naturally be solved by individuals. During the period between 1979 and 1984, income distribution for farmers was well arranged. Though the government did not intervene in farmers' production, nonetheless farmers' incomes and agricultural production increased substantially. This is also the period with the most rapid poverty reduction. Currently however, greater attention has been paid to production growth, and consumption is not fully stimulated; thus violating somehow the development rule of history.

In Western economics, well-being is referred to as a basket of goods and services that can be purchased with money, including private and public goods; all the things are included in a liberal market. When there are adequate products and services that people can afford with their earnings, people's basic needs can be satisfied. However, when public goods are needed or public services deficient, public goods will transform into expensive private goods. When people cannot afford these new private goods with their earnings, multidimensional poverty takes place.

Even in the United States with advanced infrastructure, basic health care and education, there are many relatively poor groups who cannot afford basic needs. There are huge gaps in comprehensive national strength and per capita income between China and the United States. Therefore, without considering the vast investment in infrastructure and public services, simply following a U.S. model of development will undoubtedly trigger multidimensional poverty caused by lack of public goods and public services.

More critically, since funds for poverty alleviation are distributed through transfer payments, when horizontal transfer payments for a minority group are made, they are likely to fall into the hands of powerful interest groups. This can lead to funds for poverty alleviation being used more by non-poor groups than poor ones. There are detailed studies in the United States on the deviation of funds caused by lack of detailed definition of access threshold value in the system.

• Poverty reduction practices in China

Though multidimensional poverty alleviation has been introduced into practical operations, a single income standard³ is still in use for targeting poverty-stricken areas and poor groups. During the process of resource allocation, it is quite difficult to identify deprivation (or relative deprivation) of rights in other fields. The utilization effect and efficiency of poverty alleviation resources cannot be monitored adequately due to the lack of non-income standards in the policy.

If poverty-stricken counties are initially designated by the Ministry of Agriculture according to the per capita net income of rural residents from the perspective of the "economic development of poor areas", what is the specific criterion for future identification of poverty-stricken counties? For example when the number of poverty counties increases to 592, what criteria are used? No public criterion was found, and it seems the criteria

Deficiency in Poverty Measurement

Regional targeting lacks scientific criterion

³ Although some experts stressed that China should also adopt consumption standard to measure poverty, different local standards in China are deduced from local living levels compared with the definition of poverty in the U.S. by means of income level which is three times the expenses on basic food consumption for poor people. Therefore, China has deduced the expenses on food and income level from using individual energy consumption rather than consumption poverty standards or unified standards for nationwide rural consumption poverty. This paper adopts the standards of income poverty.

for identifying poverty stricken counties are more subjective than objectively based. The relevant research reveals that some non-poor counties have in fact “wedged” themselves into the list of poverty-stricken ones in order to get more financial investment from the government.

Targeting the village level is presently conducted according to the national poverty line. This standard builds upon income data from the statistical authorities, including straw and stalk which is difficult for farmers to calculate, thus, the first deviation takes place in this process. Since different regions re-calculate the income levels of their own communities according to local price systems and consumption structures, there arises the second deviation. Thirdly, the number of poor is purposely increased to get more poverty alleviation funds from the state. Given that the approval agency dealing with poor villages lacks staff and other means for verification, the third deviation would be sufficient to cause significant deviation in the distribution of poverty alleviation funds.

The assumption of household level targeting is that poverty alleviation funds should go to the poorest households. Yet these are small groups in any village, and funds are easily withheld by opposing interest groups due to unclear means of monitoring and verification.

Presently there is no systematic poverty monitoring for provinces, because of financial reasons and the lack of specific tools and standards for measuring multidimensional poverty. The *China Poverty Monitoring Report* has adopted multiple indicators for monitoring. However, the results from monitoring are included in the income indicators because there is no target of multidimensional poverty reduction.

Poverty alleviation in China has entered a new stage of tackling “hardcore” poverty. Though some positive results have been gained in the village approach, sustainability of poverty reduction results needs to be proven in the future. During the process of poverty alleviation, diversified demands dispersed limited funds, and specialized projects are separated from comprehensive regional strategies for economic development, thus increasing the cost of specialized projects. Furthermore, no one knows whether specialized poverty alleviation investment will change the overall economic situation of a village. If clinical economics is used and funds are assumed to be the remedy to treat village-level poverty, then it is an open question that how much medicine is needed to “cure” poverty.

The system of “provincial governors be responsible for rice bags” and “mayors for vegetable baskets”, which was popular in the past, does not exist anymore. With rising inflation and much lower bank interest rates, the Engel’s Coefficient for poor households remains high even after substantial changes have taken place in the nationwide basic consumption structure. In these households, income growth almost keeps pace with that of expenditure growth, making the wealth growth mechanism difficult to take shape for vulnerable households.

The main problem is that poor people cannot benefit from economic growth due to the unfair distribution of social welfare and the widening gap between rich and poor. Inadequate provision of fundamental welfare including nutrition and health, education and employment results in emerging multidimensional poverty.

In sum, multidimensional poverty is the root cause of many social problems in China. Poverty will become increasingly multidimensional in the coming decade; therefore, the key to solving the problem of poverty lies in people-oriented solutions and making resource allocations and monitoring accurately target to the causes of multidimensional poverty.

Targeting of poverty village

Targeting of poverty household

It is too early to fully affirm the achievements gained in the whole-village based poverty alleviation

China has been a forerunner of multidimensional poverty alleviation for a long time

The poverty alleviation goal should be bound together to that of economic and social development

3.4 China's strategic direction for poverty alleviation

In the period when a traditional catch-up strategy was adopted, the Chinese Government provided generalized preferential medical services and public education services for vast rural areas. Though at a relatively low level, equality was given priority in social development. Poverty alleviation adopted a social relief strategy based upon distribution on the basis of labor under the same initial conditions (primary distribution). However, this strategy disappeared when China entered the stage of pursuing fast economic growth.

Since the beginning of the 21st Century, the Chinese Government has set people-oriented development goals, promoting human development, and realizing sustainable growth. With a better understanding of poverty alleviation, in recent years the Central Government has adopted the whole-village poverty alleviation strategy. The objective of that strategy is to permanently solve the subsistence problem for poor populations, and to improve their living and production conditions. Furthermore, the government also highlights adhering to integrated exploitation and all-around development, and emphasizes both construction of infrastructure and the development of science and technology, education, health and culture. It strives to improve living standards and community environment, and promote balanced development in poverty-stricken areas.

More importantly, the whole-village poverty alleviation strategy emphasizes public participation, and the designing and implementing of poverty alleviation plans in a bottom-up participatory way. From this strategy we can see that China has integrated multidimensional poverty into the practice of poverty alleviation, even though the concept of "multidimensional poverty" has not been clearly defined at the policy level.

Transfer payment funds is used in generalized preferential social services and infrastructures. The earlier such welfare is provided, the smaller the cost will be in the long-term. Integrating basic healthcare, education and employment into generalized preferential poverty alleviation strategies will promote attainment of the MDGs. Furthermore, building on the tradition of promoting rural medical services and education adopted in the 1960's and the 1970's will be a new route of poverty alleviation with Chinese characteristics to build an all-around well-off society.

The "single-dimension poverty line" is not bundled to the goals set by the national medium & long-term development strategy. In order to enable the rural population to benefit from economic and social development, the goals of multidimensional poverty alleviation should be connected to the development goal for the construction of a well-off society. This will establish a common platform for poverty reduction and development, thereby realizing poverty alleviation through the process of development.

The biggest problem for the income poverty line is that it changes each year. This makes poverty targeting and monitoring more random and harder to operate precisely. The poverty alleviation indicators in the new era should be easy to operate and measure, and be based on the national medium and long-term goals for economic and social development.

4. Multidimensional Poverty Policies and Implementation Scheme in China

4.1 Basis for multidimensional poverty alleviation strategies

It is a dynamic and continuous process, without the so-called "dual" development structure, that economic development goes from lower-level structures led by agriculture

Multidimensional poverty alleviation prevents ossification of social strata

Strategic goals

Main tasks

to higher level ones led by secondary and tertiary industries. Developing country should not copy the development models of other countries. In different stages of development, upgrading of “software” and “hardware” of infrastructures and adjusting and controlling the efficiency of resource allocation through the market will produce huge beneficial externality and profits for enterprises.

This theory of development highlights the interrelations during the development process. These interrelations are highly complex and cannot be suspended abruptly, even in emergencies. As economic restructuring develops in China, we need to search factors fundamental to China’s experience of poverty alleviation and develop a poverty alleviation framework that meets the requirements of the Scientific Development. This framework will prevent the stratification and ossification of social groups and lay an economic and social foundation for the construction of a harmonious society.

4.2 Multidimensional poverty alleviation strategies

National multidimensional poverty alleviation strategy associates with the overall strategy of social and economic development, guided by the philosophy of human-centered Scientific Development with priority of livelihood improvement. Improved livelihood is the foundation of a harmonious society. Poverty alleviation propels the strategy of invigorating the country through science and education.

Most of the poor population lives in the rural areas of Central and Western China. Accordingly, regional approaches of poverty alleviation are concentrated in these areas and integrated with other regional development policies, such as the Western Region Development. Initiatives on multidimensional poverty reduction should integrate into the strategy on promoting social and economic transformation in poverty-stricken areas.

The overall goal of multidimensional poverty alleviation strategy is to improve the system of infrastructure and social services, and satisfy the basic living needs of poor people. More opportunities should be given to poor people by improving basic conditions of health and nutrition, education and employment. Efforts will also be made to narrow the urban-rural gap in basic living conditions and production. People’s income should be increased in the process of sustainable urban rural integration.

The main tasks of multidimensional poverty alleviation strategy are as follows:

- (1) Enhancing basic medical and healthcare services and nutrition for children in poverty-stricken areas, and promoting urban-rural integration in healthcare;
- (2) Optimizing the allocation of educational resources in backward areas, and providing affordable equal education to children in poor families;
- (3) Enhancing the vocational skills of poor people and providing job opportunities to them;
- (4) Establishing unified indicators to monitor performance of multidimensional poverty alleviation across the country, and at provincial level. Effectiveness of poverty reduction should one of the key indicators of performance assessment of local government.

4.3 Implementation scheme for multidimensional poverty alleviation

We face a number of problems of poverty and deficiency in non-income dimensions that must be resolved in the process of building an all-round, well-off society. Standards of multidimensional poverty should be set align with the country’s development goals and objectives in the medium & long-term national development plans.

Basis for defining multidimensional poverty line

Primarily, those who have not met the target of health and education set by the Central Government must be identified as poor people. Since the national development goals will be realized within the foreseeable future, the national average level can be regarded as a significant reference. Those living below this level will be considered as being in multidimensional poverty and eligible for policy support.

Defining criterion for multidimensional poverty line

For example, the *National Programme for Mid-and Long-term Educational Reform and Development (2010-2020)* takes “promoting equity” as an important guiding principle for educational reform and development. It sets the following strategic goals: to provide equal education beneficial to all the people; to put emphasis on the balanced development of compulsory education, and on support for groups with financial difficulties; to promote the construction of a service system of basic public education covering urban and rural areas, and to offer equal education to all the people. The Programme sets out specific development goals to be achieved by 2020: preschool education will be popularized; the gross enrolment rate in senior high school education will reach 90% and higher education 40%; and the average number of years of schooling for newly-employed laborers will increase to 13.5 years. Those who cannot meet these requirements will be considered poor, and areas with indicators lower than the national average level will be supported as poverty-stricken areas. This principle also applies to healthcare.

The government requires that financial input in education be 4% of GDP. Any county that cannot invest 4% of its GDP in education is defined as a “poverty-stricken” county in education. The same principle is also applicable to the provincial level. With supervision of public opinion in education development, a more conducive environment for implementation of the national development strategy will be created.

The Central Government has set certain development goals for social and economic development in different stages. In line with the 12th Five-Year Plan, multidimensional poverty alleviation policies and programs will be made following the national-average-level approach, i.e. all the areas cannot meet the average national level should be identified poverty areas. Given limited resources, by referencing the national average level and the calculation of income poverty, the areas with deeper multidimensional poverty can be given priority. This principle of targeting for departmental or specialized poverty alleviation (single non-income dimension) is also applicable to the design of related projects (Table 3).

The first four dimensions in Table 2 show the provinces with lower level indicators (lower than the national average): Twenty provinces, municipalities and autonomous regions have a rural per capita income lower than the national average; 20 provinces have graduation rates of high school students (calculated based on the population registered at schooling age) below the national average, which also include the economically advanced Guangdong Province; in terms of the population ratio of rural residents using tap water, 17 provinces are below the national average level; and 12 provinces have medium level malnutrition rates of children under five years old higher than the national average.

Table 3. Illustration of Multidimensional poverty by provinces (data: 2009)

No.	Dimensions involved	Net rural income of residents (CNY)		% of high school graduates		Tap water use ratio of rural residents to total rural residents (%)		Medium malnutrition of kid under 5 years old (%)		1/ (% , 2008) The 65+ years old to total population	
		average	5153.2	average	77.6	average	68.4	average	1.7	average	13
1	4	Gansu	2980.1	Qinghai	35.0	Anhui	43.7	Guangxi	4.01	Chongqing	17.3
2	4	Guizhou	3005.4	Ningxia	45.2	Inn.Mongolia	44.0	Yuannan	3.84	Shanghai	16.5
3	3	Qinghai	3346.2	Xinjiang	48.3	Sichuan	49.1	Xizang	3.58	Sichuan	16.1
4	4	Yuannan	3369.3	Henan	51.7	Jiangxi	55.0	Hainan	3.27	Tianjin	16.0
5	3	Shaanxi	3437.6	Guizhou	52.6	Henan	55.0	Hebei	3.17	Jiangsu	15.8
6	3	Xizang	3531.7	Gansu	52.6	Shaanxi	55.0	Qinghai	3.01	Anhui	15.5
7	3	Xinjiang	3883.1	Inn. Mongolia	54.8	Gansu	56.1	Xinjiang	2.94	Liaoning	14.8
8	4	Guangxi	3980.4	Shanxi	59.4	Guizhou	58.7	Jiangxi	2.63	Hunan	14.4
9	3	Ningxia	4048.3	Anhui	59.7	Guangxi	60.3	Henan	2.29	Zhejiang	14.1
10	2	Shanxi	4244.1	Yuannan	60.1	Yuannan	61.6	Guizhou	2.18	Fujian	13.8
11	3	Sichuan	4462.1	Hebei	62.4	Liaoning	62.0	Hunan	2.01	Guangxi	13.6
12	1	Chongqing	4478.4	Sichuan	63.2	Hunan	62.3	Gansu	1.87	Hubei	13.5
13	3	Anhui	4504.3	Shandong	64.7	Heilong-jiang	62.9			Shandong	13.1
14	3	Hainan	4744.4	Xizang	65.2	Ningxia	64.5				
15	4	Henan	4807.0	Guangxi	66.3	Jilin	65.8				
16	4	Hunan	4909.0	Hunan	68.8	Hubei	67.3				
17	3	Inn. Mongolia	4937.8	Fujian	69.0	Hainan	67.8				
18	3	Hubei	5035.3	Guangdong	73.3						
19	3	Jiangxi	5075.0	Hubei	73.5						
20	3	Hebei	5149.7	Shaanxi	75.8						

Results with the category of elderly people added:

Dimensions involved	5	4	3	2	1
No. of provincial areas (30)	2	7	9	5	7
Detailed provincial areas	Guangxi, Hunan	Gansu, Guizhou, Yunnan, Sichuan, Anhui, Henan and Hubei	Qinghai, Shanxi, Xizang, Xinjiang, Ningxia, Hainan, Inner, Mongolia, Jiangxi and Hebei	Shanxi, Chongqing, Shandong, Fujian and Liaoning	Guangdong, Shanghai, Jiangsu, Zhejiang, Tianjin, Heilongjiang and Jilin

1/ note: data for the dependent ratio of aged was 2008 data. The dependent ratio of aged = population equal or above 65 years old / (population between 15-64 years old) × 100%. No data available on tap water in Tibet.

Source: calculated based on data from the 2010 China Health Statistical Yearbook (Ministry of Health, 2010. Publishing House of Beijing Union Medical University)

Changing “exploitative” poverty alleviation strategy

“Balanced” generalized preferential strategies for multidimensional poverty alleviation

Determination of multidimensional poverty-stricken groups

Six provinces have all four remaining dimensions defined as backward, compared with the national average; these are: Gansu, Guizhou, Yunnan, Guangxi, Henan and Hunan. This indicates that these provinces are broadly affected by poverty dimensions, and need to be taken as key provinces for poverty targeting. Meanwhile, 11 provinces are affected by 3 dimensions simultaneously, 2 provinces are affected by 2 dimensions and only one provincial area, Chongqing, is affected by one dimension of low income.

If the preparedness of various provinces regarding the issue of the elderly population is further considered, namely, lack of readiness for facing the challenge of ageing (a potential risk) is considered as one dimension of poverty, then the result is changed: Guangxi and Hunan provinces will be affected by all five dimensions, the issue of “aging before getting rich” should be planned as a whole; 7 provinces would be affected by 4 dimensions, which will be considered as the key provinces in relation to multidimensional poverty alleviation. The number of provinces that would be affected by 3, 2 and 1 dimensions are 9, 5 and 7 respectively. In this way, except Beijing, the well-being of the other 30 provinces of mainland China would all be affected by some of the five dimensions.

The analysis of the multidimensional poverty situation based on current existing statistical data provides a broader vision for the future of poverty alleviation in China, beyond the income-based standard. How to solve the multidimensional poverty faced by the poor from a more inclusive perspective depends on the recognition by all society on multidimensional poverty, establishment of inclusive growth mechanisms through the adjustment of poverty strategies and policies, and innovation in multidimensional poverty alleviation practices. Without doubt, the key to solving multidimensional poverty problems is the promotion of awareness of multidimensional poverty.

4.4 Policy recommendations and implementation

4.4.1 Short-term proposals (one to three years)

(1) Changes in poverty alleviation strategies

The word “exploitation” in the phrase “poverty alleviation by way of exploitation” originating from regional economic development, now has no meaningful significance. This concept has been subjected to particular criticism from the West. For example, the exploitation of natural resources is a measure that neglects ecological sustainability and has long been given up by the West. In a new era of constructing an ecological civilization, China has adopted an ecological protection strategy combined with the process of poverty alleviation by means of ecological migrant relocation. With livelihoods at the core of development, new poverty alleviation strategies will focus on protecting the natural environment, and on the basic living security of the people.

Future multidimensional poverty alleviation strategies will change to “protective” and “supportive” generalized preferential strategies at the policy level. Taking the regional implication into consideration it is better to define multidimensional poverty alleviation as “balanced” regional development.

(2) Thorough investigation of the status of multidimensional poverty across China

How many people are poverty-stricken across the country and where are they living? The public currently is waiting for the completion of a poverty atlas by the National Bureau of Statistics (NBS). As the designation of the 592 national poverty-stricken counties lacks scientific basis, poverty in such fields as healthcare, education and employment across the country should be thoroughly investigated according to the standard of national

economic and social development, and the social and economic features of population from the sixth census in 2010. This will establish a relatively complete file about the distribution and management of the nationwide poverty-stricken population.

(3) Pilots in multidimensional poverty alleviation strategy

Basic necessities of life are generally considered to be food, clothing, housing, and means of travel. Since the urban-rural gap in housing construction has widened and housing conditions cannot be measured with a unified standard in the vast area of China, the issue of housing is not included in this report. In the short term, basic nutrition is regarded as a fundamental issue of multidimensional poverty, and fields such as healthcare, education and employment need to be evaluated as core concerns of multidimensional poverty.

As for the above three fields, poverty-stricken townships or communities will be selected across the country for pilot projects. Good practices in the pilot areas will be disseminated in other poverty-stricken areas. The following methods should be focused on during the piloting process:

In terms of nutrition and the basic healthcare of children, the main issues relevant to children will be explored in communities based on “Growth Indicators for Children under 7” published by the Ministry of Health. The types and severity of disease suffered by women and relevant measures regarding the prevention of endemic disease will be explored referring to indicators of maternal mortality in Millennium Development Goals. The goals of rural multidimensional poverty alleviation should be set in line with the relevant medium & long-term development goals of the country. The urban nutrition and health service level should be taken as a medium-term goal based on practical conditions and make preparation for future integration of urban and rural medical systems.

The efforts should be made to narrow the regional gap of education between rural areas and nearby cities comparing with the national average level. Through this comparison, needed budgets can be calculated in the educational field for narrowing the gap. In the education pilot project, the degree of poverty can be measured by comparing affordability by household between compulsory education and non-compulsory education.

Standardized monitoring and evaluation is made for employment training courses based on community needs, population and employment characteristics, the status of outgoing employment and local development in agriculture. Experiences in training and employment are summarized for different poverty-stricken groups.

(4) Guidance for participation of Stakeholders in multidimensional poverty alleviation

The Central Government will give guidance to participation of poverty alleviation. These stakeholders will voluntarily participate in the fields of healthcare, education and employment; Available resources will be allocated into the weakest indispensable points linking with people's livelihoods such as health, nutrition and education.

(5) Establishing a monitoring and evaluating system for multidimensional poverty

A complete system is needed to guarantee and realize monitoring and evaluation for multidimensional poverty. The members of the State Council Leading Group Office of Poverty Alleviation and Development (LGOP) should establish a group for monitoring and evaluation.

According to the strategic tasks of multidimensional poverty alleviation in the new period, indicators and monitoring methods for poverty alleviation in various fields should be

Experiment and pilots

Nutrition and health

Education

Employment

Leading the subjects of poverty alleviation to put resources into health care, education and employment

Establishing a nationwide monitoring and evaluating agency for multidimensional poverty

Importance of technical support

established. Regular monitoring and evaluation of multidimensional poverty projects is needed to evaluate the effectiveness of the poverty alleviation projects. Accordingly, Assessment of effectiveness of utilization of funds for poverty alleviation is also needed. This will allow us to evaluate experiences and lessons from a micro level, and propose relevant suggestions at macro level.

(6) Targeting multidimensional poverty

Unlike the rough datum used for monitoring income poverty, monitor of multidimensional poverty demands rigorous discipline and strong technical support. The design of the targeting requires active participation of professionals in the fields of health and education, along with baseline data from the leading investigations on targeting. A specialized multidisciplinary technical team should be formed to target the regions and areas with multidimensional poverty.

Current multidimensional poverty is not confined to the poverty-stricken counties that have been defined by the Central Government. Those poverty-stricken counties previously defined on the basis of “economic growth” will not all meet the requirements of poverty alleviation in the new period. New definitions are needed to redefine poverty-stricken counties in accordance with the national development goals and multidimensional criteria. After poverty-stricken groups are defined, targeting is undertaken at the regional level according to the number of the multidimensional poverty group and the national development strategy.

1) Key regions for multidimensional poverty alleviation in the Strategic Development of Western China: Key regions for poverty alleviation and development are the connected areas of Western China; including, the southern region of Xinjiang, the eastern edge of the Tibetan Plateau, the Wuling mountain area, the Wumeng mountain area, the mountain area on the border of western Yunnan and the Qinbashan-Liupanshan mountain area.

2) Determination of the corresponding targeting area for multidimensional poverty in relation to the Western Development Economic Zone: In the process of constructing the western economic zone⁴ work on multidimensional poverty alleviation will be conducted in the surrounding areas of the economic zone to avoid the previous regional disconnections between economic development and poverty reduction.

3) Connected areas of infectious and endemic disease: The tuberculosis therapy area in the Southwest region, the therapy area for prairie echinococcosis, etc.

4) Areas with difficulty in achieving the goals set in the Programme for Educational Development: Such areas are not limited to Western China, and include related areas which can hardly realize targets without external support.

5) The ethnic minority areas with employment challenges: Due to deficiency of education, language barrier and other factors, many ethnic minority areas with small populations develop slowly.

Technical and professional advantages need to be fully utilized for targeting at the community level. Such targeting will be selected based on national development goals,

⁴ Stably promote the development of Chengdu-Chongqing, Guanzhong-Tianshui and Guangxi Beibu Gulf economic zones, support the development of such economic zones as Hohhot, Baotou, Yinchuan, north slope of Tianshan mountain, Lanzhou, Xining, Golmud and Shaanxi-Gansu-Ningxia, foster economic zones including middle Yunnan, middle Guizhou, upper reaches of Xijiang river, areas along Yellow river in Ningxia and the areas of “Angqu, Zhaqu, Sequ and Lancangjiang” rivers in Tibet, thus forming new strategic highland with radiating and leading role for surrounding areas. –extracted from the speech by premier Wenjiabao at the working conference on the Strategic Development of Western China.

the locally applicable goals for multidimensional poverty alleviation and rigorous scientific standards. With the reform of the education and medical systems, the most important factors concerning livelihoods will be taken into account at community level.

Targeting the household level should respect public opinion, especially the opinions of poor groups. In accordance with the development goals in medical care, education and employment, villagers will be invited to participate in discussions, to determine which groups will be defined as poor in which dimensions, so that democratic decision-making and supervision can be strengthened. This can encourage governments to conduct wide ranging research when working out development plans, to avoid arbitrary plans.

(7) Studies on indicators for multidimensional poverty

Poverty studies conducted in the fields of health care, education and employment are mostly focused on income and expenditure. Research on the gap in the national strategic goals is inadequate, which requires participation of different departments and cooperation of various disciplines.

Although selection of indicators becomes a technical issue after setting policy targets in multidimensional poverty reduction, it is an indispensable link and a tool for targeting poverty-stricken groups. The government issued the Medium and Long Term Education Development Plan 2011-2020, and the similar plan in health sector is also stipulated, studies, pilot projects in these fields can be conducted. Subjective indicators in poverty and the incomparability of regional indicators should be avoided.

4.4.2 Medium & long-term proposals

(1) Gradual expansion in the field of multidimensional poverty alleviation

Prioritization and sequence of development in multidimensional poverty alleviation is very important. Under current living conditions, there is an urgent need to solve the basic problems of medical care, education and employment. Medical care and education priorities will be combined with regional development in the 12th five-year plan.

With establishment of integrated medical care system in urban and rural areas, the urban-rural gap will be gradually narrowed in health service. Integrated employment system across urban and rural areas will promote labor mobility. On this basis, other dimensions related to multidimensional poverty such as housing, prevention and the control of HIV/AIDS, and poverty alleviation for physically disabled people will be included in the framework for poverty alleviation during the period of the 13th Five-Year Plan.

(2) Strengthening the role of poverty alleviation agencies

The role of Leading Group Office of Poverty Alleviation (LGOP) should be strengthened. It should carry out the following roles:

- Promotion of researches on multidimensional poverty alleviation, relevant indicators and their application;
- Comprehensive coordination of the efforts of different ministries in new countryside construction and poverty reduction projects;
- Improving the monitoring system for multidimensional poverty;
- Further promotion for international cooperation.

Multidimensional poverty alleviation requires spreading professional knowledge and positive cultural influences. In the field of development, research on relations between

Targeting on the community level

Targeting the poor household

Multi-disciplinary study

Indicators are tools for targeting

Focusing on medical care and health during the Twelfth Five-Year Plan

Gradual expansion on the coverage of multidimensional poverty during the Thirteenth Five-Year Plan

Strengthening the role of comprehensive coordination

Create a cultural atmosphere for multidimensional poverty alleviation

An arduous task for multidimensional poverty alleviation

Key fields for cooperation

health care, education and development has been marginalized. Economists explore the function of human resources more from the perspective of “economic growth,” regarding human beings simply as labor input. Thus, when studying human contributions to growth, they neglect the social and cultural attributes of human beings and society.

Actually, people's beliefs are the main factors that lead to behavioral change. Specifically, belief in the principle of people-oriented development encourages citizens to change their behavior and build an all-around, affluent society, based on common prosperity and the transformation of economic and social structures. Their belief and efforts will make their dreams come true.

In this regard, it is indispensable to promote understanding of multidimensional poverty alleviation and to create a cultural atmosphere for coordinated development (though the factors in the political and cultural dimensions are not discussed in this report). Poverty alleviation in the fields of health care and education will provide basic living necessities for the poor, giving them confidence to break vicious circle of poverty.

4.4.3 Key fields for future international cooperation

The implementation of China's multidimensional poverty alleviation policies will undoubtedly attract wider international cooperation. China must play a leading role in achieving the MDGs and eliminate absolute poverty in the country step by step. Undoubtedly, it is a tough task and needs broad international cooperation. Facing complex domestic and international conditions, China has to actively cooperate with international organizations for poverty alleviation and seek support in information, knowledge and funding.

Using the definition of multidimensional poverty, the scope of poverty in China is different from the poverty measured by income per capita. The international community may change its attitude toward China accordingly. South Africa provides a good example of a country that has undergone this shift. Though it is a middle-income country in the real sense, it can still receive assistance from many international organizations.

The key fields in which future international communities can participate include:

- Research on the system of policies and indicators for multidimensional poverty in China;
- Assistance in establishing a rural monitoring system for multidimensional poverty in China;
- Promoting international co-operation in studies and discussions on practices of multidimensional poverty in China;
- Promoting the spread of ideas for “balanced” multidimensional poverty alleviation in China.

Appendix One: Understanding of strategies for poverty alleviation in different periods in China

	Traditional catch-up strategy (1949-1978)	Catch-up strategy in transitional period (1979-2000)	Catch-up strategy in the new period (2001-)
Development goal	Pursuit of high speed of development and catch-up. Realizing the “Four Modernizations” by 2000	Pursuit for high economic growth. Doubling GDP by 2000	People-oriented, promoting human development and realizing sustainable growth
Relationship between human beings and nature	Vigorous exploitation of resources, leading to waste of resources, damaged ecology	Pollution first and treatment later, a worsening ecological deficit	Sustainable development, ecological construction and environmentally-friendly development
Relationship between income and distribution	Egalitarianism	“Theory of earlier prosperity”	“Theory of common prosperity”
Urban-rural relationship	Priority on urban development, partition of urban and rural system	Limited urban development, widening urban-rural gap	Coordinated urban-rural development, narrowing urban-rural gap
Interregional relationship	Limited development in inner land, widening regional gap	Limited development in coastal areas, with regional gap being narrowed first, then widened	Coordinated development of eastern, central and western regions
Economic and social development	Paying attention to social development	Priority on economic development	Coordinated economic and social development
Equity and efficiency	Priority on equity	Priority on efficiency and taking equity into consideration	A balance between efficiency and equity, and paying more attention to social equity (redistribution, priority on equity of public services, priority to social harmony)
Understanding of poverty	Getting rich by honest work; respecting the aged and loving the young; aiding those in poverty or in peril	Poverty was defined as lacking basic capabilities of living and having low income	Gradual understanding of multidimensional poverty, which has more dimensions than a simple poverty line of income
Poverty alleviation strategies	Generalized preferential public medical services and education, full employment, distribution on the basis of labor, and social relief	Regional poverty alleviation and development, regional targeting and designating poverty-stricken counties from 1986; encouraging poverty alleviation in the form of export of labor services; aids from multiple departments; participation by the whole society; promoting poverty alleviation on village- and household-level; going on solving the problem of food and clothing for poor population	1. Poverty alleviation is not only to provide enough food and clothing for poor population, but also to improve their living and production conditions permanently 2. Adhering to balanced development and putting emphasis on both infrastructure construction and development of sciences and technology, education, health and culture; 3. Putting emphasis on participation by people, working out and implementing poverty alleviation plans in a bottom-up participatory way.

Appendix Two: International Experiences and Case Studies

The overall aim of the Report on *The Measurement and Targeting of Multidimensional Poverty* is to clarify the concept of multidimensional poverty, examining if it is possible to adopt it (or aspects of it) within future policies for poverty reduction in China. A more specific aim of the *Report* is to develop indicators for measuring areas of multidimensional poverty, notably in the *Report's* tabulation of appropriate indicators in the three dimensions of “individual capabilities, economic tolerance and economic well-being”.

Multidimensional approaches have been in use for some time in poverty assessments and poverty reduction programmes in China, but to address both remaining areas of poverty and newly emerging poverty, the *Report* argues that it is necessary to formalise the multidimensional approach through the development and use of specific indicators to measure areas of multi-dimensional poverty.

Recent Developments in Measuring Multidimensional Poverty

During the last two years, internationally, there have been important developments in the measurement of multidimensional poverty, and work has been undertaken on the design of indicators. This is summarised below, with reference to case studies with relevance for the development of indicators for possible use in the Chinese context.

In the United Kingdom, the Oxford Poverty and Human Development Initiative (OPHI) has developed a new approach to measuring multidimensional poverty—the *Multidimensional Poverty Index* (MPI). Almost all recent discussions on multidimensional poverty have focused on discussing this new Index and its relevance for poverty reduction policies and programmes.

As has been the case in most methods for assessing multidimensional poverty, the MPI defines those living in poverty as “multiply deprived” in a range of areas. As devised by OPHI, the MPI has three dimensions: health, education and standard of living. These dimensions are measured using ten indicators. The indicators in the MPI are based on participatory assessments and available data in each of their areas. The MPI measures household, rather than individual poverty. These dimensions and indicators, with their weighting, are as follows:

1. **Health** (each indicator weighted equally at 1/6)
 - * Child Mortality: If any child in the family has died;
 - * Nutrition: If any adult or child in the family is malnourished;
2. **Education** (each indicator weighted equally at 1/6)
 - * Years of Schooling: If no household member has completed 5 years of school;
 - * Children’s enrolment: If any school-aged child is out of school in years 1-8;
3. **Living Standards**
 - * Electricity: If the household does not have electricity;
 - * Drinking Water: If this does not meet the requirements of the relevant Millennium Development Goal (MDG), or if access to water requires more than 30 minutes walk;
 - * Sanitation: If this does not meet MDG requirements, or if the toilet is shared;
 - * Flooring: If the floor is dirt, sand or dung;
 - * Cooking Fuel: If a household cooks with wood, charcoal or dung;
 - * Assets: If the household does not own more than one of: radio, telephone, bike, motorbike;

Use of the Multidimensional Poverty Index

Using the MPI produces two estimates: The *Headcount*-or percentage of households who are poor, and the *Average Intensity* of Deprivation. The latter estimate aims to show the number of dimensions in which the household is deprived. In this way, the MPI can be used as an analytical tool to identify the most vulnerable households, indicating not only those areas in which they are deprived, but also the interconnections between their deprivations. This enables policy makers to target resources and design policies more effectively. The MPI defines a household as “multidimensional poor” if-and only if-it is deprived in a combination of indicators whose sum exceeds 30% of all deprivations. The intensity of poverty measure is particularly important, internationally. For example, using this measure indicates that poverty is more prevalent in South Asia than was previously estimated. Using the MPI reveals that South Asia has the world’s highest levels of poverty. The region contains nearly twice as many multidimensional poor people than in the next poorest region, Sub-Saharan Africa. The latter region, however, has the highest MPI poverty rates. Using the MPI, China currently has 7% of its population living in poverty (Compared, for example with India at 55%, Pakistan 51%, Indonesia 21% and Brazil, 8.5%). Using the MPI indicators reveals that the highest contributor to overall poverty in China is deprivation in education.

One of the most useful ways in which the MPI could be used in China might be via its use in identifying “types” of multidimensional poverty. The MPI can be “decomposed” by population sub-group (by ethnic group, for example), or by area. This has already been done in a number of countries, such as Bolivia, Kenya and India. These studies have revealed striking differences within each country. For example, in the case of Kenya, whilst the MPI in Nairobi compares favorably with countries with low percentages, the rural northeast has an MPI similar to that of the poorest Sub-Saharan African country, Niger. In Bolivia, within the country headcount poverty ranges from 27-46%. Similar conclusions have been reached in India, with a state such as Kerala at 14%, compared with Bihar at 81% and Jharkand at 77%. We can thus identify areas of regional poverty. Examining the findings from using the indicators in these areas, we can then begin to identify types of multidimensional poverty within these areas. This can enable us to suggest specific local strategies for addressing these different types of poverty. In some areas it may be the case that educational deprivations are greater than health deprivations, or that households score lowest in areas such as inadequate flooring and cooking facilities. Similarly, the MPI can also be used to evaluate progress over time in particular areas of poverty reduction, charting changes both in the numbers in poverty and the intensity of poverty regionally.

Relevance of MPI for the contemporary Chinese context

The Measurement and targeting of Multidimensional Poverty Report stresses the importance of targeting remaining areas of rural poverty (in remote, hardcore, environmentally fragile areas). It also highlights the importance of addressing newly emerging forms of poverty (for example, resulting from migration to urban areas, from the impact of climate change), and improving specific policy implementation (in areas such as the co-operative medical insurance scheme). In all these areas, using the indicators put forward in the MPI would enable us to understand and assess the impact of particular forms of deprivation experienced by different groups in different regions. Doing this will also enable us to target the needs of poor households more efficiently. The *Report* suggests a set of indicators. However, it appears that the indicators presented in the MPI are more comprehensive, and might provide a means for established a more detailed understanding of different types of poverty in China than currently is the case. Certainly, it is worthwhile policy-makers examining the recently developed MPI, to assess its relevance for the Chinese context.

Criticisms of the Multidimensional Poverty Index

Most recently, a number of criticisms have been made of the MPI, and these are also worth considering in assessing its relevance. Several critics have emphasized the lack of data availability in many countries as a serious constraint on the use of the Index for comparative purposes. Given the availability of Chinese data for most of the indicators, however, this should not be a major problem for its use.

In assessing poverty conditions, policy makers often need to respond to short-term change—for example, in assessing the impact of climate induced change on poor households, estimating how many and what types of household are likely to fall into poverty as a result of such change. Many of the indicators in the MPI—most notably the six “living standard” indicators—are unlikely to be useful in such a situation. As a number of critics have concluded, the MPI is not very responsive to social and economic fluctuations. For example, it would not have been very useful in assessing the impact on poor households of the 2008-9 economic crisis in the global economy—either by country or regionally. This is an issue for the possible use of the MPI in regions of China, where aspects of the impact of climate change on poor households (in the form of floods, landslides, for example) require rapid assessments and responses. Although one could well respond that a pre-crisis use of the MPI would have enabled a detailed understanding of the types of poverty experienced by households vulnerable to such impacts.

A more telling criticism centres on the value judgments implicit in the MPI, which are questionable. The weighting of the indices involves accepting the notion that—for example—the death of a child is somehow equivalent to living on a sand floor, or not having a television, telephone, or car. Clearly, some areas of deprivation will have greater importance for households than other areas, and we need to take this into account in making judgments on the relevance and weighting of elements of a composite index.

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8. Ki, J.B., Faye., S., et al. (2005) “Multidimensional Poverty in Senegal: A Non-monetary Basic Needs Approach”, PMMA Working Paper 2005-05.
9. Santos, M.E., and Ura, K. (2008) “Multidimensional Poverty in Bhutan: Estimates and Policy Implications”, OPHI Working Paper, No.14, Oxford Department of International Development, Oxford.

A universal problem with anti-poverty under the market economy system is that: as a regular occurrence, governments of developing countries or impoverished regions in the world generally aim for economic growth. However under pressure of extreme scarcity of capital and of building high-cost modern superstructures by imitating the West, will inevitably lead to an increase in government debt, they are almost all inevitably and intrinsically oriented toward a “pro-capital” policy⁵. Only when capital is no longer a scarce factor and the reduction in pressure from government debt is an objective external condition, are they likely to truly carry out a “pro-poor” policy. This is also one of the intrinsic causes explaining why it is hard for most developing countries to truly implement UN’s “Millennium Development Goals (MDGs)” effectively.

For many years, China was a developing country with the largest poor population, and economic growth was a main development goal. Rural China at large before the 1980s’ reform was immiserized, the root cause of which was that in the primitive accumulation stage of early industrial capital formation, over RMB600-800 billion of economic surplus was extracted from the rural sector (Yan Ruizhen et al., 1990; Kong Xiangzhi et al., 2009). Government debt in that period was excessively high (Wen Tiejun, 1999). Even in the initial stage of reform, the government’s antipoverty strategy was “creating growth poles” and “industry-based poverty alleviation,” still reflective of the policy orientation that the government attempted to create industrial capital in impoverished areas where capital was extremely scarce.

Important changes have taken place in recent years; that is, after capital was no longer scarce (and even “overcapacity” already came to the fore”) in the late 1990s, the policy of poverty alleviation was adjusted accordingly to a generally beneficial “integrated village development project (IVDP)” and an internationally accepted policy “aiming at poverty-stricken groups”. In implementation, however, policy inertia (or “path dependence”) of the earlier industry-based poverty alleviation and rich household-stimulated poverty alleviation still persists.

This section does not aim to analyze external macro-environment and governance but rather the impact of rural governance at village level. The report provides an objective analysis on the premise of recognition with the generally beneficial antipoverty strategy and policy the government strives to promote.

1. Rural Disadvantaged Groups: A Key Target of New Poverty Alleviation Initiatives

In the period of the inevitable primitive accumulation of capital for national industrialization, the official institutional arrangement by the government for providing urban industry with massive surplus from agriculture, rural areas and the peasantry (known as the three rural issues, *San Nong*) became the main factor causing widespread poverty in rural China.

Since reform and opening up, China’s rural development has drawn worldwide attention

⁵ “Ecological Civilization, Indigenous Culture and Rural Reconstruction in China”, by Wen Tiejun, Lau Kinchi, Liu Xiangbo, He Huili, Qiu Jiansheng, International Conference on Crossroads, June 17, 2010, Lingnan University, Hong Kong.

The institutional arrangement of extracting surplus from agriculture, rural areas and peasants in the period of primitive accumulation for China’s industrialization became the main cause of rural poverty

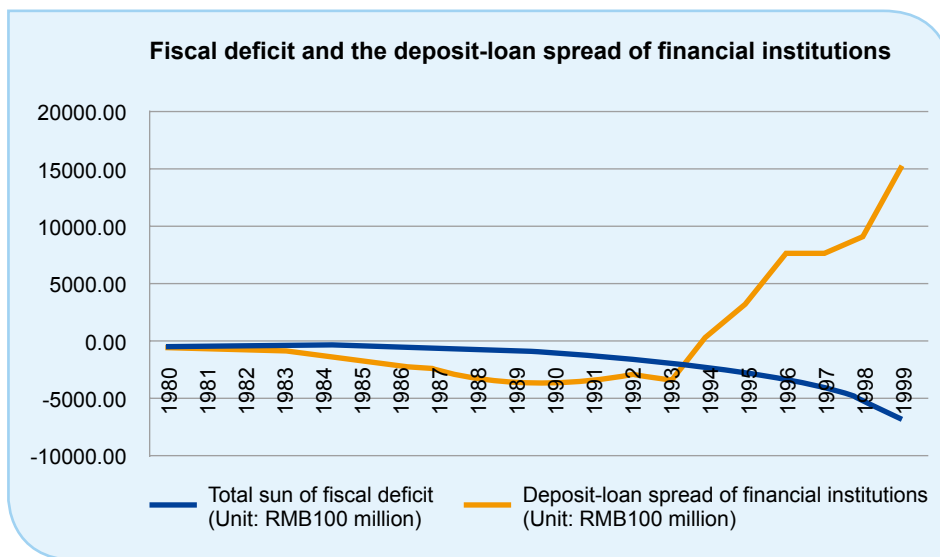
on the one hand; on the other, her antipoverty effort became a generally acknowledged major achievement, mainly because after the completion of primitive accumulation of capital for industrialization the government’s source of revenue has mainly come from urban industry and commerce. It then stopped extracting surplus from San Nong, which had less and less surplus and it became more and more difficult to extract. Although in this period China was not in a condition to make massive investment in poverty alleviation, only if the state reduced the extraction of rural surplus and “allowed” farmers to resume traditional small-scale peasant economy and village autonomy system, farmers’ livelihood and rural diverse economy could be spontaneously restored and widespread poverty was hence put to an end.

When the central government raised in the early 1990s the so called “Eight-Seven Poverty Alleviation Plan”, a poverty alleviation program aimed to lift 80 million people out of absolute poverty in the period of seven years from 1994 to 2000, China was experiencing a macroeconomic crisis comprised of simultaneous deficits in three areas. In 1993 the government overdraw from banks because of a severe fiscal deficit. The financial system was taken out of all the capital funds and confronted with a huge credit balance. At the same time, foreign exchange reserves fell short of the repayment of external debts with interest (Fig. 4 and Fig. 5)⁶. It was estimated that in the year the ratio of the composite debts to GDP the central government shouldered including the due social security expenditure was over 100%. The consequent increase in money supply as a response directly gave rise to a 24.1% CPI and generalized inflation in 1994. The reform of decentralization and giving up profits to enterprises left government finance down to only 12.6%⁷ of GDP in 1993 on the eve of the introduction of the tax reform; it was difficult to pay the salaries of officials, soldiers and teachers, not to mention increasing poverty alleviation spending directly targeting poor households. In the same period, as the rigidity of farmers’ cash expenditure was unable to be reduced along with a slower income growth, a trend emerged among the rural labor force, mainly in less-developed areas, towards seeking jobs outside their places of origin, in pursuit of cash income. It is thus clear that China’s antipoverty strategy in this period had characteristics of the government behavior of a common developing country under pressure of high debts. According to estimates by researchers agriculture, rural areas and the peasantry have contributed RMB17.3 trillion to cities and industry since the founding of the People’s Republic of China in 1949 (Kong and He 2009). The central leadership also indicated that “Agriculture supported industry and the rural areas supported urban sectors in the early stage of industrialization; in the medium stage of industrialization we need industry and urban areas in return to support agriculture and rural areas.”

⁶ In more than one year from the second half of 1992 to 1993, China once again registered a foreign trade deficit; in 1993 alone, the foreign trade deficit was RMB70 billion. The suddenly increased foreign trade deficit posed a challenge to China’s foreign exchange reserve and payment systems. At the end of 1993, China’s foreign exchange reserves stood at some \$21.199 billion. After deduction of the then balance of floating debts, \$13.546 billion, the remaining \$7.653 billion was not enough to pay net imports of the year alone (the foreign trade deficit in 1993 was \$12.220 billion). Data source: *China Statistical Yearbooks*.

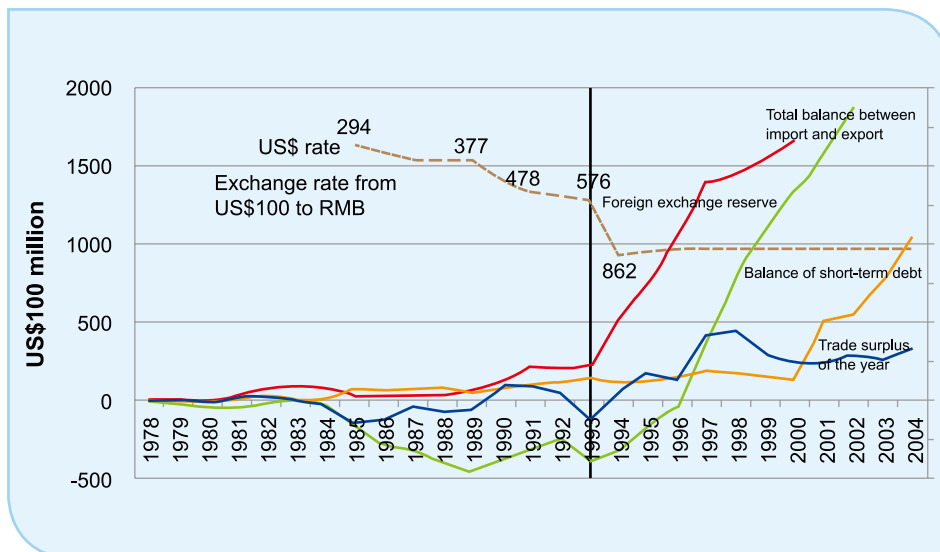
⁷ Data source: Calculated based on data provided in *China Statistical Yearbooks 1993 and 1994*.

Fig. 4: Changes in Fiscal Deficit and Bank Deposit-Loan Balance in 1980-1995



Source: China Statistical Yearbooks

Fig. 5: Changes in China's Foreign Exchange Reserves in 1978-2004



Source: China Statistical Yearbooks

Experiencing countless hardships and difficulties, China finally went through the adjustment stage of industrial capital, initially revealing capital accumulation and overcapitalization in the classical theory sense. Economist Prof. Lin Yifu pointed out in 1999 that “Now we are already facing ‘a vicious circle under dual excess’; only by initiating new rural reconstruction as a national strategy can we improve rural infrastructure, increase farmers’ income, expand domestic demand and ultimately relieve the pressure of excess.”

In the new millennium, to tie in with the “New Measures for People’s Well-being” raised by the central government in recent years in support of the implementation of the Scientific Outlook on Development, the key to the present national policy of reciprocating the three rural issues is exactly carrying out the overall national strategy

The central government made the strategic adjustment to reciprocate agriculture amid industrial overcapacity

of the “new countryside reconstruction”. Since 2006, the agricultural tax has been thoroughly exempted. At the same time, the central government has introduced a series of policies designed to strengthen rural infrastructure and social welfare. In the four consecutive years, total rural investment has been over RMB2 trillion, which has partly promoted localized employment of peasants in non-agricultural sectors. From 2007 on, more emphasis has been placed on the non-economic functions of agriculture such as ecology and environmental protection, as well as society and culture. Additionally, in 2008 a sustainable development goal regarding agriculture, rural areas and peasantry was specifically set, namely to develop a “resource-saving, environmental-friendly agriculture”.

In recognition of the above national strategy, this report points out that it is necessary to have an understanding of the new situation of poverty in rural China and be aware that historically important changes have occurred in both the impoverishment mechanism and the meaning of poverty.

Agricultural labor forces tend to be more and more composed of women and aged people in the “post agricultural tax era”

Because of the massive outflow in the past two decades of labor capital with a higher stock of human resources into cities, the elderly and women left behind in rural areas have become the largest disadvantaged groups in modern China. As their capacity for self-development is insufficient, it is difficult for them to make a living merely through their own labor resource, and they depend more and more on external cash inflows for sustenance, leading to a higher degree of cash-based livelihood of farmers in impoverished rural areas. This will inevitably lead to a higher poverty threshold and thus increase difficulties in poverty alleviation, making many once effective and well-received poverty alleviation programs now less effective.

Nevertheless, this is a prevalent issue in less-developed areas and very common in developing countries. In Mexico, for example, about one third of the rural young and middle-aged labor force flowed into the United States seeking employment, leading to decreased rural self-sufficiency and a considerably greater extent of cash-based livelihood in rural areas. As a result, in the nation, there is a discussion over the necessity of increasing its poverty threshold from the internationally accepted 2 dollars a day to 4 dollars.

These disadvantaged groups fall short of the profitability requirement of external capital because of their lower stock of resources

Currently, in rural China, the agricultural labor force in many areas has tended increasingly to be composed of women and elderly people. As estimated according to a report by China Economic Weekly in 2006, the number of left-behind women in the year already approximated 50 million⁸. According to the second national agricultural census, there were 349 million agricultural laborers in 2006, 53.2% females⁹ and 46.8% males, with a male-to-female ratio of 87.97%. But the national census revealed a countrywide male-to-female rate of 106.27%¹⁰, showing that female agricultural labor was already in the majority. Ye Jingzhong (2008) indicates that as many rural young and middle-aged laborers work outside their places of origin, the elderly become the main sustainers of agricultural production, and currently 80.6% of the left-behind elderly are still engaged in agricultural production¹¹. Rural laborers aged 50 and above engaging in agricultural production in central and western China have increased from 17-18% in 1996 to the

⁸ Zheng Juncai, ‘A Survey of the Abnormal Existence of 50 Million Rural Left-behind Women’. *China Economic Weekly*, Issue 10, 2006.

⁹ Cai Fang ed., *The Year 2002: A Report on Population and Labor Issues in China—Urban and Rural Employment and Countermeasure*. Beijing: Social Sciences Academic Press, 2002.

¹⁰ Data source: Data of the 4th National Population Census by National Bureau of Statistics of China. <http://www.stats.gov.cn/tjgb/rkpcgb/index.htm>.

¹¹ Ye Jingzhou and He Congming, *The Lonesome Sunset: The Left-behind Elderly in Rural China*. Beijing: Social Sciences Academic Press, 2008.

Satisfying diverse needs of rural disadvantaged groups should become an important part of the poverty alleviation effort

present 32-33%, a figure reaching 46% in provinces with a greater outflow of labor (Zhang Shuguang 2010). Some local field investigations reveal that the elderly aged 50 and above account for more than 60% of the rural left-behind population¹². These figures show that agricultural production is carried out increasingly by women and the elderly. Meanwhile, a great number of children are also important laborers in rural households. They take part directly in agricultural production.

At the same time, many disadvantaged groups still have the potential to convert their labor resources into capital. It is only that their labor resources cannot satisfy the profitability requirement of the external industrial capital. If these human resources are being developed in a comprehensive way, it is still likely to convert them into multifunctional and diverse social capital so that poor peasants can maintain their basic livelihoods and thus support agricultural and rural sustainable development in less-developed areas.

That means after the stage of large scale poverty reduction in the 1980s (1978-1985) relying on institutional reform and national economic development, then the development-oriented poverty alleviation in the 1990s (1986-2000) targeting regions and the stage of targeting impoverished villages in the new millennium, strategies now need to shift the target down to rural disadvantaged groups, especially the left-behind elderly and women. Accordingly the definition of antipoverty also needs to shift from unitarily promoting the income growth of the impoverished population to satisfying the needs of disadvantaged groups for sustaining basic livelihood and for agricultural and rural sustainable development.

The needs of the disadvantaged group and sustainable rural development are of diverse, which link with the diversity of small farmers' production to reduce nature and market risks. Such needs cannot be met by relying on bureaucracy, which objectively gives rise to the necessity of incorporating the improvement of rural governance into poverty alleviation action – only by promoting the organization of disadvantaged groups acting as carriers to connect with external poverty alleviation resources can the excessive transaction costs between small-scale peasant economy and the external sectors be effectively reduced. Poverty alleviation efficiency can then be enhanced. But the present rural top-down governance structure was in essence created for extracting surplus from the San Nong to satisfy industrialization and urbanization, in which it is impossible for disadvantaged groups to participate effectively. It inherently contradicts the idea of universal benefit as pursued by the poverty alleviation strategy in the new period.

Further, if we approve the idea of ecological civilization as advocated in the "Central Government No.1 Document" of 2007 and deem that less-developed rural areas should seek long-term, sustainable diversified development, then rural poverty alleviation should have multifunctional connotations. Accordingly, rural governance should be helpful and conducive to the formation of a diversified society.

¹² 'Labor force Ageing Hampers New Rural Reconstruction' <http://www.cnca.org.cn/info/8271.html>; jsessionid=2A9EB8073CC806DB7436E8CFF4A4FB54.

Box1: Macroeconomic Background to Present Impoverishment of Rural Disadvantaged Groups

The current impoverishment mechanism and the difficulties in poverty alleviation need to be understood by taking into consideration the historical context of the increased outflow of rural resources during China's industrialization and urbanization.

China, a country in pursuit of exogenous modernization as a late-comer, primitive accumulation for industrialization following the founding of new China could only come from the resources and surplus of domestic agriculture, rural areas and the peasantry. The strategic arrangement in which agriculture provided primitive accumulation for national modernization became the institutional factor causing the poverty of the peasantry at large in the period of "collectivization". In the initial stage of reform and opening up, under the combined effect of factors such as the institutional arrangement of the household contract system, improving irrigation works, the advance of agricultural technology (for example, development in chemical industry) and the raised prices of agricultural products, agriculture entered a golden period of development. In the 1990s, driven by the market mechanism and fast urbanization, resources began flowing into non-agricultural sectors from the agricultural sector with relatively low rates of return, leading to obvious depletion of rural resources and constrained rural development.

First of all, with the advance of commercialization reform of banking sector, under the market-oriented mechanism, funds gained speed towards flowing into non-agricultural sectors and urban areas with high liquidity, high profitability and economies of scale, away from agricultural sectors of long cycle, low return and small scale. Related research reveals that: during 1978-2000, the net outflow of funds merely from rural credit cooperatives amounted to RMB451.92 billion, not counting postal savings deposits (Han et al. 2007); loans taken from the national banking system for agriculture and rural areas were on the decrease, and in 2002 loans to rural areas accounted only for 10.4% of the gross loans in society at large (Chen 2004); the gap between financial supply and demand in the rural sector was on the rise, from RMB462.296 billion in 1991 to RMB10,332.051 billion in 2004 (Wu et al., 2007). As the leading factor, finance has nowadays become the scarcest economic element in rural areas. Scarcity in funds has severely hampered agricultural and rural development.

Second, due to the comparative income gap between urban and rural areas, most of the people capable of self-development flooded into the urban areas. The rural exodus, on the one hand, raised the rural cash income level, which has been a positive factor contributing to the great achievement in poverty reduction since the 1990s. On the other hand, however, as a result only disadvantaged groups with lower human capital stock and lacking abilities to develop stay in rural areas, which has become a constraint factor on the development of poverty-stricken community.

Moreover, with industrial development and urbanization gaining speed, continuous requisition of massive rural land led to the 'outflow' of land resources from rural areas toward urban sector. In the absence of an effective compensation and resettlement mechanisms a large number of landless farmers have been left behind without assured means of livelihood. If the urbanization ratio in China increases to 50%, then in the 30 years from 2000 to 2030, arable land thus occupied will amount to over 54.5 million mu, with more than 78 million farmers wholly or partially landless (Han, 2006).

After the changes in the agricultural tax era rural governance in the post agricultural tax era tends to deteriorate

Finally, the increased outflow of funds, labor and land resources have led to an extreme scarcity of human capital and material capital in the rural community. Due to the drainage of the labor force with relatively plentiful human capital stock, the poor population left behind is mainly composed of highly scattered women and the elderly who have extremely little capital stock, or those vulnerable groups in areas with an extreme scarcity of natural resources. They have become more and more incapable of basic self-development and been increasingly marginalized in a modern society and market economy, with little potential for sustainable self-development. Due to these structural changes, the grass roots have very low labor capital stock, making it difficult for them to have access to external capital. Unless the State persists on a long-term basis in large-scale investment into new rural reconstruction, putting in financial resources with the visible hand of government and driving other factors of production flow back into San Nong, otherwise impoverished rural areas will not have the potential for having access to external capital even if the government still continues its industry-oriented poverty alleviation effort, because external capital has to bring together dispersed labor to lower transaction costs. Therefore, the change in targets of current poverty alleviation has objectively increased the difficulties in poverty alleviation.

The influence of deteriorated rural governance is reflected mainly in three aspects: fairness, efficiency and development capability

2. Rural Governance: Impacts on Performance of poverty alleviation in the “Post Agri. Tax Era”

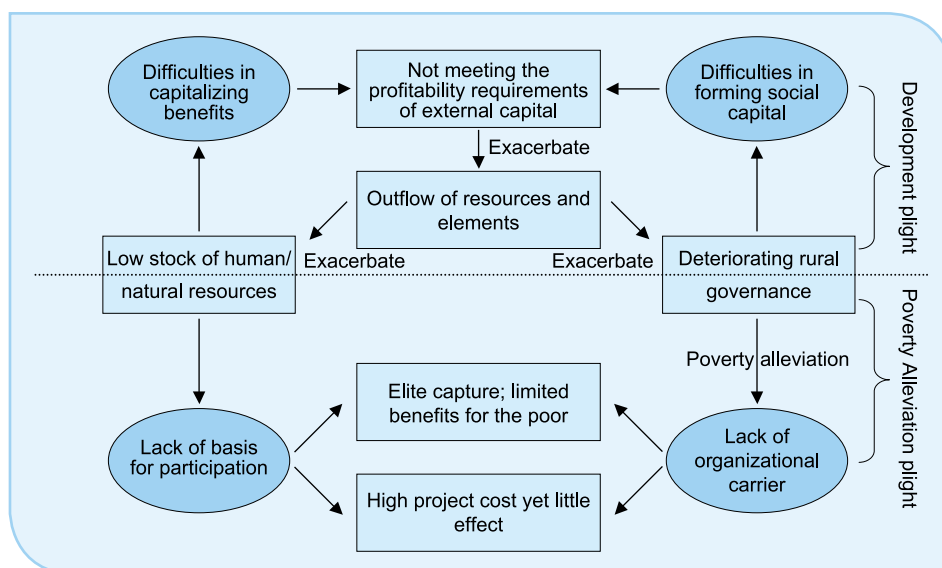
In the agricultural tax era, rural organizations as stakeholders had a clear behavioral goal and a definite structural function. With the implementation of agricultural tax and levy reform and the ultimate rescinding of agricultural tax, rural areas have entered a post agricultural tax era. This has an important impact on rural governance. On the one hand, the development of rural public service is confronted with difficulties under the pressure of grass-roots debts and rigid financial expenditures; on the other hand, the liaison between farmers and village cadres weakens, and the behavioral choice of the rural elite deviates increasingly from community interests as a whole. Furthermore the material basis of rural administrative authority is crippled. Rural public authority is “in a vacuum” (Tian, 2006). Some scholars describe this as the “suspension” of grass-roots authority (Yu, 2010).

The deterioration in rural governance affects poverty alleviation mainly in that the lack of organized carriers in atomized rural communities leads to “elite capture”. A minority of people dominate resource allocation whereas the poverty-stricken groups, mainly the elderly and women, find it difficult to effectively take part in various programs because of their lower stock of human and natural resources.

This aggravates considerably the difficulty in poverty alleviation: on the one hand, poverty alleviation resources, in most cases, are acquired by a minority in the process of transfer into rural communities, making it hard to guarantee the involvement of disadvantaged groups for their benefit, or ensure fairness in allocation of resources; on the other, because of the absence of established organizational carriers, re-organization of those rural disadvantaged groups lacking human, material and natural resources, involves extremely high costs as well as great difficulties in mobilization, leading to a considerable decrease in the efficiency of poverty alleviation efforts.

More importantly, in the post tax and levy era, the impoverished population, mainly disadvantaged groups such as women and the elderly, having generally a lower stock of human and natural resources, are hard to be "capitalized" to gain yields. In a situation of deteriorating rural governance it is also difficult to effectively mobilize these disadvantaged groups to form multifunctional and diverse social capital and meet the profitability requirement of external capital. This accelerates the outflow of resources from depressed areas. The depletion of resources causes an ever lower stock of human and natural resources, which leads to a weaker base for rural governance. These disadvantaged groups are therefore entrapped in a situation in which it is **hard to improve their development capability** (see Fig. 6).

Fig. 6: How Deteriorating Rural Governance Affects Poverty Alleviation in Post Agricultural Tax Era



2.1 Deterioration in rural governance: difficulties in transferring resources of poverty reduction to disadvantaged groups

In the current situation in which rural governance is deteriorating, there are two reasons for difficulties in transferring poverty alleviation resources to disadvantaged groups, namely: i) a small number of elites compete for, or "capture" resources; and ii) the majority excludes disadvantaged groups.

2.1.1 Mechanism analysis: "Elite Capture" and the exclusion of disadvantaged groups

"Elite capture", a widespread phenomenon in rural areas with deteriorating governance in relation to external resources, is one of the most important reasons for poverty alleviation resources not being used effectively within rural communities¹³. In a situation in which rural households are isolated, massive in number and highly dispersed, transaction

Massive poverty alleviation resources are "captured" by the elite

¹³ "Elite capture" mechanism: When entering rural areas, government resources and enterprises would choose agents of a certain scale, with the aim to reduce transaction cost; given the situation of rural de-organization, only large and influential peasant households and elite could act as agents to connect with external resources; due to absence of a benign governance at large, the majority of income would be seized by large and influential peasant households and elite within rural communities. See: The Task Force of the Key Project of the National Social Science Fund (06AJY003), 'Governmental Departments and Capital "Going to the Countryside" and the Development of Peasantry's Specialized Cooperative Economic Organizations', Economic Theory and Business Management, 2009 (7); Wen Tiejun (ed.), Report on New Rural Reconstruction in China. Fuzhou: Fujian People's Publishing House, 2010.

costs are excessively high for both government resources and external industrial capital to enter rural areas. Confronted with this problem, it usually needs an agent capable of internally reducing the transaction costs on behalf of a rural community. Generally, this role is played by the political or economic elite in a rural community.

Inherently, rural society has always been regulated by elite politics. But through changes over a long period, the benign ecology of rural governance has been wrecked, and the behavioral choices of community elites have deviated increasingly from community interests at large.

This was a ubiquitous result in the context of long-term institutional changes. After land was contracted to and operated by rural households in the 1980s, administrative organizations at village and township levels in fact no longer had a property basis for self-sustaining operations. Local treasury departments began "decentralizing power to lower levels as a way of throwing off burdens" (permitting township governments to levy uniformly pooled fees on farmers to meet their expenditure needs) one after another. When the macro-economy encounters downturn pressures, the institutional costs of the urban economic crisis were conducted and transferred to agriculture, rural areas and farmers, leading to tensions in rural economic relations. As a result "good gentries" were expelled by "bad gentries," which was a commonplace in history and nowadays happens more frequently. Eventually rural communities witness the wreckage of social ecology on which rural governance depends. (Wen and Feng, 1996; Dong and Wen 2008).

This is also supported at a local level by case studies on rural governance transition. For example, it was found in surveys that when the tax burden increased in the mid- and late-1990s, in some villages, village cadres who were able to shift institutional costs out forcefully by all means came to power, and gradually superseded the rural elite who traditionally relied on "responsibility for lower levels" to maintain community governance, leading to the start of the deterioration in rural governance. In the post tax and levy era, however, agricultural tax has been abolished and the State is implementing a national strategy of new countryside reconstruction. When massive resources are being put into rural areas, the rural elite's demand for being the first to be compensated leads to a conflict of interests between elites inside and outside the system-to break out through village elections, petitioning, mass disturbance, and even confrontation.

Therefore, on the one hand the elite must act as an agent transferring external resources; on the other hand, a type of cooperation emerges inside the rural community in the form of pro-big household governance, in which the majority of yields are appropriated by large rural households and elites. The problem of public interest eroded by "elite capture" is widespread in rural society.

In the meanwhile, since the role of the rural elite has changed from "protectors" to "profit seekers"¹⁴, the "good gentry" governance mechanism which might take care of the disadvantaged is also undermined.

In rural society, a small-peasant village community based on kinship and locality was a relatively closed "commonwealth" (Zhang Jing 1999)¹⁵; the members shared a common cultural and ethical system, and the community elite was the agent of the community's common interests and had its own interests realized by protecting the community, whose authority came from the prestige bestowed on him or her by personal experience and

The interests of the real disadvantaged groups are excluded as they don't have a say

Disadvantaged groups are excluded

¹⁴ For the description of agents as "protectors" or "profit seekers", see: Du Zhanqi, *Cultural Right and the State*. Nanjing: Jiangsu People's Press, 1990.

¹⁵ Zhang Jing: History: Sources of Local Authority. *Open Times*, Issue 5-6, 1999.

the public opinion of the community (Fei 2004)¹⁶. The protection of and care for the disadvantaged was usually an effective means of increasing the elite’s prestige. Under such governance, the disadvantaged were usually protected by the elite.

With the state’s administrative power pressing on rural society and the influence of market consumerism, rural society’s cultural and value system and social networking gradually degenerated, with relations between members based increasingly on materials and interests. In such a governance ecology, due to changes in the source of power and right, the community elite, whose role already evolved into “profit seekers”, gradually deviated in its behavior from taking care of public interests and looked toward satisfying the interests of those with more say, having little care for the interests of disadvantaged groups in the minority. At the same time, ordinary rural households in the majority also tended to exclude disadvantaged groups, rather than protecting them.

When poverty alleviation resources approach the community, therefore, it is impossible to really take into consideration the disadvantaged groups who are in need of aid mostly and have the least say, whether the resources allocation is manipulated by the elite or determined through majority voting. At the same time, it is apparently difficult to look to external supervision to solve this lack of fairness in transferring resources inside villages—they also face similarly the problem of excessively high costs for social supervision.

In conclusion, in an objective state of increasing atomization of rural society, for villages to effectively receive external resources, it is necessary to accept the elite’s active role in reducing transaction costs and satisfy their needs for “extra yields” higher than for ordinary households; on the other hand, certain check-and-balance mechanisms must be introduced to prevent external resources from being excessively captured by big households and the elite, and avoid exacerbating the poverty of disadvantaged groups.

2.1.2 PA practices: Inadequate involvement of the poor and discrimination in allocation of PA resources

Because of the existence of “elite capture” and the objective regularity that most people discriminate against disadvantaged groups, a common phenomenon prevails that it is difficult to transfer poverty alleviation resources to disadvantaged groups. In the present poverty alleviation system, resources are transferred and administered by governments at various levels. When poverty alleviation resources are transferred to a village, implementation is organized mainly by the existing village Party committee and the villagers’ committee (“two village-level committees” hereinafter). This method reduces to a certain degree the organizational costs for program implementation, since it makes full use of the existing administrative system.

In practice, due to restrictions resulting from improper rural governance, administrative resources transferred to villages are usually managed by the elite and operated by “rich and influential households”; the poor population, mainly disadvantaged groups, generally has no adequate say and decision-making power in this organizational system. Even if the majority principle is applied inside villages, the interests of needy disadvantaged groups generally cannot be prioritized.

From all the perspectives of criteria and approach of identifying poverty village as well as the specific procedures of targeting impoverished villages, and the implementation and operation of a poverty alleviation program, disadvantaged groups have little room for active participation. It is required that a village should propose a program according

¹⁶ Fei Xiaotong describes such governance as “presbyterial ruling” based on edifying power”. See: Fei Xiaotong, *Rural China*. Beijing: Beijing Publishing Group, 2004.

to its own situation and make a plan complying with certain procedures. For example, a villagers’ group first raises a program proposal to be summarized and determined at village congress, then invites experts, usually county-level poverty alleviation officials or provincial-level resident officials in the village, to discuss the program and make a financial plan, and finally reports it to higher levels for approval. However, assessments have highlighted that ordinary peasants generally don’t have a clear idea of what the village-level poverty alleviation program is, nor do they know about the financial sources. They are at times indifferent in the process¹⁷. In practice, many programs are still formulated under government operation and with involvement of the elite, as a minority in villages. Since lack of organization and concerted action, the scattered poor population, mainly disadvantaged groups, are also unable to get involved in the formation of poverty alleviation programs.

It is hard for poverty alleviation resources to effectively target the poor population, as the participation of the poor population cannot be ensured. For example, in IVDP projects, though projects like road construction, may improve the infrastructure of villages, but the poor population may not substantially benefit due to their limited use of the program’s outcomes because of their lack of capacity to participate. As for some programs designed to better people’s lives, such as drinking water and biogas, the need for counterpart funds usually makes it difficult for impoverished households to get involved¹⁸.

The other two measures, rural labor training and transfer and industry-oriented poverty alleviation, which together with IVDP constitute the three major poverty alleviation measures since the start of the new century, are also liable to give rise to “discrimination against the poor and in favor of the rich” inside villages.

As with IVDP, there exists the problem of screening in labor training and transfer programs. Though policy prescribes that poor villages and needy families should be given priority in participating in transfer training, in practice trainees are usually laborers in poor counties who are “willing” to participate. As some poor people cannot afford to participate in training, they have fewer opportunities to participate than non-impoverished people. Surveys also reveal that during early implementation of a training program, families with close relations with enrolment organizers (especially village cadres) are more likely to participate firstly in training¹⁹.

The scarcity of production factor determines prices of factors. The ones who own the factors are in the position to set the rule of games. Therefore, in rural areas where capital is an extremely scarce factor, industry-oriented poverty alleviation programs implemented by the government to support agents in possession of capital to increase gains by capitalization of resources end up mainly in “elite capture” – only rich peasants with a higher capacity for resource development are able to share the benefits of capitalization.

To sum up, affected by the current deterioration in rural governance, poverty alleviation resources cannot be transferred fairly within a community, resulting in a widening poverty gap. The impoverishment of disadvantaged groups is thus aggravated. In the absence of supportive rural governance, it is difficult to solve fundamentally the problem of fairness in the transfer of poverty alleviation resources within villages by relying merely on specific technical improvements.

¹⁷ Wang Sangui. *Mid-term Evaluation on the Poverty Alleviation and Development Program for Rural China: An Assessment of IVDP Implementation and Poverty Alleviation Effectiveness*. September, 2005.

¹⁸ Ibid.

¹⁹ The Task Force of China Development Report 2007. *China Development Report 2007—Eliminate Poverty in Development*. Beijing: China Development Press, 1st edition, September 2007, p118.

The atomized state of rural households increases organizational costs for poverty alleviation

Disadvantaged groups in a less organized state cannot reverse the seepage of poverty alleviation resources in the process of transfer

2.2 Low delivery efficiency of PA resources and short-term impact of PA programs

2.2.1 Mechanism analysis: High transaction and organization costs with atomized households

Since the inception of economic reform, rural society has experienced a long process of de-organization, and peasants find themselves in a modern market and social milieu increasingly in a modality of atomization, thus producing far-reaching influences on the efficiency of the poverty alleviation effort.

First of all, due to the absence of pre-existing organizational carriers, advancement of poverty alleviation programs will inevitably encounter the plight any external agent would be confronted with when entering rural society, in which it is difficult to make transactions with a large number of scattered farmers because of excessively high costs. Though the current role of two village-level committees for program implementation costs less to a certain extent than directly targeting peasant households, its function is very limited in lowering the costs of organization and implementation because in most areas the two village-level committees have become incapable of mobilizing farmers after the long course of de-organization. Moreover they give rise to many other problems in terms of resource allocation. A poverty alleviation program usually need to reorganize farmers when implemented in a rural area, which not only requires extremely high costs for mobilization, but also increases considerably the total cost for program implementation because of difficulty in obtaining effective coordination of various social resources within a community.

Secondly, disadvantaged groups have a lower stock of human capital and natural resources, lacking the resources and surplus necessary to spontaneously form social capital, and can hardly afford the cost of re-organization. So they have a low degree of organization and also least involvement in poverty alleviation programs.

Inadequate participation by the needy directly affects the outcome of poverty alleviation programs. In the absence of supportive rural governance, the selection of a poverty alleviation program is either monopolized by village cadres or designated uniformly by the government, while the real needy groups simply participate in the program passively. They have no say in project identification and planning. In this way, it is very difficult for the poverty alleviation program to meet the real needs of the poor, which not only affects the fairness of the program, but also greatly undermines its effect.

Besides, from the perspective of incentives for government behavior, rural governance under an atomized structure is not conducive to reversing the seepage of poverty alleviation resources in the process of transfer. In the current situation, in which it is impossible for disadvantaged groups to participate in rural governance, the high costs and low efficiency of poverty alleviation make local governments more unwilling to put funds into poverty alleviation. Besides, in many deprived counties, governments still have many more pressing issues than poverty alleviation, for example, how to obtain financial sources to maintain their own operation, promote growth of local fiscal revenues and GDP²⁰; then, as poverty alleviation funds reach county and township levels, grass-roots governments have a very strong incentive to use poverty alleviation funds on programs which benefit the local economy, government revenues and their official achievements, but have little effect on poverty alleviation. In addition, a less-organized community cannot exercise effective supervision over the government. Whether there is seepage of

²⁰ Ibid. p.166.

poverty alleviation resources in the process of transfer thus depends only on supervision and self-examination within the government.

2.2.2 PA practice: High costs yet limited lasting effect

There are many cases in poverty alleviation practice in which high organizational costs and the absence of mobilization of community resources lead to high costs for implementation of a poverty alleviation program. For example, some NGOs have constructed roads in the mountainous areas of Guizhou for the purpose of poverty alleviation, with a cost of less than RMB10,000 for a 1km-long, 5m-wide road, while the same project may cost RMB80,000-100,000 in the government's poverty alleviation program. The reason underlying the cost difference is that the former fully mobilized the village labor force, with only explosives, tools, crusher, rubbing mill and technicians provided externally, whilst the remainder of the project was organized by the villagers, which considerably reduced costs²¹.

Given current rural governance, however, the stock of resources in most deprived communities cannot be mobilized effectively. As women, the elderly and other disadvantaged groups have little human capital stock, they cannot participate in basic construction and production programs without effective community organization. In those deprived communities located in ecologically vulnerable areas lacking natural resources, program implementation requires high costs and is especially subject to natural conditions, the follow-up management and advancement of a program is of particular importance. This cannot always rely on external forces, but requires organization by all community members to take the lead, formulate development plans, organize implementation, and take corresponding measures to address problems in the process of project implementation. Without strong and effective community organization, it is very difficult to ensure effective outcome of the program.

To sum up, although the funds and real assets introduced via poverty alleviation programs into deprived communities have a positive effect on the improvement of the infrastructure and living conditions, and the reconstruction and improvement of development capacity, external assistance is always insufficient to meet the development needs of deprived communities and disadvantaged groups. External poverty alleviation resources must function in co-ordination with community resources in order to produce best results.

2.3 Needy groups into a vicious circle where rural governance deteriorates

2.3.1 Mechanism analysis: Shortage of human and natural resource stock for external capital

In deprived communities, the human and natural resource stock of the disadvantaged like the elderly and women at large is low, and difficult to capitalize to gain incremental returns. Under conditions of deteriorating rural governance, it is also difficult to re-organize these disadvantaged groups to form diverse social capital, making it hard to meet the profitability expectations of external resources. It is expressed concretely in the low returns of peasant households.

Under decentralized operations, the disadvantaged have no choice but to accept market prices. Production cost is high because of price increase in the means of production

A poverty alleviation program totally directed by the government requires higher costs

The social capital of communities cannot be effectively mobilized

Poverty alleviation programs with high costs yet low yields are hard to continue

Needy small peasants in decentralized operation have low returns

²¹ Li Changping. 'The Eighteen Inappropriate Institutions Impoverishing Peasants', a speech by Li Changping at China Agricultural University, cited from Ningxia News Net (www.nxnews.net), June 17, 2005.

Atomized households' poor ability to tackle risk, leading to a massive outflow of capital and high-caliber labor forces

and the rise of cost due to fragmented operations. At the same time, lacking necessary capabilities and access to, as well as understanding of the market, the producers find it very difficult to get involved in processing and circulation sector of agricultural products with higher added value, which usually make considerable profit. The higher profit in the processing and circulation sector in return reduces profitability of the producers. Besides, because acquisition of market information by individual households involves excessively high costs, they usually suffer from market price fluctuation as a result of delays in access to information.

In the meantime, as resources and high-caliber laborers flow out constantly, and rural investment in basic livelihoods is decreasing, these disadvantaged households are increasingly incapable of dealing with various risks. In production and life, farmers often encounter various risks, including, among others, reduction in crop yields as a result of devastating weather, impact of climate change on ecologically vulnerable areas, and risks caused by disability, illness and ageing etc. For whichever risk, it is difficult for needy small households having little property and income to endure independently. The basic issues in agricultural production, such as construction and maintenance of irrigation and drainage facilities, and the prevention and control of plant diseases and pests, are inseparable from organized cooperation among farmers. Given the lack of comprehensive coverage by the national social security system in rural areas, unexpected disasters in life cannot be tackled without the help of relatives and acquaintances via social networking. All these cannot be addressed adequately within rural communities in a state of disunity.

As a direct consequence of low returns, meager profit and high risk, capital and high-caliber laborers are continuously flowing out of deprived areas, which lead to a scarcity of human and material capital within rural communities. And the poor population, especially the disadvantaged like women and the elderly, will increasingly lack basic development capability. This will further worsen the quality of rural governance in deprived areas, and this deterioration in rural governance will in turn accelerate the outflow of resources, finally leaving the needy in a vicious circle of deteriorating governance and increasing difficulties in capability development.

2.3.2 PA practice: High poverty ratio and poverty returning of the disadvantaged

Cases can be found everywhere of poor people's weakening capacity to deal with risks, due to the degeneration of organizational carriers and absence social safety nets in rural areas. For example, villagers used to cooperate with each other to repair irrigation canals and ditches, dredge rivers and ponds and do other works, but now nobody do these because of de-organization. These facilities can now hardly handle ordinary drought and flooding. The severe drought which hit five southwestern provinces in the first half of 2010 reveals that after de-organization it is no longer viable to rely on rural residents for long-term maintenance of many water conservancy facilities. The frequent catastrophic weather in recent years has aggravated farmers' losses. Among them, the disadvantaged having little ability to cope with the situation are worst hit.

At the same time, given the degeneration of traditional community safety nets, unexpected expenditures and periodical fluctuations within families are more liable to plunge farmers into poverty.

People in absolute poverty, even if lifted out of poverty, are extremely likely to fall back into poverty. They depend more heavily on agriculture, and most of the agricultural products they produce are used for their own consumption to maintain subsistence. Real

Unable to tackle natural risks

Unable to tackle risks in everyday life

products account for the majority of their income. Their basic needs for cash payments (for example, daily necessities like medical treatment, education and clothing) can only be met by cash income from the meager surplus of their products. Once the price relations of agricultural production or agricultural products worsen (for example, the prices of agricultural products drop, or the prices of products used in agriculture like fertilizers and pesticides rise), their living conditions deteriorate remarkably. For those needy groups living in remote and ecologically vulnerable areas, it is all the more so. For example, an analysis of the data from rural households surveys by the National Bureau of Statistics of China revealed that the considerable decline in grain prices in earlier years caused the average income of 10% of the lowest-income peasants (those with per capita income level in 2005 roughly at the development poverty line) to fall below the subsistence poverty line in 2000-2003²².

In the current general situation in which catastrophic weather of all types strikes frequently, markets fluctuate drastically and funds as well as high-caliber laborers forces are increasingly draining away, if the vicious circle of deteriorating governance and low development capability is not broken, poverty alleviation action can only be an ineffectual remedy and can hardly overcome the potential risk of returning to poverty and help the poor towards sustainable development. The most likely result is that the poor left behind in rural areas, mainly women and the elderly, are going to be bound by an inextricable long-term dependence on poverty alleviation by the government, and remain marginalized in an unequal social status with a psychology of unfairness.

3. Thoughts on Solving PA Problems and Local Practice

Since current rural governance militates against poverty alleviation efforts targeting the rural disadvantaged, improvements in rural governance must be included in poverty alleviation goals in the new stage of poverty reduction. Both the IVDP implemented since the beginning of the new century and the pilot projects of mutual aid funds in depressed villages since 2006 have to a certain extent laid the material base for improving governance in deprived villages. The ensuing poverty alleviation policy, therefore, should take a further step to meet the diverse social and cultural needs of deprived villages, thus laying a sound social base for supportive rural governance.

Eventually, the village-level autonomous management organizations must be formed to combine with external poverty alleviation resources, reduce transaction costs and mobilize social resources within villages. They must function in synergy with the government and other social forces to improve the efficiency of poverty alleviation efforts. Upon this foundation, if comprehensive cooperative organizations with wide participation by peasants can be promoted in a timely way to help the disadvantaged to diversify risks and ensure a stable return, their comprehensive development capability can thus be enhanced.

Currently, pilot projects in various fields have made some useful explorations in this regard and obtained many valuable experiences.

3.1 Foster cultural cooperation of the disadvantaged

Culture is an institution in a broad sense, so cultural innovation is an institutional innovation in a broad sense.

The disadvantaged are extremely liable to return to poverty even after being lifted out

The poor are incapable of self sustainable development and thus marginalized

Forming benign rural governance requires material and social bases

²² The Task Force of China Development Report 2007. *China Development Report 2007 – Eliminate Poverty in Development*. Beijing: China Development Press, 1st edition, September 2007, p58.

Start from cultural cooperation requires lower costs yet produces desired results faster

Individualized impoverished persons, especially the elderly, women and other disadvantaged groups, usually can hardly establish cooperation among themselves because of their relatively lower stock of human, material, and social capital. At the same time, as the cultural and value systems and networking have almost disappeared during the atomization of households, there is no social atmosphere to foster a cooperative culture within rural communities. To improve the organization level of these impoverished groups, **cultural and value systems must first be reshaped within communities, to lower the organizational costs of cooperation.** This is because culture is essentially an intangible carrier of community homogeneity and the reconstruction of rural culture is a process of enhancing co-operative awareness and co-operative capacity within communities. Moreover, **cultural life, which requires little investment yet produces the desired results fast and is essentially not measured by material interests, is by nature a field in which cooperation is established fairly easily.** For the rural poor in particular, cooperation in the field of culture may help change their cultural life and alter their state of being marginalized.

Cultural cooperation requires lower institutional costs in that cultural life inherently exists in rural society, which will burst with vitality once again only with an appropriate effort, rather than huge investment on its reconstruction. As a type of custom, rural culture has experienced historical inertia for hundreds of years but has also formed new aspects in modern times. Traditional festivals and major rites, especially carry important ideas of life or cultural connotations for the villagers.

The reason for the prompt effectiveness of cultural cooperation is that the rural disadvantaged including the left-behind elderly, women and children have an existing and long-neglected appeal for basic entertainment, association, care, community life etc. Cultural activities, once organized, would evoke a resonance among them. At the same time, they are also the most important carriers of traditional rural culture, who are more capable of spreading and carrying forward rural culture than young and middle-aged labor forces working outside the village.

As indicated in pilot cases, cooperation in cultural fields has low organizational cost. The rebuilding of community culture and values also helps resume supportive governance. All these are the most pressing problems to be solved when poverty alleviation is carried out at the village level.

The volunteers of the Center for Rural Reconstruction under the Renmin University of China have carried pilot projects in various rural areas. For example, In Hucun Village in Lankao County of Henan Province where most young laborers leave and work outside, with the help of volunteers from the Renmin University of China, cadres delegated to China Agricultural University and other social forces, the left-behind elderly and women first set up an entertainment and cultural team and an association of the elderly, and finally organized an economic cooperative engaging in ecological planting of carrots, based on their own ideas, with the participation of the disadvantaged, and have achieved good economic and social benefits. In particular, whilst enhancing participation, improved cultural organization has also brought about changes in community culture and values and the ecology of supportive governance.

Box 2: Hucun Village Uses Cultural Organization to Increase Participation of the Disadvantaged and Improve Community Governance

In Hucun Village, cultural cooperation has been changing the village's setting gradually: villagers are now having greater communication and interaction with each other, and a common practice of mutual help has been taking shape. The association of the elderly has assisted the village committee in mediating conflicts between villagers. The cooperative has also set up an aid group to help the elderly, the disabled and families short of labor to do farm work and housework. Gradually, on the basis of cultural cooperation, organizers have begun planning for economic cooperation between villagers. So far, the cooperative has run for several years, which has improved villagers' living conditions.

Source: Center for Rural Reconstruction, Renmin University of China.

There are many other cases similar to that of Lankao. For example, the "Peasants Association of Puzhou Town of Yongji City" in Shanxi also began by organizing women for cultural cooperation before gradually forming a peasants association with comprehensive functions including production and culture, resulting in healthy development. In addition, the experiences of the Center for Rural Reconstruction under the Renmin University of China has also revealed the low costs and high efficiency of enhancing involvement of the disadvantaged and improving rural governance by starting from the field of culture. In recent years, the Center has enrolled students from more than 100 colleges and universities to participate in "aid-for-farmer" teams, helping villages organize entertainment and cultural groups and peasants associations, laying particular emphasis on mobilizing women and the elderly to set up associations of their own.

3.2 Introduce external resources for better village governance and mobilizing rural social resources

Fostering autonomous peasants' governance organizations can effectively solve the problem of the low efficiency of poverty alleviation programs in rural areas. It can considerably save transaction costs for scattered small peasants on the one hand, and on the other fully mobilize various community resources as complementary to external poverty alleviation funds. In addition, a community with an established organization may increase its participation in program design and the use of project funds, and thus is more likely to enhance the relevance of a program, and exercise improved supervision over the allocation of funds.

IVDP, the most important poverty alleviation measure for the period from 2001 to 2010, aimed to encourage a wide participation of peasants in deprived villages in the processes of program selection, implementation and supervision, and use of comprehensive poverty alleviation investment to improve the production and living conditions in deprived villages. However, these efforts overall didn't attain the expected results. Peasants didn't adequately participate in program selection, implementation and supervision, nor mobilized their social resources. Nevertheless, some pilot programs achieved more successful outcomes. As indicated earlier, this may be attributable to the synchronous advancement of program implementation and village-level governance improvement, which mobilized massive community resources in support of poverty alleviation resources and then gradually gave rise to a supportive mechanism for sustainable poverty reduction and rural development.

Injection of external resources must be combined with improvement of rural governance to produce a better effect

A good case is that of Daxu Village, Zhanggong Town, in Ningling County, Henan, which used national lottery funds for IVDP.

Box 3: Community Resources Mobilization in the IVDP in Daxu Village of Zhanggong Township, Ningling County of Henan

The IVDP in Daxu Village relying on two village-level committees with a sound organizational base has achieved a good result in terms of resource mobilization and program cost reduction. Firstly, the main members of the two village-level committees not only spent a lot of time and energy but also contributed a lot of money during program implementation; the village secretary and head contributed over RMB100,000, the deputy village head RMB50,000, and the treasurer RMB6,000. To broaden the main road in the village, the village head and his family members took the lead in removing their own courtyard wall and part of their house, with a loss of RMB150,000. Secondly, thanks to the peasants' support for the program and the leadership by the village cadres, 36 households voluntarily had their courtyard walls and parts of their houses removed, with economic losses amounting to over RMB1 million. One woman put it honestly, "I have eaten nothing, but cried for two days when I learned at the beginning that the courtyard wall and house were to be torn down (with a loss estimated at RMB80-90,000). But considering that a broader road would benefit all, and that the secretary and his two brothers had dismantled their houses first, I phoned my husband myself, asking him back from Shangqiu to dismantle ours." More than 500 laborers across the village volunteered to participate in the program, and the waste pits and the original watercourse were filled and leveled up for only a sum of slightly more than RMB20,000, adding 148 mu of additional land (including 80 mu arable land) to the village. This is unimaginable for most villages.

Source: Wang Sangui and Tong Zhihui et al: The Practice and Inspiration of Pilot IVDP with the Support of Lottery Fund, June, 2010.

Daxu Village was one of the 15 pilot villages selected in 2009 by the county government for IVDP with the support of central lottery funds. The total investment in Daxu Village was RMB1.55 million, plus a sum of some RMB200,000 funded by other departments.

With internal organizational management and resource mobilization, the village finished a number of projects in less than a year, including: road to every household in the village costing RMB1.16 million, 40 street lamps worth RMB100,000, a cultural room and public toilets taking RMB100,000, 8 irrigation wells with RMB40,000 spent, and RMB150,000 for village-level mutual aid funds. The funds provided by other departments were mainly used for building a cultural plaza and buying fitness apparatus, land leveling, river and pond dredging, the construction of a biogas digester and village office building, etc. All the projects were basically completed within one year.

Great changes have taken place since then in many aspects of the village; village-level governance has improved; villages have become more united and much more harmonious; and it has been much easier for village affairs to be supported by peasants. The villagers now have full confidence in the future of the village.

The most prominent feature of the Daxu Village project was that good village-level governance in combination with large-scale poverty alleviation resources resulting in the best poverty alleviation effect. Without continued input of large-scale external resources (including funds and supervision), it would have been very hard to mobilize village resources for development. These resources would either have flown out (by means of

Promote comprehensive cooperation of the disadvantaged to gain stable returns

outflow of labor force and of funds into cities in the form of bank deposits) or been wasted in worthless activities (for example, card games, mah-jong and other forms of gambling prevailing in rural areas). Without the support of external resources, community elites would have had neither the ability nor the will to invest alone in community development, and community governance could hardly have improved at all.

On the other hand, without an effective and benign governance structure, it would have been impossible to use external resources in a sensible way. New contradictions would have emerged among the villagers over scrabbling for external resources and interests. Such cases indeed happened in some IVDPs, making projects unable to proceed smoothly, not to mention the formation of a supportive community governance and sustainable development capability.

3.3 A comprehensive cooperation framework for self-development capability of the disadvantaged

After the mechanisms of cultural cooperation and community resources mobilization become mature, consideration from [the government may be given to introducing a comprehensive cooperation framework](#) into rural communities to improve the self-development capacity of disadvantaged households.

It is well-known that, in the context of industrialization and market-led development, agriculture has low comparative returns. Relying merely on agricultural operations can hardly lift agricultural producers out of poverty stably. It is not commonly admitted that even for organized farmers, cooperation in a single field generally can hardly cope with risks from drastic market fluctuation and from the change in natural conditions. In general, small peasants can still maintain their production operations in a fashion in which they conform to Chayanov's hypothesis that a peasant household cannot expel its labor, so they can exclude the counting of the portion of production costs for maintaining subsistence. But if cooperation is carried out in the production field, the circumstances are different in many ways: the opportunity costs of agricultural labor investment are continuously made visible and increased by wages earned from working outside; and the income of the cooperative from planting can hardly ensure the continuity of cooperation. Therefore, relying merely on simple cooperation in production can hardly lift peasants out of the plight of underdevelopment. Most of the agricultural cooperatives worldwide engaging merely in production ended up in failure.

As seen by the experiences of small farming households in other East Asian countries like Japan, South Korea and Taiwan province and by many local rural construction experiments, [only by developing comprehensive cooperative organizations incorporating functions of financial cooperation, purchase and sale cooperation and specialized cooperation and entitling them by legislation to exclusive powers and preferential policies in several agriculture-related fields, can small peasants constrained by resources truly have access to opportunities of sustainable development.](#)

Both existing poverty alleviation efforts and rural reconstruction experiments in other fields have achieved some experiences in this regard.

3.3.1 Experiences of the village-level mutual aid fund

Because of the lag in development of the rural financial market, the problem of impoverished households being unable to get enough production funds as a means of support became more and more outstanding. Since the early 1990s, various small-sized micro-finance and community fund experiments were conducted countrywide, in an effort to relieve the constraints of production credit funds on impoverished farmers,

Certain experience has been gained in using village-level mutual aid fund to promote financial cooperation among peasants

but all ended with failure due to restrictions by financial policy as well as management problems. In recent years, some local poverty alleviation and fiscal departments have attempted village-level mutual aid fund experiments in a number of deprived villages by applying the model of community funds to the use and management of fiscal funds for poverty alleviation, with the aim of improving the targeting and effectiveness of these funds.

In 2006, the State Council Leading Group Office of Poverty Alleviation and Development and the Ministry of Finance conducted in 14 provinces a larger scale pilot program on mutual aid funds for deprived villages, with the aim of extending the mutual aid fund model into other deprived areas countrywide, and get some lessons learnt. These programs were designed to set up mutual aid and autonomous management organizations in deprived villages to improve the availability of production funds by the impoverished peasants and thus increase the income and welfare of local villagers, especially impoverished families and women.

Good results were achieved in some places. An example is the village mutual aid fund in Wangcang County, Sichuan. After adequate publicity, mobilization and training, a mutual aid association and council established in some areas formed an effective internal governance structure and management capacity. Since its inception, the mutual aid association has not only operated smoothly, but basically **achieved financial sustainability with a size of only RMB150,000**. In less than two years, 74% of the mutual aid association members in the pilot villages of Wangcang County had received loans from the mutual aid fund, and up to 82% in the group of the 20% members having least assets had been granted loans. The rate of fund return stood at 100%, and the management personnel received a proper remuneration. Judging from the present situation in the county, the mutual aid funds for the pilot villages have realized the dual goal of poverty alleviation and sustainable development.

To avoid problems in the village, mutual aid funds did not exclude anyone in the village, but made certain institutional arrangements to ensure the participation and benefit of the poor. Firstly, the membership fee for the poor is low, generally at RMB50 Yuan. If it is really unaffordable for those exceptionally poor households, village cadres would be mobilized to pay for them until future reimbursement. Secondly, the borrowing limit is low, not more than RMB2,000 Yuan for the first loan. Thirdly, repayments are by installments. Fourthly, interest rates are not lower than those of loans from local credit cooperatives. All these measures automatically increase the cost of rich villagers getting loans and make them less interested in the mutual aid funds,²³ and thereby ensure benefits for the poor.

A key to the success of village-level mutual aid funds lies in the active participation by villagers of deprived villages and the formation of sustainable self-management capacity. To foster such a capability, explorations have been conducted on village selection, mobilization of villagers, and organizational management.

At present, the village-level mutual aid fund program is still in a stage of preliminary experimentation. Apart from the experiences gained in well-operated programs as in Wangcang, many places have revealed problems requiring attention in the operation of the mutual aid association. A core factor affecting the sustainable operation of the program is that the sole operational returns of a mutual aid association comes mainly from interest

Mere cooperation in the field of financing can hardly cover the operational costs

²³ World Bank's TCCT Expert Panel. *Survey Report on Village-level Mutual Aid Fund Program*. October, 2007.

Promote cooperation in the field of financing within specialized cooperation organizations

of loan and in the long run such a small-sized financial organization can hardly cover its own operational costs. It is therefore necessary to carry out further cooperation in more profitable agricultural production sectors such as purchase and sale, processing and circulation, in combination with the cooperative foundation formed by the mutual aid association.

3.3.2 Integration of specialized cooperation and mutual aid fund

The central government has indicated both in the document of the Third Plenary Session of the 17th CPC Central Committee in 2008 and in the No. 1 Document of 2010 that peasants economic cooperative organizations should be encouraged to establish internal mutual aid fund organizations in villages. This has considerable significance for cooperation between impoverished peasant households. As small peasants, who are numerous but highly scattered, can hardly secure a negotiating position in the market, profits from the agricultural industry chain are squeezed by the high prices of means of production and the low purchase prices of agricultural products. Promoting cooperation among small peasants is intended to have them organized so that they become a subject with a particular negotiating position in the market, whereby having access to lower purchase prices of means of production and higher prices of agricultural products can thus increase profit margins in the market.

But cooperation among farmers still faces difficulties in getting funds. Further promoting cooperation between farmers in the field of financing on the basis of cooperation in purchase and sale and specialized fields is important for solving the shortage of funds. An established cooperative culture and an organizational base for cooperatives may considerably lower the operational costs of mutual aid fund organizations, whereas profits from specialized cooperation can better maintain the operation of mutual aid fund organizations. Baixin Mutual Aid Fund Cooperative of Yanjia Village in Lishu County, Jilin Province, made initial attempts to promote a combination of husbandry cooperation, joint purchase and sale, and cooperation in financing.

On the 10th of November 2003, in order to raise the wholesale price of sheep, 5 peasant households from Commune no.9 of Yanjia Village, Yangshutai Township of Lishu County, Jilin Province, began selling sheep jointly, leading to a price increase of RMB0.6-1.0 per kilogram which amounted to extra RMB20-30 for each sheep sold. Later they established the Baixin Mutual Aid Fund Cooperative with the involvement and help of supporters, formulating preliminary transactional rules. In the meantime, they had the opportunity to take a free training course organized by Beijing-based agricultural support volunteers, the main training contents of which were developing the cooperative economy, a guideline already included in central government documents yet not widely carried out, and practical operation experience on improving the level of organization among peasants²⁴.

Observing that the 5 households' joint selling increased income substantially, other households wanted to join the cooperative. As a result, the breeding scale of the cooperative swelled gradually, with a sheep stock of more than 300 in 2004. But when they wanted to expand cooperation to purchase agricultural materials so as to lower production costs, they met with a problem: almost all participants were financially in difficulties and had no access to borrowing money. Shortages of cash some had always bought agricultural production materials on tally at high prices to maintain production. So there emerged the need for a mutual aid fund.

²⁴ The key figure who directed and advanced the development of Baixin Mutual Aid Fund Cooperative in Lishu County was Jiang Bolin, staff member of Siping Municipal Banking Regulatory Bureau and an enthusiast for the course of rural cooperatives.

At present, real comprehensive and multi-level cooperation lacks the state's promotion and institutional guarantees

Box 4: Baixin Mutual Aid Fund Cooperative Starting from Joint Purchase and Sale

The core cooperative members of Yanjia Village, Yushutai Township in Lishu County of Jilin Province, found in their joint purchase and sale experience that one third of the villagers had money to buy agricultural production materials with a surplus, and one third of them basically were able to solve their problems themselves, and the rest had no money at all nor had substantial shortage. They then came up with the idea of financial cooperation, persuading villagers in favorable conditions to help those with little money to purchase production materials together, in order to lower material prices and purchase costs. After some attempts, the villagers then institutionalized this internal cooperation in financing, with fund borrowing and lending rules formulated. This organizational form of allocating financial surplus to meet shortages among the farmers has spread the seed of a new "rural cooperative finance".

Because of the ties of blood or geographical relations between rural members, most of the cooperative members kept a good credit record, with almost no one in arrears. The members then concluded that as long as the cooperative met the needs of members with good service and high efficiency, members would then have strong repayment awareness and none would delay repayment. In such circumstances, Baixin Mutual Aid Fund Cooperative made useful explorations as to the operational mechanisms on governance, management, risk prevention and interest rate determination, and gradually formed relatively sound mechanisms. In 2007, it became the first village-level peasants cooperative financial organization officially registered under the China Banking Regulatory Commission.

After years of organizational innovation and system evolvement, Baixin Mutual Aid Fund Cooperative, as a typical grass-roots cooperation organization, moved from purchase and sales cooperation to financial cooperation, creating valuable experiences for rural civil mutual fund organizations. They have provided an important reference for national macroeconomic policy adjustment.

Source: Center for Rural Reconstruction, Renmin University of China.

The improved negotiating power of small peasants in purchase and sale cooperation organizations has a limited role in increasing returns from agricultural production, because the really profitable sectors in the agricultural chain are agricultural products processing, logistics, retailing, etc. To truly increase the agricultural income of poor households, they must be organized to participate in these agriculture-related economic sectors of high added value. Based on the experiences of comprehensive agricultural assistance in East Asian countries, only if the state promotes regional and countrywide agricultural assistance systems with diverse preferential policies can grass-roots cooperatives effectively have a share of the profits from scale operations in agriculture-related economic sectors.

Although different sorts of experiments have provided useful examples in fields such as financial cooperation and purchase and sales cooperation, with certain positive results achieved, comprehensive and multi-level cooperation organizations really enabling peasants to diversify risks and earn a stable income have yet to be established, due to the absence of state-level promotion and institutional guarantees. This will be a long-term process of exploration and practice.

If poverty alleviation efforts can make a breakthrough in this regard and achieve a continuous development of the poor on the basis of improving comprehensive cooperation among them, it will provide an extremely valuable example to relieve the worsening plight of agriculture, rural areas and the peasantry in the context of resources outflow, and genuinely implement the balanced urban and rural development advocated by the central government.

4. Policy Suggestions

Since the advance of poverty alleviation efforts in the new period targeting the largest rural disadvantaged groups is restrained to a certain degree by the current unbalanced state of rural governance, the emphasis of the poverty alleviation effort for the next stage should be put on the improvement of rural governance in deprived areas, realizing sustainable poverty reduction on the basis of sound rural governance.

However, many problems emerge for extending rural governance, due to the outflow of rural resources, the disorganization of peasants and the wreckage of rural social ecology. Thus, the improvement of rural governance is a comprehensive systematic project for realizing agricultural sustainability, re-organization of peasant households and the reconstruction of rural social and cultural ecology. Such a systematic project requires concerted efforts made at multiple levels like long-term strategy, medium-term policy and near-term operation.

To sum up, the organic combination of rural governance and sustainable poverty alleviation in the new period will, in an overall adverse situation in which rural economic resources tend to diminish in an irreversible way, play an active role in promoting the conversion of rural grass-roots social resources into social capital. As long as social capital is used as a carrier to connect with the investment of external capital, the goal of achieving universal benefits from the anti-poverty effort will ultimately be realized.

4.1 Long-term Strategy

A new feature of the poor population is that it is increasingly composed of rural disadvantaged groups like the elderly and women. In view of this, the antipoverty strategy is confronted with the diverse needs of underdeveloped areas and impoverished households. The idea of multifunctional agriculture raised in the No. 1 Central Government Document of 2007, and particularly the concept of ecological civilization advocated by the 17th National Congress of the CPC and the development goal of a "resource-saving and environmentally-friendly agriculture" proposed by the Third Plenary Session of the 17th CPC Central Committee, requires the antipoverty strategy to keep abreast of times and consider how to reflect the rural diversity and agricultural versatility of an ecological civilization. Furthermore, this should be regarded as the guiding principle to comprehensively summarize experiences and lessons from previous antipoverty strategies.

In the long run, therefore, the antipoverty effort for the new period should be adjusted on the traditional basis of promoting growth in economic income. It should change as much as possible in the direction of meeting the diverse needs of the disadvantaged for maintaining basic subsistence and of sustainable agricultural and rural development. Additionally, it should specifically include as goals of the rural poverty alleviation

policy the improvement in the extent of organization of the disadvantaged and related supportive governance, as well as meeting social needs such as cultural life and the needs of rural areas for sustainable development of ecology and environmental protection.

4.2 Medium-term Policy

Since the rural sustainable development in deprived areas and the diverse subsistence needs of the currently most disadvantaged groups, women and the elderly, are closely related to rural governance, the poverty alleviation policy should shift to actively including the improvement of rural governance. Previous poverty alleviation efforts have laid an economic foundation for the development of rural governance, and the development of rural social organizations will also lay a social foundation for the development of rural governance. Rural governance with a supportive structure can only be realized by it being based on both economic and social foundations.

For this reason, we propose the following policy suggestions:

Firstly, we should continue to strengthen the diversity of IVDP investment in those villages with planned programs, [increasing the social and cultural expenditure necessary for achieving improved organization for the rural disadvantaged](#); [use more preferential policies to support and promote the development of social and cultural organizations with the broad participation of the disadvantaged in comprehensive and multifunctional community cooperatives](#); and then promote the formation of a supportive rural governance structure on the basis of developing diverse social organizations. Not only can we reduce costs and cooperate more effectively with comprehensive cooperatives as a means, but we can also form an internal supervision mechanism through extensive participation in social and cultural activities. Through these means we can guarantee the sustainability of poverty alleviation performance.

Secondly, on the basis of giving full consideration to the coverage and security of funds, we should strengthen rural financial cooperation in the course of IVDP and mutual fund cooperative development, and set up policies or mechanisms conducive to the participation of disadvantaged groups in financial cooperation. Specifically, this includes: [lifting various policy restrictions on peasants' cooperation in finance](#); [introducing related policies to encourage the development of peasants' cooperative financial organizations, injecting a certain amount of seed capital into peasant's cooperative finance organizations from fiscal revenues](#); and [promoting the development of economic cooperatives in areas with conditions favorable for inter-village cooperation](#).

4.3 Short-term Operations

At a specific operation level, efforts should be directly aimed at promoting community organizational innovation geared to the new problem that the disadvantaged in deprived areas have lower stocks of resources, and to improve the organizational levels of impoverished peasant households. The disadvantaged, mainly women and the elderly and deprived communities, generally have lower stocks of human and natural resources. They cannot afford the major organizational costs at the initial stage of cooperation because of their low returns from capitalization of human resources. Furthermore, the problem of elite capture is prevalent in the process of development of co-operatives.

Therefore, efforts should start in areas such as cultural and social life in which women and the elderly are able to get involved at a low cost. Doing so can help to form social organizations which may lower transaction costs and achieve effective internal supervision by extensive participation of disadvantaged groups. A social foundation will then be established on which supportive governance can be built. When conditions become mature, efforts should be made to further advance mutual aid and cooperation amongst disadvantaged groups in production, purchase and sale, and finance, in order to achieve dispersion of risk and stable returns on the basis of comprehensive cooperation, and thus consolidate the foundation for sustainable development. From the practice that has emerged throughout China, we can see that this type of multifunctional cooperative which has both social, cultural, and cooperative functions, can maintain the process of increasing peasant's profit and effective internal supervision. Thus, we should continue our explorations in this direction, at the operation level, and [enhance our experiences in assisting disadvantaged groups to establish comprehensive and multifunctional cooperatives](#).

Appendix Three

International Experiences in *Rural Governance*: Targeting of Poor households and Elite Capture of Poverty Reduction Funds

1. Targeting

There have been extensive and substantial discussions internationally on targeting mechanisms within poverty reduction programmes. In support of targeting, it has been argued that targeting is essential to: identify different types of poor households; ensure that appropriate benefits reach these households; prevent non-poor households from capturing these benefits; and devising and implementing appropriate poverty reduction strategies for poor households²⁵. Against this, many researchers have concluded that targeting in poverty reduction programmes inherently contains serious problems; For example:-targeting often fails to fully cover poor households²⁶; benefits leak to the non-poor; targeting in participatory programmes often results in elites capturing the benefits²⁷; decentralised targeting often is characterised by corruption, thereby worsening inequality locally²⁸. Looked at from this point of view, the costs of targeting can outweigh the benefits it brings.

It is important to focus on some of the above problem areas and the lessons learnt about them in recent years, since this may have some relevance for the current Chinese context.

Until recently, most poverty reduction programmes used approximate indicators to identify poor households. These indicators varied from general basic needs measures to estimates of average incomes in a particular village, area, or region. Using poverty mapping techniques, and combining this with data from household surveys (allowing linkages between consumption levels and household characteristics) is a much more rigorous approach, and this has been introduced recently in some countries. This approach can produce more detailed and significant results, enabling more rigorous targeting. A number of countries have adopted it with some degree of success: For example:

In India, at an early stage, in the late 1990s, targeting aimed to identify poor households for receipt of food and additional subsidies. Income estimates were unreliable and uncertain, so additional criteria were adopted, notably housing conditions, number of family earners, land access and ownership of livestock and consumer durables. State governments were given responsibility for identifying poor households, and this was implemented via the use of identification cards.

In Indonesia, receipt of food subsidies is based on targeting using a classification of households into categories devised on the basis of food consumption patterns, access to health care and possession of alternative sets of clothing. Additionally, poor villages were

²⁵ For a useful summary of the benefits of targeting in poverty reduction programmes, see *Pathways out of Poverty and the Effectiveness of Poverty Targeting*, Operations Evaluation Department, Asian Development Bank, Manila, 2006.

²⁶ For examples of this, see John Weiss, "Experiences with Poverty Targeting in Asia", in *Poverty Targeting in Asia: Experiences in India, Indonesia, People's Republic of China, the Philippines and Thailand*, ADB, Manila, 2004.

²⁷ On this issue, see Jonathan Conning and Michael Kevane, "Community based Targeting Mechanisms for Social Safety Nets: A Critical Review", *World Development*, Vol.30 (no.3), pp 375-394, 2002.

²⁸ For this particular criticism, see Emanuela Galasso and Martin Ravallion, "Decentralised Targeting of an Anti-Poverty Program", *Journal of Public Economics*, 2003.

targeted on a scoring system based on a set of social and economic characteristics, including infrastructure, housing and population.

In the Philippines, targeting for poverty schemes has been based upon a set of “unmet basic needs”—in terms of shelter, health, education. Where data was unavailable, participatory assessments were used, and poverty mapping devised and implemented.

Targeting has undoubtedly been most successful where it has been based on multi-dimensional poverty indicators (as outlined in detail in the *Note on International Experiences with Multidimensional Poverty*), and where it aims to promote sustainable development out of poverty. A systematic study of targeting of poor households in Asian countries by the ADB²⁹, found that, even with accurate specification of poor households and poor communities, most projects evaluated did not focus on sustainable poverty exit but rather concentrated narrowly on channeling resources to poor regions or distributing subsidies to poor households. As a result, in many cases, targeting of programmes brought only limited benefits such as short-term training, subsidised farm inputs or work on sub-project construction. These benefits achieved little to move households out of poverty in the long-run. Instead of measuring the effectiveness of targeting programmes by the number of poor that were lifted out of poverty sustainably, many projects were justified in terms of the number of poor beneficiaries reached. An additional—and somewhat telling-finding of this study was that many poor households actually lived in “non-poor” areas³⁰.

Use of participatory approaches in targeting has been developed in China in recent years, notably in the Poor Rural Communities Development Project (in Yunnan, Sichuan and Guangxi) and by the Jiangxi Poverty Alleviation and Development Office (PADO). Both these cases have involved participation by village members, and then by village member representatives in the process of targeting poor households. Based on evidence from these projects, it is useful to summarize the main steps involved in targeting. These are outlined in the box below:

- Analysis of poverty problems in village: Officials organise and facilitate villagers to devise a list of specific poverty problems (lack of access to drinking water, poor housing conditions, etc);
- Analysis by villagers of seasonal variances in these problem areas;
- Vulnerability Issues: Villagers analyse factors making them relatively more or less vulnerable (whether poverty gets worse under particular conditions);
- Household Interviews: Interviews, particularly with poorest households, as a sample group of key informants;
- Community Meetings or Village Representative Meetings: to decide-on the basis of the above-which are the poorest households and what are their specific needs, as a basis for targeting funding to these households.

Similar methods of participatory targeting have been adopted in a small number of countries in recent years. For example: In India, the District Poverty Initiatives Project (DPIP) examined the use of participatory methods in targeting for the distribution of “Below the Poverty Line” (BPL) cards in Gujarat, India’s second largest state. Confirming assessments of the results of participatory targeting in Chinese programmes and projects, the Indian project found that the use of participatory targeting greatly improved

²⁹ Asian Development Bank, *Pathways out of Rural Poverty and the Effectiveness of Poverty Targeting*, Special Evaluation Study, Operations Evaluation Department, ADB, Manila, 2006.

³⁰ Also, a detailed study of spatial patterns of poverty in Vietnam concluded that “most poor people live in less poor areas”. See N. Minot, B. Baulch, M. Epprecht, *Poverty and Inequality in Vietnam: Spatial Patterns and Geographic Determinants*, Washington DC, 2003, p.71.

accuracy in determining appropriate BPL recipients³¹. Similarly, in Bangladesh, a detailed study found that participatory targeting via the use of participatory wealth rankings was exceptionally accurate in predicting absolute income poverty when compared with other methods³².

2. The Problem of “Elite Capture”

With participatory approaches to poverty reduction coming to the fore from the mid-1990s onwards, many had assumed that the increasing use of these approaches would be accompanied by improvements in governance at the local level—that greater transparency and increased public election of leaders would be accompanied by a reduction in levels of corruption; that a greater sense of ownership would create more equal forms of representation for disadvantaged and vulnerable groups; and that improved governance would lead to the benefits of development becoming more widely available within local communities.

In some cases, such improvements were realised, but in many cases participatory approaches, when implemented, did not lead to greater transparency. This has led many observers to conclude that the occurrence of elite capture cannot be reduced by increasing levels of participation in decision-making.³³ Several reasons have been put forward to explain why elite capture continues along with improvements in levels of participation. Some of these explanations, together with remedies suggested, have some relevance for the Chinese context. Consequently, it is worthwhile noting these, together with reference to relevant case study experiences.

The main conclusions from recent assessments are that elite capture rests primarily on elites retaining privileged access to economic resources, on their privileged position within asymmetrical social positions in village communities, on their knowledge of political processes, their higher levels of educational attainment, and privileged networking³⁴.

Recommendations for dealing with elite capture in recent years often have focused on a somewhat simplistic dichotomy, of either “countering” or “co-opting” elites. The former approach advocates “challenging” elites by effectively excluding them in the design of poverty reduction programmes. As stated in a recent paper by Lewis and Hossain (2008)³⁵, elites are “obstacles to progress with poverty reduction development”³⁶. By raising public awareness of inequalities in access to power, and by building local capacity, the “counter-elite” approach suggests that community empowerment can be effective

³¹ The DPIIP survey was conducted in 2006, and covered 6000 households across 300 villages. The findings are presented in N.Kumar, “Participatory Governance and Pro-Poor Targeting: Evidence from Central India”, Working Paper published by the *Consultative Group on International Agricultural Research* (CGIAR), International Food Policy Institute (IFPRI), 2008.

³² J.F.Feuleback and M.Zeller, “How Accurate is Participatory Wealth Ranking (PWR) in Targeting the Poor? A Case Study from Bangladesh”, Conference on International Agricultural Research for Development, Göttingen, 2005.

³³ As one commentator aptly stated, enhancing participation does not necessarily “mitigate the opportunism of local leaders”, J-P Platteau, and F.Gaspart, “Disciplining Local Leaders in Community-Driven Development”, Centre for Research in the Economics of Development, Namur, Belgium, 2004.

³⁴ These points are summarised in some detail in texts such as Bardhan, P., and Mookerjee, D., “Capture and Governance at Local and National Levels”, *American Economic Review*, Vol. 90, No.2, pp 135-139,2000.

³⁵ Lewis, D. & Hossain, A, *Understanding the Local Power Structure in Bangladesh*. Swedish International Development Cooperation Agency (Sida), Stockholm: Sida Studies No. 22, 2008.

³⁶ Lewis, D. & Hossain, A, *Understanding the Local Power Structure in Bangladesh*. Swedish International Development Cooperation Agency (Sida), Stockholm: Sida Studies No. 22, 2008, p.33.

in countering domination by local elites³⁷. In contrast, the "co-opt" approach suggests that co-operation with elites should be the main solution, since many elites actually play a constructive role in community development³⁸. Clearly, both these approaches are somewhat simplistic, since most elites' actions cannot be placed easily within each category; furthermore, "challenging" the authority of local elites does not necessarily undermine their influence, whilst "co-opting" them risks reinforcing power inequalities and worsening poverty.

More realistic strategies for addressing elite capture might well focus on assessing ways in which supportive elites actually assist in the development of poverty reduction programmes. Elites who achieve this appear to have a deeper understanding of the social structure and organisation of villages than is the case with less benevolent elites. This was illustrated recently, for example, in a detailed study of the introduction of communal solar lighting projects in Bangladesh³⁹. Elite capture of funds can also be addressed by sequential and conditional disbursement procedures, as highlighted in a recent detailed study by Platteau⁴⁰. Rewarding local elites by publicising their successes regionally and nationally in controlling corruption, thereby giving them enhanced status, has brought successes in a number of cases⁴¹. As suggested above, in the section on targeting, the use of participatory monitoring and evaluation can act as a constraint on leakage of funds during the different stages of project or programme implementation. Ultimately, however, genuine and meaningful empowerment is the most sustainable way of avoiding elite capture, as illustrated recently in a short overview of poverty reduction project implementation by Cleaver and Harmada⁴². If the required time is not spent ensuring that representatives of poor households acquire real bargaining strength and organisational skills, genuine ownership by beneficiary groups is likely to remain elusive—as stressed repeatedly in the many participatory assessments undertaken for the 2000/1 WB Report, *Attacking Poverty*⁴³. This conclusion is reinforced by further recent studies, suggesting that elite capture is correlated with relatively high levels of local inequality.⁴⁴

³⁷ See S.Hickey and G.Mohan (eds), *Participation, from Tyranny to Transformation? Exploring New Approaches to Participation in Development*, Zed Books, London, 2004.

³⁸ See Platteau, J.P., and Abraham, A., "Participatory Development in the Presence of Endogenous Community Imperfections", *Journal of Development Studies*, Vol.39, No. 2, pp.104-36, (2002)

³⁹ See Wong, Sam, "Elite Capture or Capture Elites? Lessons from the "Counter Elite" and Co-opt Elite Approaches in Bangladesh and Ghana", United Nations World Institute for Development Economics, *Research Working Paper No. 2010/82*, July 2010.

⁴⁰ See J-P Platteau, and F. Gaspart, "Disciplining Local Leaders in Community-Driven Development", Centre for Research in the Economics of Development, Namur, Belgium, 2004.

⁴¹ For a presentation of these, see, eg J-P Platteau, and F. Gaspart, "Disciplining Local Leaders in Community-Driven Development", Centre for Research in the Economics of Development, Namur, Belgium, 2004.

⁴² F. Cleaver and K. Harmada, "Good Water Governance and Gender Equality—A Troubled Relationship", *Gender and Development*, Volume 18, Number 1, pp.27-41, 2010.

⁴³ World Bank, *World Development Report 200/2001: Attacking Poverty*, Oxford University Press, New York, 2001. For the participatory assessments prepared as the basis for this report, see D.Narayan et al, *Voices of the Poor: Crying Out for Change*, Oxford University Press, New York, 2000.

⁴⁴ See Emanuela Galasso and Martin Ravallion, "Decentralised Targeting of an Anti-Poverty Program", *Journal of Public Economics*, 2003.

The Chinese Government has gained significant achievements in poverty reduction

However, the problem of “transitional poverty” brought by urban-rural integration has set great challenges for future antipoverty effort

Mass migration and mobility of rural labor forces in the process of urbanization has formed a large number of floating population, left-behind population and landless farmers

1. Introduction: Urban-rural Integration and Transitional Poverty

1.1 Vulnerable groups in urban-rural integration process

Since the 1980s', the Chinese Government has been dedicated to eliminating poverty in both rural and urban areas and has made significant achievements. Taking the poverty line at US\$1.25 for daily expenses, poverty incidence in China was estimated as high as 84.0% in 1981, much higher than that in India (59.8%); while the figure sharply dropped to 16.3% in 2005 in China and was much lower than that in India (41.6%)⁴⁵. Most of the absolute impoverished population remaining in China are “chronic”-impoverished groups lacking normal labor capacity or basic means of subsistence (Asian Development Bank (ADB), 2004), who will be adequately covered under the minimum living allowance system being established across the country; and China's antipoverty policies seem to be complete and well-targeted thanks to the “development-oriented poverty relief” that has been a long-term policy of the Chinese Government and mainly targeted the low-income groups in rural areas.

New challenges are emerging from the poverty developing during the process of urban-rural integration, i.e. this problem is closely related with the accelerating urbanization process in the past three decades and is expected to continue in the coming 15-20 years in China. If we study China's poverty problem by taking into account this process and consider “poverty” as not only in income but also in multiple dimensions which include factors such as lack of rights and deficiency in basic welfare, and antipoverty work not only to solve the “immediate” poverty but also prevent from falling into poverty, we will clearly see that new challenges come along with the achievements already gained.

(1) Vulnerable groups are coming to the foreground as urban-rural integration advances in China

In the past 30 years, China has experienced a mass migration of its rural labor force as never before, considered to be the largest population migration in peaceful periods in history (World Bank, 2009). The “floating population” resulting from this migration is an enormous and ever-increasing number, estimated at about 150 million. This mass migration has increased China's urbanization rate from 26% in 1990 to 47% in 2009. And the tendency is expected to continue in the coming 15-20 years⁴⁶.

A large number of rural laborers migrate to work in towns and cities, resulting in a huge left-behind population. Furthermore, to meet the needs of the rapid development of nonagricultural industries and the acceleration of urbanization, more agricultural land is used for other purposes, leading to a considerable number of landless farmers. Despite the lack of unanimously agreed estimates of the contemporary landless rural

⁴⁵ Refer to Ravallion (2010). The exchange rate between US dollar and RMB was converted on the basis of the purchasing power parity in 2005.

⁴⁶ According to the official materials, China's urbanization will keep a rapid pace in 15-20 years ahead. During the Twelfth Five-Year Plan period (2011-2015), the urbanization level in China is expected to reach and go beyond 50% and the country becomes an urban society. Please visit <http://www.askci.com/freereports/2010-03/201033071652.html>.

population, many experts think that there were at least 40-50 million landless or partially landless farmers in China before 2005 (Han Jun, 2005). Unfortunately, this number will undoubtedly keep increasing as urbanization increases in China.

(2) As a result of non-existent or imperfect policies and systems vulnerable groups face the risk of impoverishment caused by unequal rights and inadequate measures for risk control and transfer

In the process of urban-rural integration vulnerable groups have to face the inadequacies of the subsistence safety net. Although their income may be higher than the poverty line, they are exposed to personal, employment, development and other risks due to deficiencies in the subsistence safety net caused by drawbacks of policies and institutions, hence their major feature of “vulnerability”.

(3) China's long-adopted social service policies and specialized antipoverty policy have been based on a concept that divides urban and rural areas and isolates urban residents from their rural counterparts, which therefore are unable to stand the impact of urban-rural integration.

A range of policies in China have been designed separately for rural and urban areas and for rural and urban residents, and so have the long-adopted antipoverty policies which therefore cannot counter the impact of rural-urban integration. Though the Chinese Government has in recent years developed many policies and measures to build the subsistence safety net for urban and rural residents, the current problem lies in the fact that such a net is cut into two parts respectively for urban and rural areas, instead of an effectively connected “net” planned as a whole. This is the major cause for vulnerable groups uncovered by this net and obviously lags behind the process of urban-rural economic integration.

(4) The above-mentioned issues for vulnerable groups have long-term and formidable characteristics.

Migration and urbanization in China will continue for a long period. Meanwhile, because of the constraints of economic development and historical factors, the complete elimination of the urban-rural separation in social services and special anti-poverty policies in China is a long-term process⁴⁷. So, resolving the issue of vulnerable group is not only a long-term process but also a hard task. It is a basic principle to identify, prioritise, and then resolve the issues step by step.

Therefore, neither could China's existing macro public policy and specialized antipoverty policy target the emerging vulnerable groups, nor is the current antipoverty policy adopted in China complete. Additionally, future policy arrangements and policy choices will be a long-term and hard task.

1.2 Transitional poverty and its features

The risk of impoverishment faced by vulnerable groups during urban-rural integration differs from the traditional risk of poverty resulting from low income. The former has emerged during the transition process from urban-rural separation to integration which can thus be called “transitional poverty”.

New vulnerable groups are facing the deficiency in subsistence safety net

The concept of antipoverty policy that has cut urban and rural areas apart is unable to stand the impact from urban-rural integration

⁴⁷ According to the estimation of China Development Research Foundation (2010), cost for citizenization for migrant workers needs 2 trillion RMB per year.

Transitional poverty is defined by its vulnerability, and is also multidimensional. It results mainly from policies

China's antipoverty tasks shall cater to the dynamic and changing situations during the period of social transition

The research framework for transitional poverty is established from a multidimensional view and covers all the vulnerable groups and a wider antipoverty system

"Transitional poverty" has the following features:

- *Groups suffering transitional poverty are often difficult to define and their major risk is vulnerability.* Not all vulnerable groups in urban-rural integration suffer from transitional poverty; on the contrary, only some of them may fall into poverty due to their limited capacity to respond to risk. Furthermore, the causes of transitional poverty are uncertain.
- *Transitional poverty is multidimensional.* Groups trapped in transitional poverty do not necessarily have low incomes. They may also be excluded from society or deprived of equal rights to public services, or suffer from insufficient opportunities for development.
- *Transitional poverty is the result of policies rather than being chronic.* The cause of transitional poverty lies in defects in the policy system, rather than from the inability of vulnerable individuals. Transitional poverty has resulted mainly from the failure of the macro policy system, public service policies and specialized antipoverty policies, all of which have divided urban from rural areas. Since the policy system doesn't effectively cover vulnerable groups during the transitional period of urban-rural integration, these groups are unable to deal adequately with various risks of impoverishment. Given this, improving the policy system for the transitional period of urban-rural integration is crucial for solving the problem of transitional poverty.

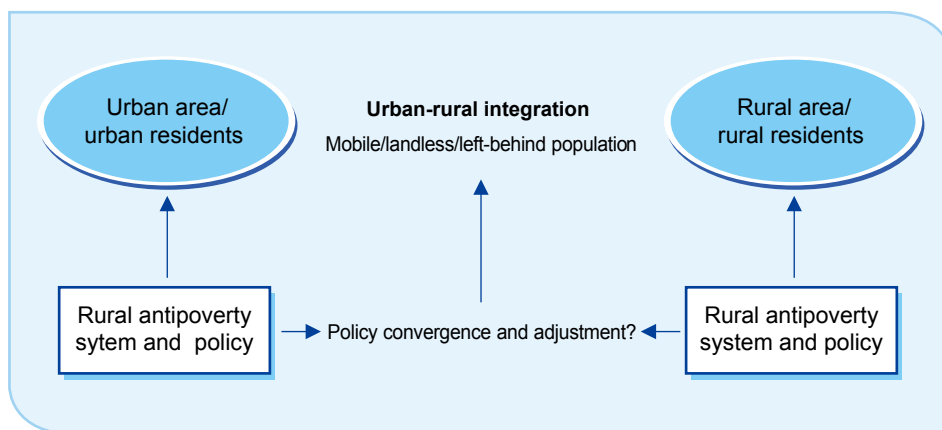
In one word, population migration, urbanization and related urban-rural integration have put the issues and tasks of China's antipoverty work into a dynamic and ever-changing social context, constantly testing and setting new tasks and challenges for existing antipoverty policy. Macro social service policy and specialized poverty relief policy should establish a subsistence safety net that can prevent vulnerable groups from falling into transitional poverty, so as to equip them with basic capacities and rights to deal with risks during the period of social transition, including equal employment opportunities, right to share development achievements and guarantees for basic public services, and consequently set up a complete and coordinated antipoverty system for both urban and rural residents.

1.3 Research framework for investigating and analyzing transitional poverty

This chapter examines the challenges facing China's current poverty reduction policy and poverty system in relation to urban-rural integration, especially as a result of the migration of rural laborers and the acceleration of urbanization, and proposes possible adjustments to China's antipoverty policy against the background of urban-rural integration in the coming 10 years.

For the above purpose, a research framework is needed to investigate and analyze transitional poverty. In this research, urban-rural integration is taken as the core exogenous variable and the research starts from the current antipoverty system and policy which are designed separately for rural and urban areas and residents in these areas and thus must be improved to counter the challenges brought with urban-rural integration. The research framework is shown in Fig. 7.

Fig. 7: Research framework



With the knowledge of the context and causes of transitional poverty, the analysis made on the basis of this research framework follows the three principles below:

- The issue of poverty no longer or mainly refers to absolute poverty⁴⁸ as measured by the income index; instead, it becomes a multidimensional one that also exists in development capacities and opportunities;
- Therefore, the objects of analysis will include all vulnerable groups that face various risks of development because of urban-rural separation or lack of primary public service policies in the present economic transition and urban-rural integration, instead of only the low-income group;
- Accordingly, the anti-poverty system under analysis will include not only the government's specialized anti-poverty policy, but more importantly, various public service policies that may impact the potential risks of development for vulnerable groups during the economic transition and urban-rural integration.

2. Transitional poverty: issues and challenges

2.1 Vulnerable groups in China's transition period of urban-rural integration

The vulnerable groups emerging during urban-rural integration and exposed to impoverishment risks include migrant workers who work in cities but have no adequate insurance of unemployment, work injury, diseases and pension. Landless farmers who have no equal accesses to land appreciation benefits and not covered by social security system, left-behind children and the elderly who need care from their parents or children, and women who are informally employed and whose rights and interests are not well protected.

2.1.1 Floating rural population (migrant workers)

(1) Size

According to the statistics issued by the Department of Rural Social and Economic Survey under the National Bureau of Statistics of China (NBS) (2010), the number of rural migrant workers reached 230 million in 2009, among which out-going rural workers

The vulnerable groups in the transitional period include...

Migrant workers: size, distribution and risks of transition poverty

⁴⁸ The Chinese Government has begun since 2007 to establish step by step a nationwide minimum living allowance system in rural areas, to cover all the absolutely poor population.

were about 150 million⁴⁹. It is estimated that the population of migrant workers in 2030 will reach about 400 million (China Development Research Foundation, 2010)

(2) Distribution

In China, the places from which workers migrate are mainly in rural areas in the central and western areas, and the receiving places are in Eastern China, in large and middle-sized cities. According to statistics issued by NBS Department of Rural Social and Economic Survey (2010), the number of migrant workers from Central and Western China ranged from 53.045 million and 45.924 million respectively in 2009, accounting for 68.1% of all rural migrant workers. As for destinations, 90.76 million rural workers went to East China in 2009, accounting for 62.5% of the all migrant workers; and 63.3% worked in large and middle-sized cities above the prefectural level.

(3) Risks of transitional poverty

Migrant workers are vulnerable to the following risks:

- *Unstable employment and heavy workload.* As is shown in a 2009 survey, only 42.8% migrant workers signed labor contracts with their employers or employing units; 89.9% of them worked over 44 hours per week prescribed by the Labor Law; and those in the catering industry worked more than 60 hours per week (NBS Department of Rural Social and Economic Survey, 2010). In the ongoing process of rural-urban integration, there is no longer simply a unidirectional flow from rural to urban areas, since there is the possibility for migrants to move back from urban to rural areas as a result of changing economic situations. This process will further complicate and exacerbate the employment instability of migrant workers.

- *Inadequate guarantees of medical care and personal safety.* In 2009, the rates of pension and work injury, medical, unemployment and maternity insurance paid by employers or employing units for rural migrant workers were 7.6%, 21.8%, 12.2%, 3.9% and 2.3% respectively; and the proportion of insured rural migrant workers in the central and western parts was significantly lower than that in the eastern part (NBS Department of Rural Social and Economic Survey, 2010).

- *Social exclusion.* Practically speaking, discrimination against migrant workers is reflected not only in legal and institutional inequalities, but also in conceptual, psychological and cultural prejudices and exclusion (Xu Yong, 2006). Deep-rooted social discrimination and exclusion may exist longer and be more difficult to eliminate than those at the institutional level.

- *Danger of intergenerational poverty.* Due to the unequal right to education for migrant rural workers' children compared with that for children living in cities, the gap may grow even wider between the two groups, and thus will cause intergenerational poverty in migrant workers.

Specific risks confronting the female migrant rural workers

- *Specific risks faced by female migrant workers.* According to the comprehensive survey launched by the National Coordination Group for Safeguarding the Rights and Interests of Women and Children (2007), in 2006, only 36.4% employing units allowed full lawful maternity leave for their female migrant workers, only 12.8% reimbursed the maternal medical expenses, and as many as 64.5% gave no salaries to female

⁴⁹ According to National Bureau of Statistics of China, going-out migrant workers are referred to as the migrant workers who leave home for work for more than 6 months; the number of migrant workers for a year is consisted of that of going-out migrant workers plus that of local migrant workers who are employed by the local nonagricultural industries for more than 6 months.

employees for their maternity leave; and 58.2% of female migrant rural workers had to go back to their villages, rather than the city where they worked, for regular checks during pregnancy, which created difficulties for them and increased their economic burden and employment problems; 46.3% of the surveyed female migrant workers said that they often felt exhausted both physically and psychologically, 18 percentage points and 11.5 percentage points higher than those for male rural workers and rural women respectively.

2.1.2 Landless farmers

(1) Size

There is no authoritative data available for the number of landless farmers at present. Most researchers estimate that the number of landless and partially landless farmers reached 40-50 million by 2005 (Han Jun, 2005). This number is expected to increase in the future. It is estimated that population of landless farmers will reach 100 million in 2020 (China Democracy Progress Party Center, 2009).

(2) Distribution

Landless farmers in China are mainly found on the outskirts around large and middle-sized cities and in economically developed areas. It is estimated that landless farmers in Zhejiang, Jiangsu, Fujian, Guangdong and Shandong provinces comprise 41% of all landless farmers. In recent 20 years, about 1.44 million mu of land has been requisitioned in Shanghai, leaving more than one million farmers landless in total. The number of landless farmers in Beijing reached 330,000 from 1993 to 2005 (Han Jun, 2005).

(3) Risks of transitional poverty

- **Risks from unemployment and declining incomes.** Some landless farmers are in inferior positions in relation to job seeking, and quite a number of them are even unemployed or semi-employed, due to their lacking nonagricultural skills. Some surveys show that the transition to new professions is the biggest problem confronting landless farmers, and the unemployment rates for the elderly who can least adapt to new economic situations and those who have no professional skills have increased (Research Team under Development Research Center of the State Council, 2009).
- **Inadequate social security system.** Only a small number of landless farmers can enjoy social security similar to that of urban residents. Landless farmers are neither farmers nor urban residents, and have become a marginalized group, living awkwardly in a social security vacuum
- **Lost social capital.** The social protection system consisting of relatives, neighbors and family or community members is destroyed when land is requisitioned. Farmers have lost both their land and social capital. A survey shows that 48% of interviewed landless farmers did not view themselves as urban residents. (Yu Xiaohui, Zhang Haibo, 2006).

2.1.3 The Left-behind population

The Left-behind population mainly consists of the elderly, children and women. Though migration has long been an important means to increase rural labor income, it unavoidably has some negative impacts on the places of origin (World Bank, 2009), including: adverse influence on the educational attainment of rural youth, vulnerability of migrant rural workers caused by their industrial injury or disabilities, issues of left-behind elderly, and a weakened cohesion and collective participation in rural areas. It is likely that the number of left-behind will increase further because of the increasing number of migrant workers.

Landless farmers: size, distribution and risks of transitional poverty

Left-behind population: size, distribution and risks of transitional poverty

(1) Size

There is no precise or authoritative number of the above-mentioned three groups of left-behind population. However, it has generally been agreed that there are about 58 million children, nearly 20 million elderly above 65, and 47 million women left behind in rural areas in China⁵⁰. The total figure is 125 million, equal to that of the rural floating population.

(2) Distribution

The issue of the left-behind population has emerged along with the tide of farmers going out for jobs. The left-behind population is concentrated in Central and Western rural areas of China which are source areas for most migrant rural workers.

(3) Risks of transitional poverty

These three groups are facing similar yet differentiated risks from transitional poverty.

- *Psychological problems.* Many left-behind children endure more severe mental conflict and psychological pressure than other rural children, due to reduced care from parents who go out for employment (Department of Children's Work under All-China Women's Federation, 2008); some left-behind women cannot find outlets to release their emotion, due to the absence of their husbands, which leads to a sharply increasing divorce rate (<http://cpc.people.com.cn>, 2009); nearly half of the elderly left-behind live under psychological pressure, while about one third often feel lonely and are affected by stress and depression, due to the absence of their children and shortage of public cultural facilities and activities in rural communities (Ye Jingzhong et al., 2008).

- *Health risks.* Many of the elderly left behind are in poor health, living with insufficient care and heavy workloads, and most of them cannot receive proper care from their children once they become ill; females play a markedly increased role in agricultural production (Zhen Yan, 2008), resulting in high labor intensity for left-behind women and thus severely harming their health; while on the other hand, when falling ill, they often sit helpless, facing huge medical expenses (<http://cpc.people.com.cn>, 2009).

- *Inadequate old-age insurance system.* It has been estimated from surveys that 81% of the left-behind elderly are involved in agricultural production and only 8% have received provision or subsidies provided by the government, and as few as 1% of left-behind elderly enjoy social endowment insurance (Ye Jingzhong et al., 2008). This situation cannot be improved until the new pension scheme is launched in all rural areas.

Feature of vulnerable groups in the transition period...

Huge scale

2.1.4 Summary

From the above, we can discern particular features of vulnerable groups in the transition period in China:

- *Huge scale.* The number of the vulnerable groups is estimated roughly at around 330 million, including about 150 million floating population (migrant rural workers), 40-50 million landless farmers and 130 million left-behind population. The figure is expected to further increase in the coming years. Of course, not all the people in these groups are likely to fall into transitional poverty; however, they may be affected by various risks. According to estimates of poverty incidence within the floating population by the World Bank on the basis of the new poverty line (8%, World Bank, 2009), and assuming that

⁵⁰ These figures are quoted from Department of Children's Work under China Women's Federation (2008), Ye Jingzhong et al. (2008) and <http://cpc.people.com.cn> (2008), respectively.

the poverty incidence of landless farmers and left-behind population are the same, the poor population in these vulnerable groups will reach 26.4 million, viewed solely from the perspective of income poverty.

- *Distribution is a significant geographical feature.* At present, the floating population and landless farmers are located mainly in the southeast coastal regions, while the left-behind population is concentrated in the rural areas in Central and Western China.
- *Impoverishment resulting from above policies.* Policy factors that lead to transitional poverty include an incomplete social security system, inadequate medical care, discrimination in employment and lack of inclusive benefits from urbanization.
- *Vulnerable groups are confronted with multidimensional non-income poverty.* As distinct from traditional poverty caused by low income, vulnerable groups do not necessarily have low incomes. Nevertheless, they are likely to fall into spiritual impoverishment, discrimination in rights, social exclusion and other areas of multidimensional non-income, due to the lagging-behind of policy and service systems.
- *Poverty for women is significantly severe.* Both migrant women workers and left-behind women are facing more severe problems such as deprivation of rights, mental health, hardships in daily life and sanitation and health. These issues are significant for both women's well-being and intergenerational poverty, hence special attention must be paid to them.

2.2 Defects in the current policy system increase the risks of transitional poverty for vulnerable groups

This chapter investigates not only the specialized poverty relief policies adopted by the Chinese Government, but also a wider range of policies that have impacts on the opportunities and capacities for development of vulnerable groups during the urban-rural integration process. These macro as well as micro policies include: developing a mode of urban-rural integration that does not allow a sharing of the benefits of development, urban-rural dual-structured public service systems, financial support policies lacking a comprehensive understanding of poverty, and specialized separate poverty relief policies for urban and rural areas.

2.2.1 Non-inclusive urban and rural integration lowers the capability of vulnerable groups to cope with the risks of poverty

(1) Non-inclusive urban and rural integration pattern

Urban-rural integration in turn results from, and increases economic development. However, the current development mode of urban-rural integration in China can hardly allow the floating population and landless farmers to share these development benefits, and thus weakens their capacities to counter the risks of transitional poverty. This feature can be seen in the following aspects:

- *Discriminatory employment and benefit schemes accompanying the household registration system*

Though discrimination against migrant rural workers in urban markets has been eased to some extent in recent years, there are still quite a number of defects in laws and regulations supposed to protect migrant workers from such discrimination (Lin Yanling, 2007). Besides, under the protection of interests for local residents by local governments, migrant workers are faced with institutional systems for employment benefits, social security and education for children, which are quite different from those of local residents.

Geographic features of distribution

Impoverishment resulted from policies

Multidimensional non-income poverty

More severe poverty for women

The policies affecting the vulnerable groups...

The developing pattern of urban-rural integration that cannot allow the sharing of the benefits of development.

This will be outlined in the section below, on the “urban-rural dual-structured public service system”.

China's reform of the household registration system has lifted some restrictions for migrant workers to register in urban areas, but only in middle- and small-sized cities and towns. However, this reform has failed to reduce the costs to rural workers of working in cities, as most migrant rural workers tend to work in large and mega cities. Furthermore, there are still preconditions for migrant workers to register in middle- and small-sized cities and towns; for example, migrant workers can register in cities only if they buy houses in these places. This has cast a shadow of “elite urbanization” over urban-rural integration.

- **Unfair distribution of land appreciation benefits during the urbanization process**

As prescribed in existing laws, land property right in China is classified either as urban state-owned land or as rural collectively-owned land. The latter must be requisitioned to become state-owned before it enters into the land market and is used for nonagricultural purposes. Therefore, collectively-owned land and state-owned land have different legal rights. At the same time, the rights of farmers who contract land are not adequately protected during changes in land ownership.

During urban-rural integration, the expansion of cities and towns and the development of nonagricultural industries require substantial rural collectively-owned land. Had rural collectively-owned land directly entered into the land market, farmers with right of land use would have enjoyed the land appreciation benefits brought by urbanization; even if full compensation is given to farmers whose land is requisitioned, landless farmers would still have been able to share the achievements of urbanization and be less exposed to the risks of transitional poverty.

However, the current distribution of land appreciation benefits during urbanization in China is somewhat unfair.

First of all, rural collectively-owned land currently is not allowed to directly enter into the market for trading in China. Thus, farmers have no way to gain and share the high profits obtainable from the nonagricultural uses of land.

Secondly, the distribution of benefits during the requisition to farmers is obviously irrational. According to data released jointly by the Rural Development Institute of the Chinese Academy of Social Sciences and the Rural Economic Survey Team of the National Bureau of Statistics of China (2005), 20%-30% of benefits arising from requisitioned land are distributed to local governments, 40%-50% to enterprises, 25%-30% to village-level organizations, and only 5%-10% to farmers.

(2) Consequences of the non-inclusive urbanization

The discriminatory employment and benefits system accompanying the household registration system undoubtedly weakens the ability of the floating population to share in the achievements of urban-rural integration, and are very disadvantageous for easing the vulnerability of this group. As surveys have shown, although land transfer profit accounts for a quite large part of local fiscal revenue, land compensation received by landless farmers is proportionately low, when set against the substantial long-term land appreciation benefits. Additionally, the compensation received by farmers has no direct relation with the huge benefits accruing after land requisition (Research Team under

Non-inclusive Urban-rural integration enlarges the rural-urban income gap and disadvantageous to achieve the expected policy outcomes of poverty reduction

Development Research Center of the State Council, 2009)⁵¹.

The above defects in the urban-rural integration mean that the floating rural population and landless farmers cannot share the achievements of urban-rural economic integration and economic growth on an equal footing with others, and are consequently quite disadvantageous for achieving the expected antipoverty outcomes of China's macroeconomic policies.

2.2.2 The dual-structured urban-rural public service system limits the adequacy of the subsistence safety net in assisting vulnerable groups to respond to the risks of transitional poverty

It was officially written into policy in 2003 to cover rural areas by public finance, with the result that a "public financial" and public service system financially covering both urban and rural areas was gradually coming into being.

It is undoubtedly a considerable achievement to establish a rural public service system from scratch. Nonetheless, the urban-rural public service system in China is still incontrovertibly a "dual" structure, which is mainly reflected in isolated policy systems for basic public services with different operational mechanisms in urban and rural areas. Such a division indicates that urban-rural integration has not been realized within the public service system thus far in China.

Actually, China's public service system is "fragmented"⁵² not only in social security, but also in other fields such as compulsory education and basic medical care. Amongst all the "fragments", the separated urban and rural systems are the primary ones.

(1) Examples of the urban-rural dual-structured public service system:

• Compulsory education policy

Following the policy that waived tuition fees for compulsory education in rural areas in the previous year, all tuition fees for urban compulsory education were also waived after September 2008. The goal of full exemption of tuition fees for compulsory education in both urban and rural areas has been achieved.

This policy, however, is challenged by the actual situation facing the floating population. The Central Government rules that "children who move with their migrant worker parents and are eligible for admission to local schools, shall be exempted from tuition fees and free of fees for temporary attendance if they attend public schools" (the State Council, 2008). In February 2010, the Ministry of Education made a further announcement to fully protect the equal access of migrant workers' children to compulsory education by focusing on building full-time public schools in destination areas and to entirely waive fees for temporary attendance schooling⁵³.

Unfortunately, with tuition fees waived for compulsory education in urban and rural areas, educational equity for migrant workers' children remains a significant issue to be solved.

Dual-structured urban-rural public service system

Dual-structured urban-rural compulsory education system impair educational equity for migrant workers' children

⁵¹ The case studies by Research Team of Development Research Center of the State Council (2009) showed that among the land-transferring fees in an eastern coastal district (county) during 2001 and 2005, the compensation for farmers only took up 14.05%; and calculated against the land auction revenue, the amount used for the compensation for farmers only accounted for 3.2% against the land auction revenue of each hectare.

⁵² This concept is borrowed from the scholars making analysis of the status of China's social security system. (Zheng Bingwen, 2009) The usage of "fragmentation" describes the co-existence of various endowment insurance systems for different groups such as public institutions, enterprises in urban areas, flexible employment in urban areas, migrant workers, farmers engaging in agriculture, and landless farmers, and fragmented in urban and rural areas as well as separated in private and public divisions.

⁵³ <http://www.scio.gov.cn/zggk/gqbg/2010/201002/t546929.htm>.

Four unlinked medical insurance policies and severely fragmented policies between urban and rural areas

Though the free compulsory education policy is implemented gradually for migrant workers' children, disparities in educational quality between migrant worker's children and urban resident's children remains.

One significant reason for this situation is that since 1985, China has adopted a compulsory education system of "local responsibilities and deregulated administration", which leads to the urban-rural divide. In such a situation, although the Central and provincial governments strengthened the financial transfer payment for rural compulsory education, the governments of receiving cities are confronted with heavy financial pressure because of lack of fiscal transfer policy support for the compulsory education of migrant workers' children, since the financial transfer payment is still based on the permanently registered population.

Therefore, further reform of the compulsory education management system is required to solve the problem. The education management system needs to be more adequately adapted to the actual situation of the large floating population. Compulsory education policy needs to be planned for urban and rural areas as a whole by building a compulsory education fiscal transfer system that is people-targeted without being locality-limited.

- **Basic medical care policy**

The Chinese Government introduced a basic medical insurance system for urban employees in 1998, and has extended this system across the country since 2005. The New Type of Rural Cooperative Medical Care System (NTRCMCS) was begun in pilot areas in 2003 and covered all counties by 2008. Pilot projects for basic medical insurance for urban residents were first launched in 2007, and are scheduled to be fully launched nationwide in 2010. Pilot projects for rural and urban medical assistance systems were begun in 2003 and 2005 respectively, and the two systems will be popularized in 2010.

Theoretically speaking, the four systems are supposed to cover urban employees, urban non-employees, the rural population and rural and urban residents in financial difficulties, and institutionally to enable the medical security system to be accessible for all urban and rural residents.

However, NTRCMCS is actually based upon the concept of the urban-rural divide (Lin Wanlong, 2009a). From the perspective of the policy system, the above four policies exhibit an obvious urban-rural divide, mainly in the following ways (Research Team under Party School of the Central Committee of CPC, 2010):

- *Urban-rural segmentation in terms of the objects to be covered.* The current medical security systems are designed separately for urban employees and urban and rural residents, under which the premium standards, proportion and rate of reimbursement, and programs for approval are different for rural and urban residents. Thus, urban and rural residents are deliberately divided, causing a new urban-rural dual structure.

- *Urban-rural segmentation in relation to management systems.* Complete and independent top-to-bottom management systems have been established for basic medical insurance systems for urban employees and residents and for NTRCMCS respectively, leading to fragmentation, incompatibility, and high administrative costs.

- *Issues of openness.* The current medical insurance systems designed within existing urban and rural household registration systems put a number of restrictions on urban and rural residents seeing a doctor. Such systems cannot meet the requirements of the huge floating population in urban and rural areas in China, nor can they adapt to rapid economic development and urbanization.

• Basic social security policy

As the urban-rural dual economic system is broken up and economic sectors become more diversified, many areas in China have set up basic social security systems covering groups such as urban residents flexibly employed, migrant rural workers, farmers engaging in agriculture, and landless farmers, but these systems are nevertheless dualistically divided between urban and rural areas and separated in private and public sectors with features of fragmentation (Zheng Bingwen, 2009). There has been no integrated plan to link up the various social security systems. Taking the pension system for rural migrant workers for example, the basic pension scheme for urban employees and the new rural social endowment insurance have so far not been connected. Insurance degrees for different social security system (quality disparity) are quite different. The fragmented urban-rural dual-structured endowment insurance systems definitely have a negative impact on the movement of rural laborers.

(2) Consequences of the urban-rural dual-structured public service system.

A dual system of urban-rural public service can only be effective when urban and rural residents are in two separated groups. However, since a large number of migrant rural workers move to cities and towns for employment, this prerequisite no longer exists. Consequently, a large floating population is excluded from the public service system, and has difficulty enjoying the same quality of public service as urban residents.

From the perspective of opportunities and capacities for development, basic public services such as education, medical care and social security provide each and every individual with a subsistence safety net for their personal development. The lack of basic public services weakens the ability of part of the floating population and landless farmers to respond to various personal or economic risks, and leaves them vulnerable to the potential risks of losing development opportunities and capacities, and consequently of impoverishment.

Take medical care for example. Separated urban-rural medical care services exclude a large floating population from the urban medical insurance system as well as NTRCMCS, reducing accessibility to services for the floating population. As for medical insurance for urban employees, quite a number of migrant workers cannot meet the precondition of “establishing stable labor relations with enterprises”, and thus are excluded from the system. According to statistics from the Ministry of Human Resources and Social Security⁵⁴, the number of migrant workers who were covered in the urban medical insurance system in 2009 was 43.35 million, accounting for only 29% of all 150 million migrant rural workers in China. Actually, though NTRCMCS has covered almost all rural areas, migrant workers are excluded from the system due to difficulties in payment and reimbursement (Lin Wanlong, 2009a).

The urban-rural divide in basic social security policy also increases subsistence risks for vulnerable groups, including the floating population and landless farmers. According to statistics from the Ministry of Human Resources and Social Security of China⁵⁵, the number of migrant rural workers who were insured against old-age, unemployment and industrial injury under urban insurance systems in 2009 was 26.47 million, 16.43 million and 55.87 million respectively, which is rather low considering the total number of migrant workers.

Basic social security systems show the tendency of fragmented development

Urban-rural dual-structured public service system lacks public service and security for the huge floating population and increases social risks

⁵⁴ Ministry of Human Resources and Social Security of the People's Republic of China, Statistic Bulletin for the Development of Human Resources and Social Security 2009, http://w1.mohrss.gov.cn/gb/zwxx/2010-05/21/content_382330.htm.

⁵⁵ Source: idem.

A fiscal expenditure policy with lacking understanding and consideration of poverty
A financial system favoring richer areas

2.2.3 The current fiscal expenditure policy with its inadequate consideration of poverty is unsuitable for narrowing the income and non-income gaps between rural vulnerable and other groups.

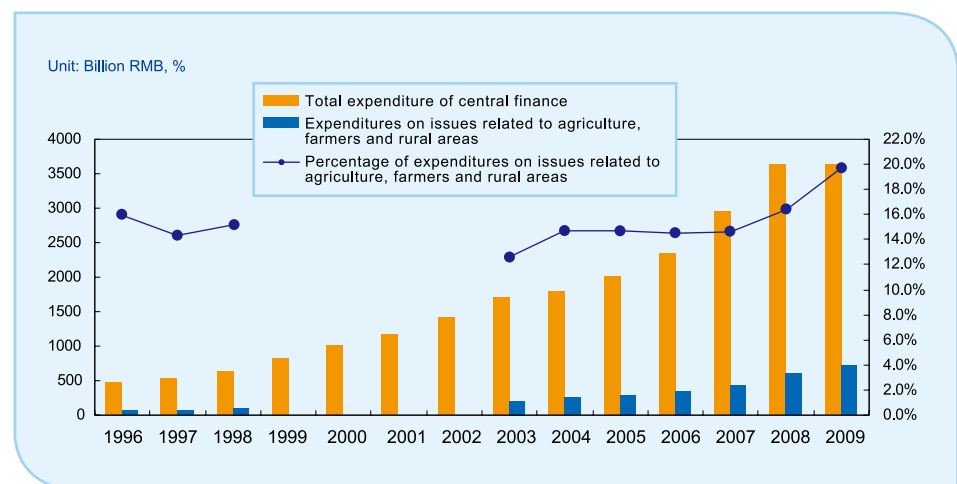
(1) Macro-economic perspective: public expenditure policy still favors cities, towns and developed areas

Due to the principle of “incremental reform” in the tax-sharing system, the richer an area is in China, the more tax return it receives from the Central Government, and the poorer an area, the less tax is returned. The central financial transfer payment, therefore, achieves little in relation to equalization. Surveys of the financial transfer payments from the Central Government to local governments in 2005 show that only 20% at the most was strictly in conformity with the equalization principle; whilst the other 80% or more either went against the inner logic of financial equalization, or had uncertain results. Furthermore, the tax rebate and specialized transfer payment accounting for 67% of the total transfer payment had nothing to do with the equalization principle at all (Wang Yongjun, 2006).

Inter-provincial inequality of income has been increased due to economic disparities plus the poorly-equalized central financial transfer payment. Compared with 1995, provincial fiscal expenditure policies were still in favor of richer provinces (World Bank, 2009).

As indicated by the urban-rural comparison, China's highly-decentralized financial system continues to favor urban areas (World Bank, 2009). Though Central finance has increased its expenditures on issues related to agriculture, farmers and rural areas, the proportion of such expenditures in total fiscal expenditure has actually not increased since 2003, and in most years has been even lower than expenditures in the middle and late 1990s (Fig. 8).

Fig. 8: Support from the central finance for issues related to agriculture, farmers and rural areas: 1996-2009



Source: Calculated and drawn according to the statistics from the Ministry of Finance of China. The data of expenditure on issues concerning agriculture, farmers and rural areas from 1999-2002 are not available.

The difference in fiscal resources for urban and rural areas was manifested finally in levels of public expenditure, which showed significant gaps between urban and rural areas in the fields of education, public medical care and social security (China Development Research Foundation, 2005).

(2) From the sectoral perspective: policies for preferential farmer subsidies⁵⁶ lack “poverty sensitivity”

Since 2003, the Chinese Government has implemented a series of policies for preferential farmer subsidies, which have played an active role in eliminating and mitigating absolute poverty, increasing farmers' income and narrowing the urban-rural gap. It is estimated (Lin Wanlong, 2009) that in 2009, subsidies from central finance alone reached up to RMB254/person, and that the contribution rate of direct subsidies to farmers' real income⁵⁷ increased substantially from 0.50% in 2003 to 4.82% in 2009. Without direct subsidies, the urban-rural income ratio would have increased from 3.24 in 2003 to 3.42 in 2009; taking direct subsidies into account, the ratio was 3.23 and 3.26 in 2003 and 2009 respectively, basically remaining unchanged. In other words, direct subsidies can make a substantial contribution to farmers' real income, and significantly prevent the urban-rural income gap from widening.

However, we should also note that in terms of mechanisms, different preferential farmer subsidies also have different influences on poverty reduction. We can classify subsidies into three categories: the universal type, expenditure-linked type and poverty-relieving type. Judged by mechanism and orientation, the universal type is neutral in mitigating relative poverty, while expenditure-linked subsidies can increase the income gap within rural areas and play a negative role in mitigating relative poverty, since farmers have to pay some expenses (or have counterpart fund) before they can receive subsidies of this type, and this will make the situation of poor households (low-income and absolutely poor households) worse. Only poverty-relieving subsidies can help mitigate both absolute and relative poverty.

An obvious tendency at present in China is that because subsidy policies have been widely implemented since 2003, the ratio of expenditure-linked subsidies has increased rapidly, whilst that of the universal type has declined significantly. By 2009, expenditure-linked subsidies had nearly taken up nearly 40% of total subsidies (Table 4).

The substantial increase in the ratio of expenditure-linked subsidies will push more and more subsidies into the relatively richer households and may lead to a widened income gap within rural areas.

Table 4. Change of ratios of three types preferential farmer subsidies from the central fiscal budget: 2003-2009

	Universal subsidies	Expenditure-linked subsidies	Poverty-relieving subsidies
2003	83.0%	13.8%	3.2%
2004	68.2%	24.9%	6.9%
2005	45.5%	19.8%	34.7%
2006	49.9%	22.0%	28.1%
2007	66.1%	25.5%	8.5%
2008	61.6%	30.6%	7.8%
2009	52.1%	39.3%	8.6%

Source: Lin Wanlong (2010).

⁵⁶ The “policies for preferential agricultural subsidies” refer to subsidies in cash for farmers or policies that directly reduce or waive cash expenditure of farmers.

⁵⁷ In accordance with China's statistical indicators, rural per-capita net income refers to productive net income that equals to residual of the overall income (including part of governmental subsidies) minus production expenditure. Therefore, the reduction and exemption of or reimbursement for farmers' consumer spending (mainly the expenditure on public services and living facilities) as a form of subsidies do not constitute the rural per-capita net income statistically, but such subsidies increase farmers' real income.

Public resources are concentrated in urban areas under the urbanization pressure, and the left-behind rural vulnerable groups are not well considered

The specialized antipoverty policy system is also fragmented in urban and rural areas

Dual poverty relief systems in urban and rural areas cannot cover the poor floating population

Indeed, most of China's current policies for rural subsidies do not specifically target poverty reduction, although this report will not deny that these policies are still beneficial for poverty reduction. However, if the ever-increasing direct subsidies cannot help narrow or may even widen the rural income gap, the previously-described situations at least give some hints to policy-makers that when designing a new policy system for preferential farmer subsidies, they should work out some specialized poverty relief policies that can improve the current policies of a relatively low poverty sensitivity, in order to make up for the "shortfalls" in the present preferential farmer policies and be more effective in poverty relief.

(3) From a micro-economic perspective: rural vulnerable groups are not sufficiently considered in the public service pattern due to the pressure of urbanization

As urbanization advances, more and more rural residents move to urban areas to work and live. Such a situation is more obvious in county-level cities where living costs are lower and migrant rural workers can survive more easily. As a result, on the one hand, urban public service facilities are severely overloaded; whilst on the other hand, rural public service facilities cannot be fully utilized as a large rural population leaves for cities. Under such circumstances, county-level governments are inclined to concentrate limited public service resources in urban areas, to lessen the demand pressure and increase the utilization ratio of these facilities.

Though it is a normal response to the pressure of urbanization, we should note at the same time that the income of left-behind rural families is often lower than that of migrant families; therefore, these families are a relatively vulnerable and poor group. The tendency of public service resources towards urban areas leads to the decline in public service quality for rural vulnerable and poor groups, and to higher costs of public services for these groups. Thus, it is unfavorable for narrowing the income and benefit gap between these groups and relatively rich groups, and consequently disadvantageous for poverty reduction (Lin Wanlong, 2009b).

2.2.4 Specialized anti-poverty policies based on urban-rural segmentation cannot include the population trapped in transitional poverty in specialized poverty monitoring and supporting systems

The urban-rural divide in China's specialized antipoverty policy system can be considered in relation to three areas: poverty relief system, definition of poverty, and poverty monitoring system.

(1) Dual-structured poverty relief systems

To implement antipoverty strategies efficiently in rural areas, the Chinese Government has set up a development-oriented poverty relief system and a rural minimum living allowance system guided by government, and established leading teams and auxiliary offices for development-oriented poverty reduction (poverty reduction offices for short) at four government levels, to coordinate specialized poverty relief projects launched by the government. For the poor rural population without adequate labor capacity, the Chinese Government has set up a rural social security network and taken some other measures, to ensure farmers benefit from economic growth. Policies for rural social security networks mainly consist of social assistance policies, medical assistance policies and educational assistance policies. These policies are carried out via co-operation between the main government departments at various levels.

To relieve and eliminate urban poverty, China has established a multilayered anti-poverty system for poor urban groups, including employment assistance, social insurance, social

assistance and relief, as well as other measures, the core of which is the minimum living allowance system for urban residents, implemented by social security departments at all levels.

It is notable that poverty reduction offices and social security departments in charge of rural poverty alleviation are set up based upon administrative divisions, and can only launch poverty relief projects targeting local rural poor groups within their own jurisdiction, but are unable to help the poor floating population. The urban minimum living allowance system, on the other hand, only provides a minimum living allowance for the urban poor population, but not for the floating population in urban areas. It thus can be seen that both urban and rural poverty relief systems have strong “local limits”, so that the large floating population is excluded from present poverty alleviation systems.

(2) Dual standards of poverty

The poverty line for China's rural areas was first calculated by the National Bureau of Statistics of China, based on data from rural household surveys and from basic rural demands in 1984, and was based on a definition of absolute poverty. Since 2008, new criteria for rural poverty relief have been put into place and poverty alleviation policy has been implemented fully for the rural poor and low-income population who live below the subsistence level. The new poverty line was raised to RMB1,196/person.

However, until the present there has been no scientifically unified standard for urban poverty in China. Various departments and institutions have rather different definitions or understanding of the urban poor population. The minimum living allowance in different cities differs greatly from one to another due to lack of unified criteria for calculation.

It is obvious that the poverty line for rural areas is set at a very low level and that the line for urban areas lacks authoritative definition and criteria, and double standards of poverty adopted for urban and rural areas cannot clearly describe or measure the poverty of the floating population. A significant change in the composition of the urban poor population in China in recent years is that migrant labors have gradually become the main group in urban poverty, and many of them finally fall into a special group of urban poor people, who have no land (after their leaving rural areas), fixed workplaces (as they are only casual laborers) nor social security (which is exclusively enjoyed by urban residents), and who cannot enjoy the urban minimum living allowance. (Lin Ka, Fan Xiaoguang, 2006).

(3) Dual poverty monitoring systems

The National Bureau of Statistics of China has published an annual Poverty Monitoring Report of Rural China since 2000, describing the size and changes in rural poverty, achievements in rural poverty reduction of the various poverty alleviation policies and preferential policies for agriculture, as well as poverty relief practices by various departments, institutions and the whole society. Nevertheless, the separate monitoring systems for urban and rural areas cannot detect the poverty suffered by the floating population. As stated in the previous section, the poor floating population has nowadays become the main body of the urban poor, and the poverty incidence for the floating population is much higher than that for the urban population (Li Shi, 2003; Research Team of China Urban Poverty, 2003). As the poor people among the huge floating population are not included in monitoring, poverty monitoring quality, and thus the design of antipoverty policies, will be substantially affected.

Some studies indicate that the poor are incapable of migration, that most migrants are not poor people at all, and that migration can reduce poverty (World Bank, 2009).

Poverty standards are differed for urban and rural areas and cannot be used to measure the poverty of floating population

Urban and rural poverty monitoring systems cannot detect the poverty of the floating population

Social and economic opportunities and social protection can help protect the vulnerable groups from poverty risk

However, in the poverty relief work in the new era, this can only be taken as the basis for “paying continuous attention to rural left-behind population”, rather than for “no need to give attention to the mobile population”.

In fact, poor people still comprise a substantial proportion of migrants, even according to the general income poverty line. In the same report containing the studies described above, the World Bank quoted the statistics from the rural household survey launched by the National Bureau of Statistics that the poverty incidence for migrant families was 8%, whilst that for left-behind households was 11% (World Bank, 2009). Other studies have shown that the poverty incidence for the mobile population from rural areas to cities was 14% in 2002 (Khan and Riskin, 2005), indicating that this is more than 20 million poor of the 150 million rural mobile population. Which ever figure is more accurate, case, close attention must be paid to the income poverty of the mobile population.

3. International experiences and Lessons Learnt

Suggestions and experiences from others can help remedy our own defects. We can learn from the practices and experiences of other countries when designing appropriate antipoverty policies for vulnerable groups during China's urban-rural integration process. Nevertheless, we must bear in mind that there may not be an equivalent notion of “mobile laborers” in many other countries. Instead, we can only draw on other countries experience in dealing with the issue of poverty for “informal employment groups”, which is a term similar to that of “mobile labor”. In summary, international experiences we can refer to include:

3.1 The concepts of social opportunity and social protection must be introduced into poverty prevention policy for vulnerable groups

During industrialization, the income gap between farmers under similar working conditions is as wide as that in nonagricultural industries. The rural scenery will be dramatically changed and totally vanish without any special protection (Hayek, 1960). Based on this theory, two tendencies have emerged in research:

One is that social and economic opportunities play an important role in economic development, which, in turn, provides different social groups with various social and economic opportunities. The change in social opportunities will not only result in differences in living quality, but also have influences on people's access to the benefits of social development. Factors such as education, medical care, social class and the possibility of social cooperation may affect a person's basic ability in capturing social opportunities (Sen, et al., 1995).

The other is the concept of “social protection” proposed around the same time by some international organizations such as the World Bank, the United Nations (UN), the UK Department for International Development (DFID), and Jorgenson and other scholars. Social protection refers to the public support and investment and other public actions taken by government, targeting specific individuals, families and communities, in order to better manage social risks and reduce vulnerability and deprivation.

Social protection not only consists of the social security measures taken by government, but also of the informal social security measures coming from families and communities, as well as commercial insurance by the market. It puts more emphasis on enhancing the ability for self-protection of people trapped in transitional poverty via enhancement measures.

All the developed countries have set up nationwide social safety nets, to effectively reduce the risk of impoverishment

The significance of social opportunity and social protection in relieving and eliminating transitional poverty lies in: Firstly, establishing a complementary social security system between families, communities and the nation, preventing the social protection provided by the nation from crowding out informal social security measures, and avoiding the situation of family protection being weakened by the nation as has happened in some Western countries. Secondly, how to deal with rural vulnerable groups such as landless farmers and migrant workers, emerging in transitional economy.

3.2 A nationwide social safety net will help reduce the impoverishment of populations at risk

Facing with the mobility of its population, a country must build a nationwide social safety net for the population at risk, in order to effectively provide guarantees and security for the poor.

Germany: In the initial phase of German social insurance in the 1880s, the German Government mandated that the population at risk be included in unified insurance service institutions and insurance against old-age, industrial injury, incapacity to work, inability of independent living and unemployment.

UK: Rather different from the German case, when launching its unified security program, the British Government enabled the population at risk to establish their own security institutions. In 1936, around 1.8 million people from the industrial and commercial communities enjoyed pensions; and the figure was close to 8.5 million in 1957, 5.5 million of whom worked in the private sector (Seldon, 1957).

USA and France: The US Government introduced a unified social security system in 1935 (Hayek, 1960). In the 1930s, France introduced a social security program as a measure for fair distribution of national revenue (Bloch, 1931; Laroque, 1948).

Japan: The Japanese Government began to treat social security as a policy system after WWII (Lv Xuejing, 2000). The initial form of the Japanese social security was the “guideline for assistance to the poor in emergency” carried out in 1945. Life protection law (also called the old law) to guarantee the minimum living standard of the unemployed and poor population was introduced in 1946. During 1948 and 1953, laws for living security, unemployment, industrial injury and occupational safety were introduced one after another. As the national economy recovered, the government pushed forward and finally achieved compulsory systems for “national pensions” and “national insurance” during 1957 and 1961 (Center for Japanese Studies of Fudan University, 1996).

South Korea: After 20 years of rapid economic growth, by the 1980s, there had been introduced the right to the pursuit of happiness, the right to claim for appropriate salaries, social welfare rights and environmental rights, all as citizen rights and obligations, as well as economic clauses to protect vulnerable social groups; national medical, citizen annuity and minimum salary systems have also been established (Zhang Yunling, 1997). There are three levels of minimum living standard in South Korea: the minimum survival level, the minimum living level, and the standard living level, with the first as the standard for social security (Zheng Bingwen, 2001).

A nation's strength of security is based upon government taxes and borrowing power (Meriam, etc., 1950). Fiscal strength is a strong pillar to social security. The social security systems built in the developed countries have effectively reduced poverty, and provided security for mobility of human resources.

Based on international experience, a fragmented social safety net may have bigger potential risks, and an integrated one is needed

3.3 The Fragmented social safety net needs to be integrated⁵⁸

Social security systems in the USA and developed European countries basically have realized full social coverage, but in different ways and with different influences on social stability. In continental European countries, full coverage has been realized mainly in a fragmented manner, i.e. groups set up their own systems, among which there is a relatively large disparity in entitlement, with some groups enjoying particular privileges. In the USA, under the “unified” social security system, there is no difference between professions and sectors. All people are insured within the same system.

UK: After WWII, the British Government integrated the fragmented social security model and set up a “three-unity” social security system, i.e. unified eligibility, unified entitlement and unified management institutions. This system has eliminated social discrimination resulting from the previous fragmented model and set a new example for Europe and the whole world, and has been followed by many other countries. Northern European countries also succeeded in integrating their fragmented systems and established unified systems, whilst some Western European countries have reserved traditional fragmented systems.

France: France tried to integrate its fragmented social security system late in the WWII as did the UK, but failed for various reasons. During the 60 years after the war, defects in the fragmented system have been getting more and more obvious, i.e. disparity in treatment, and an extremely heavy fiscal burden. In recent decades, the reform of the pension system has been the primary objective on many government’s agendas in France. However, each reform or intention of reform has aroused demonstrations across the country. Some “sub-systems” such as the railway sector that have privileges in endowment insurance have launched a nationwide social movement about every two years, meeting the government’s reforms head-on. Small-scale strikes, marches, demonstrations and street politics take place frequently.

USA: The USA has established a unified social security system, rather than a fragmented one based upon sectors and enterprises, from the very beginning when the Social Security Act was approved in 1935. Though the economic development level of the US was similar to that of Europe at that time, and even with an obvious dual structure, the US found a new path. Despite coverage initially being relatively limited and most government officials not being covered, the American social security system neither followed the British way of “integration after fragmentation”, nor was it trapped in a situation of “patching fragments” as France was; instead, it took a unique path of “gradual unity”, enlarging coverage step by step, and finally completing the process in the 1980s, fully covering all government officials and employees in private enterprises.

Taiwan province, PRC: Social security was initiated in Taiwan province in the 1950s, and divided into four independent sub-systems for government officials, militaries, workers and farmers, each of which had its own pooling and entitlement. The unified security system was set up in the 1980s as the regional economy was growing, and significant progress was made in the 1990s, with unified comprehensive security systems such as the “national health insurance” and “national annuity” being set up one after another (Zheng Bingwen et al., 2001).

Chile: Chile established its social security accounting on a cash basis in 1924, divided into three sub-systems for blue collar workers, wage earners and public servants. Within

⁵⁸ The first paragraph and the following analysis concerning the social security systems in UK, France and USA in this section are mainly quoted from Zheng Bingwen (2009). Quoted texts are abbreviated, simplified and omitted at some places.

these three sub-systems, there were around 50 smaller “fragments” based upon specific categories. The benefit levels of the secured groups under various “fragments” differed greatly. Since reform in 1980, a unified national security system has been set up, putting emphasis on self accumulation, self security and the for-profit purpose. The success of this system has gone beyond expectation and attracted considerable attention from around the world and from international organizations (Gong Weibin, 2008).

3.4 Job opportunities and employment loans are important measures for employment security and for preventing mobile population from falling into poverty

India: As urban areas expand at a high speed, a huge number of rural people have rushed to cities for more economic opportunities. Slums have taken up to one fourth of the total urban housing. More than a half of the residents in Mumbai are living in slums. To enhance the protection for informal employment groups, an employment security scheme for farmers launched in Maharashtra enhanced farmers’ risk tolerance; also, government interventions in Kerala provided employees in rural industries with basic social security (Chen Qianheng, 2006). Foreign exchange earnings by the migrant population are a significant achievement of Indian poverty alleviation policy. India’s high-level policy-makers pay attention to expanding overseas remittances in the world and in so doing find new ways for the poor to get out of poverty (Ratha and Xu, 2008). Governments established mobile population welfare foundations to prevent risk, and look for destinations for the migrant population, build cooperative relations with these destinations and clarify responsibilities, in order to strengthen the safety and security of exported workers, and reduce their vulnerability. Furthermore, governments also take measures such as registration for migrants, information disclosure, and labor recruitment regulations, to protect the rights and interests of those going to work abroad.

Bangladesh: Amongst all the projects to increase the income of vulnerable groups in Bangladesh, the combination of subsistence guarantee measures (food assistance) and improvement measures (skills training and microfinance) is the main focus of antipoverty policy. Microfinance projects provide poor groups with small loans and help them get out of poverty through training, donations and financial services. Groups eligible for application for small loans include urban residents and the rural poor. Though the mobile population in Bangladesh is not as large as in China, the practice of microfinance can provide us with references for poverty relief for the mobile population and landless farmers in China.

Brazil: As a country with a large population in informal employment, Brazil tries through credits to alleviate the poverty of the urban informally employed population by creating job opportunities and enhancing urban competitiveness. To support the efforts of the Brazilian Government, the World Bank offers specialized loans to Brazilian cities, to promote economic growth and facilitate projects for increasing income and job opportunities, enhancing the capacity of municipal engineering, improving infrastructure and public services, alleviating the relatively intense poverty, and solving the problem of economic stagnation (World Bank, 2008a). Comparative studies on the effects of poverty reduction among various industries and sectors have shown that poverty reduction efforts in tertiary industry achieved much better results than that in agriculture and industry (Ferreira, etc., 2007).

Other countries: Banks granting small loans to low-income groups and women have played an important role in poverty relief in Kenya. In Kazakhstan, some private banks form consortia providing joint capital support for small urban enterprises, and make a contribution to antipoverty (Feng Juan, 2004). The social pension system in Namibia and

Many countries provide job opportunities and loans in various ways, in order to ensure employment and prevent poverty of the mobile population

China is facing challenges of transitional poverty in the context of urban-rural integration, and needs to adjust its traditional antipoverty policies

Long-term strategy: an inclusive development is a must

Devoting major efforts to developing labor-intensive industries

Promoting the “non-elite” household registration system

the cash transfer payment for the urban poor population in Mozambique that is used for investment in small enterprises, agriculture and education, have increased the income of the poor and opened more employment channels for them (An Chunying, 2009). Additionally, some countries have found an alternative approach to reduce poverty for the left-behind population by developing more flexible farming practices, promoting the rural non-farm economy, enhancing the skills of the rural left-behind population to access nonagricultural opportunities, increasing allowances for the elderly left-behind, and diversifying the income of the left-behind population (World Bank, 2008b).

4. Structuring a balanced and interlinked urban-rural policy system to deal with transitional poverty in urban-rural integration

To sum up, the ever-increasing population of migrant rural workers, landless farmers and left-behind people in China's urban-rural integration form new poor and vulnerable groups that are different from traditional ones, with low incomes, limited development resources and severe conditions. At present, China's macro antipoverty policy and specialized poverty relief policy systems have several defects in tackling the risks of transitional poverty confronting these groups. The main problem is the urban-rural divide in the policy system.

Therefore, we need to develop a structured, balanced and interlinked urban-rural policy system, covering all macro and micro levels, and ranging from long-term strategies to short-term policies, so that we can deal with issues concerning transitional poverty in urban-rural integration.

4.1 Long-term national strategy: an inclusive urban-rural integration

In the long run, China must establish a policy system and a development pattern that benefits all vulnerable groups and allows them to share the achievements of urban-rural integration. We should avoid problems such as a widening income gap, and the estrangement and even opposition between rich and poor groups, which occur frequently, in urbanization in developing countries. China must not put undue emphasis on efficiency and speed; instead, we should reform the single urban-rural economic integration into a comprehensive process. Thus, we should accelerate the construction of the following systems:

(1) Devote major efforts to developing labor-intensive industries and enhancing job creation in urban areas

The tendency for a large number of rural laborers to work in urban areas is long-term, and requires adequate job opportunities in cities. As a result, our macro policies have to devote major efforts to developing middle-and-small-sized labor-intensive enterprises and service industries that can provide enough jobs. This must be viewed as a fundamental policy objective.

(2) Build a unified and fair production factor market in urban and rural areas

To enhance the urban capacity of job creation, we should gradually lift restrictions on the household registration system, putting more emphasis on the following measures:

- *Promoting the “non-elite” household registration system.* China's household registration system has for some time been one of the major causes of vulnerability for groups in the transitional period, and needs to be reformed. Such reform should be a “non-elite” one, i.e. there must not be many restrictions on household registration for the immigrant

population, so that most employees in urban areas can gain permanent residence in urban areas.

• *Realizing “equal right and equal price” for urban and rural land for construction.* Rural land should be given as a complete property right, and urban and rural land for construction should be dealt with in the same way, with equal right and at the same price. The subject of property rights, and rights and interests of land transfer must be legally confirmed, and farmers given back their legal rights as owners of land, so that fair “compensation” for landless farmers can be realized, and a poverty-relieving mode of urban-rural integration established.

(3) *Reform the “dual” urban-rural public service system, eliminate public service quality disparity for different groups and promote urban-rural integration in the basic public service policy system*

Generally, China’s urban-rural public service system is “fragmented” and features an urban-rural divide. Such a system is based upon the concept of isolating urban and rural areas and residents in these areas, with different qualities of public service policy system and public service quality for different groups. As urban-rural integration advances, the present policy system is neither fair nor effective, and using it makes it hard to effectively deal with the poverty suffered by large numbers of vulnerable people in the transitional period. If this “fragmented” public service system cannot be adjusted in time, the adjustment costs will increase.

The essence of building an “integrated” urban-rural public service system is not only to put more into rural public services and give more support to public services for rural vulnerable groups, but more importantly to break the boundaries between urban and rural areas step by step, establishing an integrated rather than a “fragmented” urban-rural public service system, and building a nationwide subsistence safety net covering all the vulnerable groups in urban and rural areas, taking urban and rural residents as a whole.

Considering various levels of economic development in different provinces and the limits of current financial transfer payment policy, central finance can give some support, and encourage provinces to establish integrated urban-rural public service systems within provincial boundaries initially, and then proceed to a nationwide integration when conditions are appropriate.

(4) *A new financial transfer payment system targeting people, rather than being based on household registration and locality based*

Public services such as education, medical care, endowment insurance and poverty relief are crucial features in targeting people, so subsidy mechanisms should be more people-oriented, rather than limited to household registration localities, so that the destinations of the mobile population can be more active in enhancing and planning public services as a whole, and help reduce the fragmentation in urban-rural public services and boost labor mobility.

At the same time, we should constrain a current trend in policy, of unbalanced public service provision being concentrated in urban areas as more people move there, and give more consideration to the availability of public services for left-behind rural groups. As for the distribution of government spending, the expanding demand for capital for urban public services caused by urbanization and the basic demands for public services of rural vulnerable and left-behind groups should be considered in a balanced

Realizing “equal right and equal price” for urban and rural land for construction

Promoting integrated urban-rural public service system

The core is a nationwide subsistence safety net covering all the vulnerable groups in urban and rural areas

Mid-term plan: setting up a linked-up urban-rural poverty reduction system

Including transitional poverty into new poverty alleviation strategy

Establishing and strengthening poverty relief policy targeting people more than being locality-limited

Comparable urban and rural poverty lines

Establishing integrated urban-rural poverty relief coordinating institutions

way, so that the new financial transfer payment system can consider poverty in a more comprehensive manner.

4.2 Addressing transitional poverty as a policy objective and establishing an integrated urban-rural poverty reduction system

In urban-rural integration, a large number of vulnerable groups, especially the mobile population, are facing future risks from development, which may make them more susceptible to impoverishment and uncertain conditions in the future. However, China's specialized poverty relief policy system has not yet covered this group. This situation must be changed.

(1) Include transitional poverty in the new poverty alleviation strategy

China's new poverty reduction strategy will pay more attention to transitional poverty suffered by vulnerable groups, highlighting risks of impoverishment for these groups, and making it a crucial link in future macro poverty relief strategies to enhance development capacities and opportunities of vulnerable groups. Thus, China's new poverty alleviation guidelines will take into consideration transitional poverty and groups suffering from it.

(2) Establish and strengthen poverty relief policy targeting people more than being locality-limited

At present, the main targets of poverty relief efforts at various levels are rural poor groups, and the actual scope of these efforts is limited to "rural areas", instead of additionally covering the urban poor or the poor mobile population. Aligning with the new poverty alleviation program that includes transitional poverty, new poverty relief practices will both help reduce regional poverty in rural areas and pay more attention to the poverty suffered by the mobile population, and set up a poverty relief policy targeting people more than being locality-limited.

(3) Comparable and gradually improved urban and rural poverty lines

Bearing in mind the differences in living costs between urban and rural areas in various regions, we will set dynamic and comparable urban and rural poverty lines, so as to establish comparable regional poverty relief policies across the country.

Poverty standards should be gradually raised, based on national economic capacity. All the poverty people should be included gradually in urban-rural integrated poverty reduction system.

(4) A poverty monitoring system covering urban and rural areas

We will adjust the sampling of poverty monitoring and put urban and rural residents into the same monitoring and sampling frame, so that poverty monitoring systems can cover both the rural and urban population, and dynamically reveal changes in poverty based on comparable urban and rural poverty lines.

(5) Integrating the resources of poverty relief organizations and establishing integrated urban-rural poverty relief coordination institutions

On the basis of the above three aspects, we will establish integrated urban-rural poverty relief coordinating institutions, to integrate the existing resources of poverty relief organizations, and to include urban and rural poverty relief work in a unified poverty relief system, promoting a linked-up and unified urban-rural poverty relief system.

4.3 Short-term policies and measures: improving current policies and reducing the challenges of transitional poverty

(1) Reform of the household registration system in large and middle-sized cities

Had the reform of household registration system started in middle and small-sized cities, there would have been less of a negative impact. Subsequent reform, however, must include migrant workers. As previously described, most migrant rural workers in China are in large cities and cannot benefit from the reform of the household registration system in middle-and-small-sized cities. Therefore, the reform should be launched gradually in large cities to benefit most migrant rural workers, on the basis of the current household registration reform in cities and towns.

(2) Enhancing the links between urban and rural public service systems, to lay a foundation for the unified urban-rural public service policy system

Undoubtedly, the “integration” of urban-rural basic public service policy will adequately consider the limits of economic development and the fiscal room of the Chinese Government, and be carried forward step by step, instead of being at an absolutely unified pace. Taking the actual situation and conditions into account, we will accelerate and enhance the setting up of links between existing urban and rural policies:

Those in urgent need of linking-up are urban and rural compulsory education policies that have direct influences on intergenerational poverty; next, we can gradually ease the duality of urban and rural medical insurance policies by strengthening medical insurance for urban employees and creating the new rural cooperative medical system; following this, we will consider linking urban and rural endowment policies. Based upon all these, we can complete the transition between policy systems and realize policy integration.

(3) Strengthening the poverty-sensitive policies supporting the current preferential policies for agriculture

We should assess the poverty reduction effects (including the effects of relative poverty alleviation) of current preferential policies for agriculture, whilst strengthening these policies and working out new ones. With this assessment, we can design more specific poverty-alleviating preferential policies for agriculture, to make up for the “short slabs of poverty relief” in universal and expenditure-linked preferential agricultural subsidy policies.

Besides improving and enhancing the rural minimum living allowance policy that mainly targets absolutely poor rural residents, we should also strengthen the financial support policy for rural low-income and vulnerable groups, to narrow the income gap within rural areas, or prevent the gap from being further widened. Some specific measures are:

- *Enlarging the scope of rural medical assistance.* At present, rural medical assistance fees are fully or partly paid by those assisted, so that they can enjoy cooperative medical care. However, farmers still have to pay for most of their medical fees, even if they have been covered by the insurance program. Rural poor and low-income groups are often excluded from the program, since they cannot afford the self-paid medical fees, and even the participants of the program cannot benefit from it. It is suggested to invest more money in rural medical assistance, and to subsidize poor and low-income people to help them pay medical fees, so that the risk of illness-induced impoverishment for poor farmers can be substantially reduced.

Reform of household registration system in large and middle-sized cities

Accelerating to set up and enhance links between the existing urban and rural policies

Investing more in preferential policies for agriculture to make up for “short slabs of poverty relief”

Enlarging the scope of rural medical assistance

Founding production support funds for small farmers

• *Founding production support funds for small farmers.* The present financial subsidies for agricultural production are mostly expenditure linked, favoring large-scale farmers and specialized production, whilst small farmers are largely excluded. It is recommended that specialized funds be established to subsidize small-scale rural producers and help them become involved in the market gradually. Specialized funds can also be used together with small loans, to strengthen financial support for small farmers. The pilot projects of village-level mutual aid funds launched by poverty alleviation offices in some areas are an attempt in this regard, and can be promoted, based on summaries of their experience.

Initiating comprehensive training projects for vulnerable groups of urban employment

• *Initiating comprehensive training projects for vulnerable groups employed in urban areas.* These projects are aimed mainly at migrant rural workers and landless farmers. They will provide the target groups with skills training, as well as education on laws and regulations and public health, to help them adapt to urban life as quickly as possible.

• *Starting intervention projects for left-behind groups.* It is recommended to begin specialized intervention projects targeting left-behind children, the elderly and women, including psychological interventions, agricultural skills training for left-behind women, and micro-enterprise income earning programs, as well as mutual aid groups and activity centers for the left-behind elderly, to mitigate the income and non-income poverty suffered by left-behind vulnerable groups.

Appendix Four

Migration and Transitional Poverty – International Experiences

1. Designing Policies to Meet Rural-Urban Migrants' Changing Needs

In recent years patterns of migration have changed somewhat in China. Migrants increasingly are resettling permanently in urban areas, often with their families. Central and local governments need to design and implement new sets of policies to address problems emerging from this increased permanency. As outlined in the Report, migrants fare considerably worse than local residents in nearly all non-income measures of welfare, and promoting greater equality between them and local residents is a high priority, with an extension of access by migrants to social insurance being particularly urgent. Extending social assistance programmes to cover migrants will be accomplished gradually in the coming years, accompanied by an increasing unification of these programmes between the rural and urban sectors. By capping urban benefits at current levels and gradually raising rural benefits the rural and urban systems of social assistance eventually can be integrated and harmonized, as stated in the Report.

The focus of the Report is on the need for integration, and several international examples are provided of integrated systems in Germany, the UK, the USA, Japan and South Korea. Rather than reiterating these, it is important to raise an additional question relating to the current situation and its development in the next few years. During the period in which policies move from a rural-urban split to one of increasing integration, what sorts of policies should be devised to meet the needs of the migrant population in this transitional period? What policies might be most appropriate in the interim, until a more unified system emerges? Should policies initially focus on the group of longer-term, permanent migrants and their families? Which areas are of particular importance for improving the position of migrant workers in the coming years?

2. Providing Social Insurance and Protection Schemes for Migrants

Evidence from international experience of the effectiveness of policies for this transitional period comes largely from China. The field is dominated by assessments of China's experiences, and research and assessments from elsewhere in this field are fairly limited.

It is important to recall that China has already made progress in the provision of social protection and insurance for its migrant population. For example: Measures passed in 2006 guaranteed a minimum wage and introduced a system for monitoring payment of migrant workers, together with a system for enforcing labor contracts, followed by the introduction of a detailed wage payment system in 2007. Recently, a number of provinces have experimented with measures to establish social insurance systems for migrant workers in Guangdong, Shanghai, Beijing and Zhejiang. Insurance for the elderly schemes have also been extended to migrant workers, as have insurance against injury schemes. Based on international experience, what additional useful measures could be introduced?

3. Devising Policies to Address Transitional Migrant Needs

In many countries, particularly in Latin America, cash transfers conditional upon children's educational attendance and regular attendance at health clinics are made to poor migrant families, and the provision of these is not tied to tight residence criteria, but

via the use of means such as identity cards and evidence of levels of household income. However, as outlined in the accompanying *Note on Climate Change and Poverty*, the evidence for conditional cash transfers (CCTs) improving health and education conditions is variable. For example, whilst CCTs appear to increase the likelihood of children from poor households going for preventive health checks, this has not always led to improved nutritional status for the children. Similarly, whilst school enrolments have increased, there is little evidence thus far of improvements in learning outcomes in schools.

In addition to cash transfers, more short-term provision for rural-urban in specific welfare areas is provided in many developing countries. For example, In India seasonal migrants can obtain temporary ration cards in urban areas and local governments work with NGOs to provide hostel accommodation for migrants, with a focus on migrant children⁵⁹.

For the longer-term, Labor Market Programmes play an important role in assisting rural migrants in finding employment. The experience of the programme implemented in the Qinba Mountains region, providing on-the-job training and a computerized job placement system in local markets is well-known for its effectiveness in increasing knowledge of off-farm employment for poor migrants⁶⁰. Beyond this, more generally, a national training programme for migrants was established in 2003. Similar programmes in Andhra Pradesh, India have been very successful in providing employment options for vulnerable young migrants, linking them to jobs in urban and semi-urban areas, following a three month training programme with staff from industries acting as mentors. In 2005-6 this programme created more than 10,000 jobs in semi-urban areas, resulting in incomes that were substantially higher than those prevalent in the local market. In Bangladesh, short-term programmes have been implemented for poor rural households, preparing them with skills training for work in urban and semi-urban area, and with food assistance, if needed.

4. Mobility, Portability and Participation

Additional issues of possible relevance for China's current transitional situation, emerging from international experiences, are: To what can social protection for migrants be made more portable? How to can increased participation by migrants in social protection programmes be promoted, and particularly within social insurance programmes?

An important characteristic of rural-urban migrants in China is that they are highly mobile, and thus require policies that are portable⁶¹. For example, many migrants enroll in social insurance schemes but withdraw at a later stage because they cannot take the insurance benefits with them when they move. Additionally, when they withdraw they can only take out their own contributions to these funds, whereas as their employer's contributions remain. To address migrant's problems, therefore, not only must existing schemes be extended, but new independent programmes be created to meet the specific needs of rural-urban migrants. As mentioned above, existing schemes have been extended to a certain extent in recent years to cover old-age, employment and health insurance. Progress in extending social protection via *Dibao* has also been slow. There is a need for more specific programmes, relying on central and local government provision and less on employer provision, which have often proven unreliable. These could take the form

⁵⁹ For more detail on the provision of ration cards, see P. Deshingkar and S. Akter, "Migration and Human Development in India", Human Development Research Paper No.13, Human Development Report Office, UNDP, New York, 2009.

⁶⁰ This programme is described in some detail in the Implementation Completion Report for the Qinba Mountains Poverty Reduction Project, World Bank, Washington D.C., 2005.

⁶¹ See Zhu 2007.

of conditional cash transfers to poor migrants, focusing on periods of unemployment, and, particularly in relation to areas such as health and education. Suggestions for developing such policies have been raised in a number of contributions to the debate on social insurance programmes for migrants, particular in recent months, and these should provide a further basis for research⁶².

Apart from the widely prevalent problem of enforcing such policies since many of them are disseminated in the form of “guidelines” or “opinions”, not as enforceable laws, and thus can be compromised at the local level, a further problem as is the case in other countries with migrant workers is the low level of participation of migrants within such schemes. Addressing the enforcement problem requires a further development of relevant institutional and legal frameworks through which the rights of rural-urban migrants and the obligations of governments at various levels can be clearly defined.

Where social insurance schemes are available, it also remains the case that many migrant workers are not keen to participate in them⁶³. This is not largely because of problems attendant on withdrawal from these schemes as outlined above, but because in many cases migrant workers are unaware of the schemes, and even if they are aware of their existence, do not understand the basics of the schemes⁶⁴. Poor awareness and limited understanding appears to be a major barrier to participation. Research indicates that much of the information provided by migrant social networks or in the media is insufficient for migrants to gain a good understanding of insurance schemes. Clearly, there is an important role to be played here by local government agencies in providing accurate and detailed information. In a recent research carried out in Tianjin⁶⁵, rural-urban migrants stated that they would welcome greater guidance from employers and local authorities. Given existing low levels of understanding, clearly this is an area in which major improvements can be made.

⁶² See Zhang Sifeng et al, “China’s Migrant Worker’s Social Security”, Chinese Journal of Population, Resources and Environment, School of Public Policy and Administration, Jiaotong University, Xi’an, 2010.

⁶³ For example, surveys by Xiao and Liu, in 2005, in seven provinces and one large city, found that 90% of migrant workers did not contribute to pensions insurance. See Xiao, S., and Liu, J., “Labour Subcontractors, It Is Not Easy To Keep You”, Workers Daily, 27-04-2005.

A further survey by Guan similarly found that the participation rate in pension schemes was less than 10%. See Guan, X., “Social Policy for Rural Labour Urbanization”, 21st Century Economic Report, Beijing, 2007.

⁶⁴ For details of this survey, see Li Bingqin, “Why Do Migrant Workers Not Participate in Urban Social Security Schemes? The Case of the Construction and Service Sectors in Tianjin”, in Nielsen, Ingrid and Smyth Russell (eds), Migration and Social Protection in China, World Scientific Publishing Company, London, 2008, pp. 184-204.

⁶⁵ Li Bingqin, “Why Do Migrant Workers Not Participate in Urban Social Security Schemes? The Case of the Construction and Service Sectors in Tianjin”, in Nielsen, Ingrid and Smyth Russell (eds), Migration and Social Protection in China, World Scientific Publishing Company, London, 2008, pp. 184-204.

Limitation of Capability of the Poor to Cope with Climate Change

During the prolonged battle against climate change, the poor population is on the one hand easily exposed to the risks of climate change, due to various disadvantageous limits; while on the other hand, their contribution to mitigating the negative effects of climate change has not been reflected in relevant policy frameworks. In reality, policies for mitigating the negative effects of climate change, such as development zones, emission reduction and returning farm land to forestry and pasture, may sometimes place restrictions on diversified modes of production and produce extra living costs for poor farmers, so that the poor population is pushed into a more vulnerable situation. Furthermore, proactive adaptation taken by poor farmers, such as farming system and water-collecting technology to resist drought, are restricted by resources, capital and technological support. Consequently, external interventions, including the development of climate risk forecasting and early-warning system and prevention system as well as capacity building to mitigate climate risks, are needed to help reduce the subsistence vulnerability of poor population.

The poor in the areas with fragile ecological conditions expose to higher climate risks

In China, poor farmers in ecologically fragile zones have particular difficulties in adapting to the negative effects of climate change, and are facing various challenges from natural resources, human capital, technology, and adaptive livelihoods, etc. Studies by Li Zhou et al. (1997) showed that 74% of the total population in ecologically sensitive zones lived in poverty-stricken counties, accounting for about 81% of the total population of poverty-stricken counties. Moreover, most poverty-stricken counties were located in areas with very low ecosystem capacity and productivity. China's 592 national level poverty countries are in central and western parts and over 80% of them are located in ecologically fragile zones (Ministry of Environmental Protection, 2008). A report jointly published by Greenpeace and Oxfam also indicated a high overlap of ecologically fragile zones and poverty-stricken counties in China (Fig. 9).

Poverty-stricken areas are mostly highly sensitive to climate change and disasters such as intensifying drought, shrinking forestry and vegetation, deteriorating soil erosion and frequent climate-related disasters that are caused by climate change lead to deterioration of the environment in these areas; thus it is quite obvious that climate change has more negative impacts on the livelihood of poor farmers. The *Program for Protection of the National Ecologically Fragile Zones*, issued by the Ministry of Environmental Protection of China (MoEP), lists eight national ecologically fragile zones⁶⁶, namely, the Northeast forest-grass ecotone, the North agriculture-animal husbandry ecotone, the Northwest desert-oasis ecotone, the South red-soil hilly and mountainous ecotone, the Southwest karst and desertification ecotone, the Southwest mountainous agriculture-animal husbandry ecotone, the Qinghai-Tibet Plateau complex erosion ecotone and the coastal water-land transition ecotone (Ministry of Environmental Protection, 2008). These areas are mainly in semiarid and arid regions in the north, hilly areas in the south, mountainous areas in the southwest, the Qinghai-Tibet Plateau and the coastal water-land ecotone in the east, covering 21 provinces (autonomous regions and municipalities) of Heilongjiang,

⁶⁶ Ecologically fragile zones, also called ecotones, refer to areas where two different ecosystems meet. The ecological environment in a juncture area is quite different from those in central parts of the two neighboring ecosystems. So such a zone is a place where ecological environment changes visibly.

Inner Mongolia, Jilin, Liaoning, Hebei, Shanxi, Shaanxi, Ningxia, Gansu, Qinghai, Xinjiang, Tibet, Sichuan, Yunnan, Guizhou, Guangxi, Chongqing, Hubei, Hunan, Jiangxi and Anhui.

In China's previous poverty alleviation policies, there has been neither special attention to the poverty caused by poor adaptability to climate change, nor strategic research on adaptability to extreme weather events such as drought. Neither the above-mentioned program of protection of ecologically fragile zones nor the State Council's guidelines on national zoning⁶⁷ (the State Council, 2007) made special analysis of the impact of climate change on the poor population. In the preparation of development programs, had there been any studies on the impacts of climate change on the poor, it would have been useful to develop a compensation mechanism targeting poor people. Moreover, the ecological protective actions taken in poverty-stricken areas, including those taken in the climate change regime of the country, and the ecological rehabilitation measures, have contributed quite a lot to mitigating climate change. However, the contribution has not been reflected or clarified in current poverty alleviation strategies, and consequently no corresponding compensation policies have been developed especially those for livelihood compensation for the poor farmers in these areas. Poor people living in ecotones are facing new challenges resulting from China's commitment to the mitigation of global climate change. On the one hand, poor people in regions sensitive to climate change need to enhance their adaptability to climate change; on the other hand, they need to look for alternatives for their livelihoods, to avoid losses induced by mitigation of climate change. Future poverty alleviation programs should include measures for enhancing the capability of poor people in poverty stricken areas to adapt to climate change.

Therefore, the core issue of this chapter is how to include the strategies adaptable to climate change in poverty reduction policy frameworks, i.e. how to design poverty alleviation strategies in relation to climate change, specifically in the following areas: firstly, the frequent disasters caused by climate change and their impacts on poverty and falling back into poverty; secondly, the responses to climate change taken by the government and their influences on the livelihood vulnerability of the poor population; thirdly, the restrictions on the poor population's autonomous efforts for adaptability, so that the effects of these efforts cannot be brought into full play; fourthly is how to set up a compensation mechanism for the poor population exposed to climate change risks and how to help them enhance their capacities for risk reduction, so as to enhance their autonomous adaptability to climate risks and eliminate their livelihood vulnerability due to macro policies on climate change mitigation.

Actually, ecological zones are facing quite different climate change risks and have different capacities to deal with the negative affects thus caused; thus, Lin Erda et al. (2006) suggested taking different measures in accordance with situations in various ecological zones. Due to the above-mentioned high overlap of areas with fragile ecological conditions and poverty-stricken areas and given that the people in such areas are almost under threat of extreme weather and climate change risks, which are more likely to cause livelihood vulnerability for these people, this chapter focuses on the analysis of this dimension and gives proposals accordingly.

The poverty alleviation in view of climate change is essentially to enhance poor population's adaptability to climate change

To enhance poor people's adaptability to climate change includes both enhancing their proactive adaptability to risks and response to vulnerability of livelihood due to macro policies of climate change mitigation

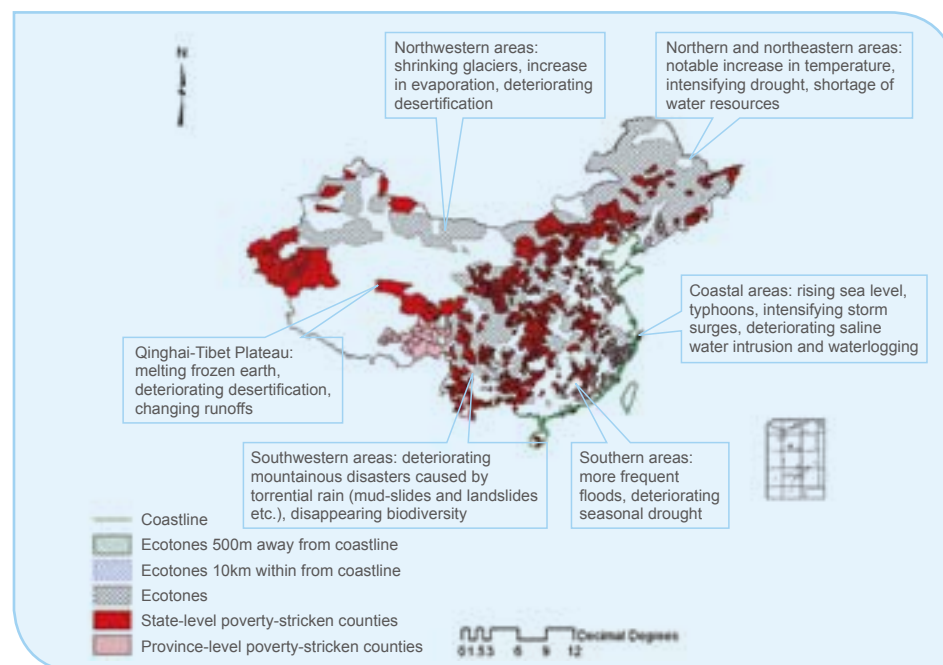
⁶⁷ It is proposed to divide the national land into four categories of optimal exploitation, prioritized exploitation, restricted exploitation and prohibited exploitation.

Ecotones are of notable features of climate change and have relatively higher possibility of extreme weather events, thus poverty incidence is higher in these areas

1. Vulnerability caused by climate change risks: main causes of poverty

People in ecologically sensitive areas have weaker adaptability to climate change risks, and thus are more likely to become victims of livelihood vulnerability, and poverty incidence is higher. There were 23.65 million absolutely poor people in China in 2005, more than 95% of whom lived in remote areas, minority-inhabited areas, and frontier areas. The poverty-stricken areas all have extremely fragile ecological environments (Ministry of Environmental Protection, 2008; Fig. 9).

Fig. 9: Location of ecotones and poverty stricken counties in China



Source: Greenpeace, Oxfam, 2009; Li Zhou, Sun Ruomei, Gao Ling et al., 1997.

Economic losses caused by natural disasters such as drought, floods, sandstorms, mud-slides and landslides cost more than RMB200 billion every year in China. Indicators such as the affected population, death toll, collapsed houses and the direct economic losses caused by floods accounted for 48%, 63%, 79% and 65% respectively in the total losses of natural disasters⁶⁸. The losses caused by drought took up over 15% of the total losses of natural disasters⁶⁹. In 2008, the direct economic losses caused by natural disasters, including the extraordinary large-scale snowstorm and the devastating earthquake, reached up to RMB1,175.2 billion, 4 times more than in the previous year. Unfortunately, natural disasters have not shown a tendency to decline; for example, by the end of July 2010, the floods in 28 provinces (autonomous regions and municipalities) had caused a direct economic loss of RMB151.4 billion, double those in the same period since 2000.

In general, the productivity of major food crops will decline and its instability will be increased, influenced by global warming. If without taking positive and effective measures to cope with climate change, and with current production and conditions, annual production of main food crops in China, such as wheat, rice and maize, will decline by 37% in the end of second half of 21st century. The fluctuation of food production in China

⁶⁸ <http://www.help-poverty.org.cn/helpweb2/zhuyeneirong/d1134.htm>, www.help-poverty.org.cn, 10 August 2004.

⁶⁹ http://www.ce.cn/xwzx/gnsz/gdxw/200708/14/t20070814_12539942.shtml, www.xinhuanet.com, 1 September 2007.

will be influenced by climate change and extreme weather disasters, increasing from 10% in the past to 20%, even to 30% in those most unfavorable years (Lin Erda et al, 2006). And the reduction of food production may have impacts on poor people with little financial assets accumulation.

The agricultural crops production structure will be changed due to climate change, with a change in overall agricultural products allocation, for example, the ratio of planting wheat, rice and maize in different regions will be changed. Some research has also concluded that there will be negative impacts on crops planted in ecotones with a relatively cool environment, for example, decline in potato production planted in the southern mountainous areas of Ningxia (Sun Fang, 2008).

There will be also a substantial climate change impact on water resources in China in the future. Firstly, water flow may be reduced in northern provinces and in regions like Ningxia and Gansu in the next 50-100 years, whilst in southern provinces like Hubei and Hunan there will be an increased probability of flood and drought occurrence. Secondly, shortage of water resource in northern areas in China will not be beneficial, particularly in relation to conflict due to water resource shortage in Ningxia and Gansu, which will become more severe, in the next 50-100 years. Thirdly, with sustainable utilization of water resources, most provinces in China will maintain a balance between water resource supply and demand, but conflicts between water supply and demand will come more prevalent in Inner Mongolia, Xinjiang, Gansu and Ningxia in the next 50-100 years (China National Development and Reform Commission, 2007).

Fig. 10: Percentages of rural poor population in 8 major ecotones between 2001 and 2007 (National Bureau of Statistics of China)

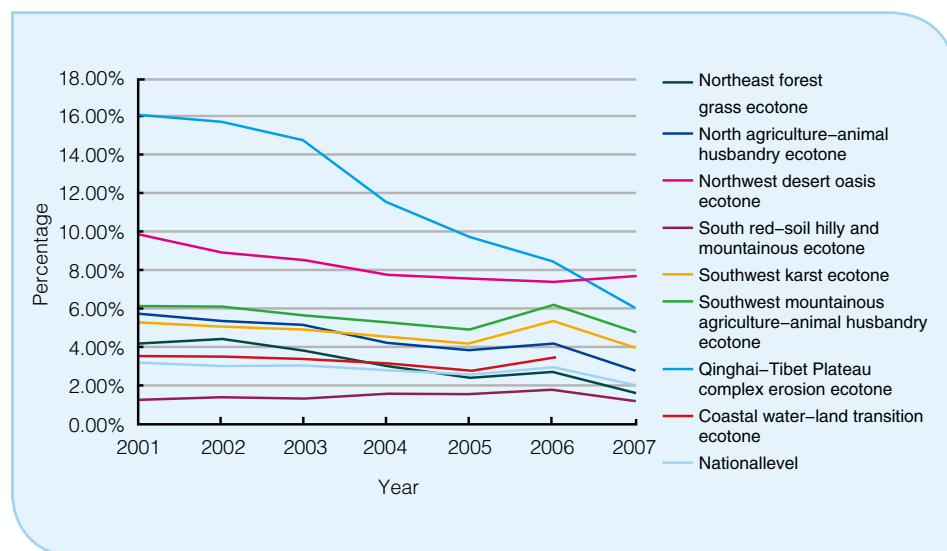


Fig. 10 shows the poverty incidence in 8 major ecotones. Between 2001 and 2007, only the percentage of rural poor population in the South red-earth hilly and mountainous ecotone was lower than that of the whole country, those in the coastal water-land transition ecotone and the North forest-grass ecotone around the national level, and the percentages of rural poor population in the other five ecotones were all higher than the national level. Those in the Qinghai-Tibet Plateau complex erosion ecotone and the Northwest desert-oasis ecotone were higher than the national level in a most notable manner.

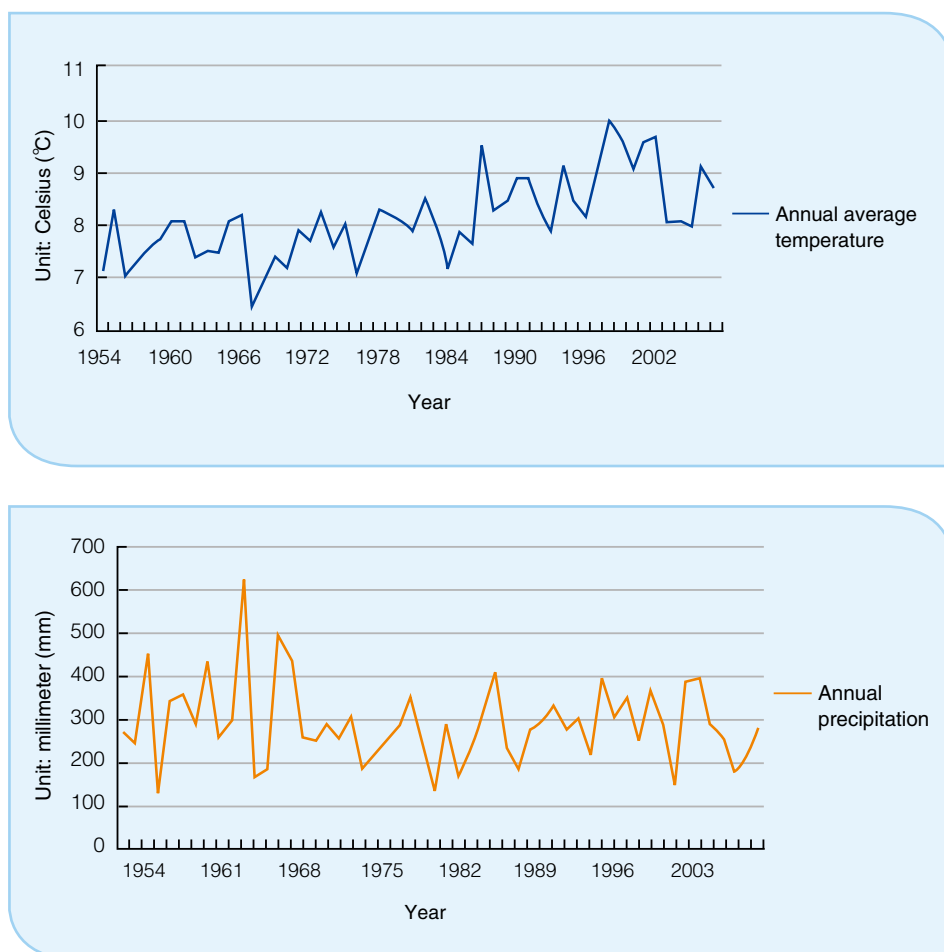
Both unexpected disasters and cumulative climate change have direct impacts on the livelihood vulnerability of poor population in ecotones

FOUR

Climate risks are manifested in the above-mentioned ecotones as frequent natural disasters which are becoming the major cause of poverty and leading to a higher poverty incidence in these areas. Li Jiayan (2005) pointed out that there are three direct causes of sliding-back into poverty, namely, natural disasters, serious disease and population pressure. About 70% of the slide-back into poverty is caused by natural disasters. Nie Zhongqiu et al. (2007) pointed out that according to the survey of returning to poverty conducted by the National Bureau of Statistics in 2003, 55% of farmers returning to poverty in that year had been hit by natural disasters. When analyzing the causes of rural poverty in China, Guo Yongzhong (2002) found that harsh natural conditions and frequent natural disasters were the root causes of poverty. Xie Yonggang (2007) indicated that natural disasters made it worse in the poverty-stricken areas with vulnerable ecosystems and low economic development, thus a vicious circle was formed in a track of “disasters–poverty–more severe disasters–more serious poverty”, and natural disasters were the major cause of falling back into poverty. Studies of the relationship between rural poverty and floods and drought carried out by Zhang Xiao and others showed that rural poverty incidence increases by 2-3% with every 10% increase in the damage to agricultural production made by floods and drought. In a famine year, the relapse rate in rural areas in Guizhou Province is as higher than 20%. Pingchang County in the Qinba mountainous areas was hit by severe natural disasters in 1993, and the grain yield decreased by 31.5% that year; calculated by the number of poor households and poor population, the relapse rates were 90% and 85% respectively. In the agricultural areas in Bishan Town, one of the worst-hit regions, the relapse rate reached 95%. In brief, disaster-induced poverty is a major feature of rural poverty in China.

However, it is noteworthy that cumulative climate change also has a great impact on the livelihood vulnerability of the poor population. It is true that extreme weather events have the most visible impact on people’s livelihood; nevertheless, the cumulative impacts of climate change cannot be overlooked. Drought has such cumulative effects, and scanty rainfall and high temperature are immediate causes of drought (Chen Yu, Principal Technology Specialist for Climate Applications and Services Division of National Climate Center). Specific weather events may cause qualitative change due to such cumulative effects. El Niño in 2009 had significant impacts on cloud cover and convection in most southwestern areas in China, resulting in extremely scanty rainfall and high temperature. Since the autumn of 2009, the eastern parts of the Southwest have suffered from continued scanty rainfall and high temperature, and drought has spread from Yunnan Province to 16 other provinces and autonomous regions. Yunnan Province was hit by extremely severe drought, while provinces and autonomous regions such as Guizhou, Sichuan, Tibet, Qinghai and Gansu were also hit by severe drought. By February 2010, more than 30 million mu of autumn-and winter-sown crops in Yunnan Province had been hit by drought, and the grain yield of the province had decreased by more than a half due to the disaster (Gao Hetao, 2010). The semiarid and arid grasslands in the Northwest agriculture–animal husbandry ecotone have suffered from higher temperature and scanty rainfall since the 1980s. Fig. 11 shows the changes in rainfall and temperature in Yanchi County, Ningxia Hui Autonomous Region. These changes have impaired farming and grazing for the local farmers and herdsmen. The persistent high temperature in Ningxia eventually developed into drought and insect pest attack in 2005, and over 3 million mu of maize was hit by the disasters.

Fig. 11: Changes in annual temperature and precipitation in Yanchi County, Ningxia Hui Autonomous Region, 1954-2007



In ecotones, the rural poor population is confronted with higher livelihood vulnerability while having lower capacity to resist climate change risks. It is equally important to reduce their livelihood vulnerability and enhance their risk-resisting capacity and strengthen financial support. Actually, climate change risks can worsen the livelihood vulnerability of the poor population. Farmers in some areas can resist unexpected climate change more adequately through capital accumulation and enhancement of daily risk-resisting capacity, so that the negative effects of climate change can be reduced. For example, the living standard of farmers in a village in Zhangbei County, Hebei Province basically remained the same when the village was hit by a severe drought in 2009 and suffered a total failure of wheat. This was thanks to the grain reserves and income from working outside the village, which provided enough for daily use⁷⁰.

Most poor farmers in ecotones are unable to mitigate the negative impacts of climate risks due to limited capability of assets accumulation. The case of Shui Village in Gansu Province shows that poor farmers have to use additional capital, including selling off their material capital, to counter drought disaster, the biggest risk for them, and to restore livelihoods (Tang Lixia, 2009), and this significantly reduces poor farmers' capacity for reproduction, and increases their vulnerability for the next strategic cycle of living.

Climate risks of an ecotone and the idiosyncratic shocks for the farmers in the area have impacts on

⁷⁰ The data is from the survey of "Social Adaptation to Climate Change" conducted by College of Humanities and Development Studies, China Agricultural University in March 2010.

the livelihood of poor population at the same time, worsening the livelihood vulnerability

The threat of climate risks for the livelihoods vulnerability of farmers is even more remarkable in outlying and minority-inhabited areas, and impairs the living conditions of women in these areas to a considerable extent. Box 5 shows the vicious cycle caused by these impacts.

Box 5: Climate risks and other factors have jointly impaired the living of women in a village on Lancang River

Though women in the village carry out most of the productive activities, men dominate access to education, training and decision-making in a family. Due to deteriorating resources, women have to spend more time on non-productive activities such as finding and fetching water and cutting firewood, thus losing opportunities to participate in other income-creating productive activities. Facing more frequent risks such as mud-slides caused by deteriorating resources, men often go out to work to reduce the livelihood vulnerability of their families, while women have to shoulder more burdens in agricultural production and living, as well as risk resistance and restoring livelihoods.

Source: Hu Qiang, 2005.

Due to climate change, the factors influencing poverty deteriorate; diversified productive activities are impaired; land with low productivity gets even poorer when hit by drought or floods; material reserves, already weak, can be damaged by severe disasters; and the capacity of the poor population to restore their livelihoods is limited by blocked traffic and unavailability of medical care caused by natural disasters. On all accounts, climate change may result in reduced access for the poor population to resources and lower security, and eventually impair the livelihoods of the poor population and the population on the verge of poverty.

Climate change can increase idiosyncratic shocks through covariate ones. Not only extreme weather events have important influences on the livelihood of farmers, but cumulative risks may also have the same influences. Therefore, for the poor population in ecotones, the covariate shocks of extreme weather events such as drought and floods are closely related to idiosyncratic shocks such as injury, starvation and sudden diseases of a single rural household. Extreme weather events are of a low frequency outside ecotones, and there are better material reserves, infrastructure and medical care in relatively rich areas, thus, the people there have stronger adaptability even if they are hit by extreme weather events. For instance, the drought hitting the Southwest China in 2009 mainly worsened the livelihood vulnerability of rural people, but it did not have so great an impact on urban residents.

There are various types of impact of climate change on health, within which weather disasters have the most direct impact on the health of people in poor areas. For example, direct effects, e.g. death and injury, induced by flood, landslides, and storm, and indirect effects, e.g. infectious diseases and long-term psychological problems. The risks of diseases or malnutrition induced by drought will be increased (Kovats, 2005).

Fig. 12: Relationship of various risks

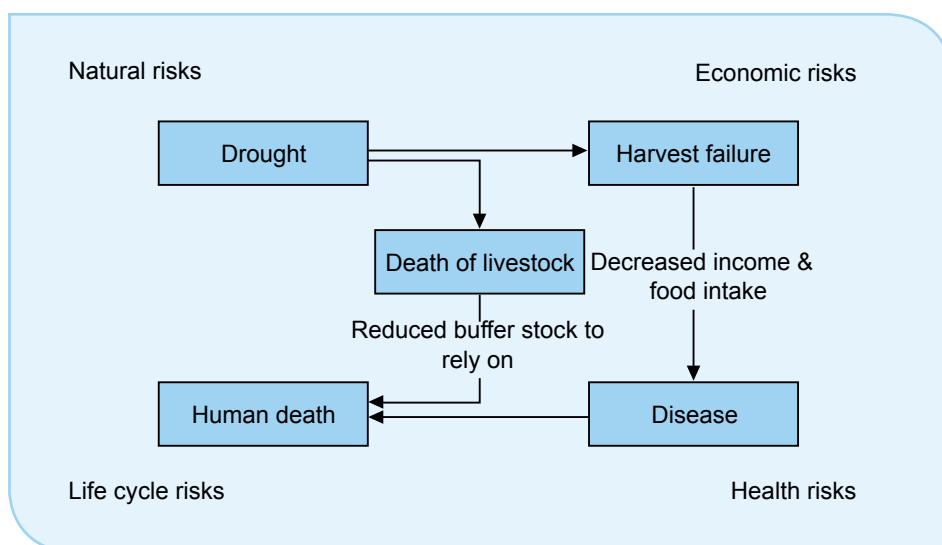


Fig. 12 shows how climate change risks can cause death of livestock and harvest failure, thus resulting in diseases and life risks. An example from the Commission on Climate Change and Development⁷¹ (Box 6) gives a more vivid description of how climate change risks influence various conditions and eventually worsen the vulnerability of poor families.

Box 6: How climate change risks worsen the livelihood vulnerability

A family which makes its living from farming less than a hectare of land suffers a blow when the husband is killed in a traffic accident (idiosyncratic shock). His wife, mother to six children, must care for the children and employs another person to cultivate her land on a crop-sharing basis, where each gets half of the harvest. However, due to the decline in yields of sweet potatoes, the employee leaves for better opportunities, leaving the woman's land uncultivated.

Although neighbors who have food reserves give them a hand to ensure their basic needs for food are satisfied, they are forced to stop their assistance when the next harvest is affected by an extensive drought (covariate shock). As she waits for relief assistance to arrive, she pulls her older children out of school and sends them to live with relatives in the city to look for work.

Source: *Christoplos et al., 2009: 8*

In reality, the risks that cause poverty are mainly idiosyncratic, including pure idiosyncratic risks and those gradually becoming covariate ones. Households and communities that are more resilient to idiosyncratic shocks are less vulnerable to covariate shocks. Climate change first affects the natural capital of various individuals or families in an area, then further affects their human capital, material capital and financial capital; such impact will in turn worsen idiosyncratic shocks, such as disputes over land caused by declining land productivity, deterioration of health due to lack of food, and failure in future credit due to being unable to repay small loans because of total harvest failure. Therefore, enhancing the capacity of resisting idiosyncratic and covariate risks by communities and individuals

⁷¹ The Commission on Climate Change and Development consists of 13 renowned individuals, with Mdm. Gunilla Carlsson, Director of the Swedish International Development Cooperation Agency (SIDA) as the Chairperson.

Both unexpected disasters and cumulative climate change have direct impacts on the livelihood vulnerability of poor population in ecotones

However, the existing poverty alleviation strategies do not pay special attention to climate change risks

is as important as improving central and local government's capability to control risk.

For the poor population, climate change primarily increases their livelihood vulnerability by reducing their living options. Facing frequent drought and floods, farmers cannot plant traditional crops or other crops as alternatives due to the lack of necessary infrastructure (such as irrigating and draining facilities). Vulnerable groups are affected even more seriously. Women have to face more unfavorable living conditions, since they are often excluded from various systems of public resources, for example, they cannot obtain credit to conduct non-agricultural activities, or participate in other activities due to the heavy burden resulting from the traditional gender division of labor. Landless farmers will face fiercer competition in labor markets due to climate change, since more farmers may rush into cities for employment when they cannot have a good harvest due to natural disasters. The poor population in ecotones has more limited livelihood options due to the lack of public service facilities, poor industrial structure and urbanization.

2. Poverty alleviation strategies and climate change risks

Actually, instead of being indifferent, governments at all levels have taken intervention measures to counter the impact of climate change. However, in spite of external aid and communities' internal measures for adapting to climate change, these activities cannot always assist in reducing livelihood vulnerability caused by climate risks, if they are not transformed into communities' internal adaptability. In general adaptation strategies, poor farmers rely more on community safety networks; however, covariate shocks will reduce such reliability. Most governments in ecotones often have limited capacity to mobilize resources to adapt to, and mitigate climate change, and people have to rely on individual or community resources when facing climate risks. Individuals and groups such as ethnic minorities and women, who are excluded from safety networks or access to public resources, will be affected by climate risks in a more direct way. Continuous and effective management of public resources such as forests, underground water and seas needs a certain capacity for collective action, which often requires aid and support from other resources. Kutuan Village in Ningxia Hui Autonomous Region, a typical village in an agricultural-animal husbandry ecotone and often affected by drought, has a strong capacity for self-organization and self-management. Supported by the microfinance project of the Ningxia Center for Environment and Poverty Alleviation, the village strengthens the operation of community development funds, and more importantly, it takes collective action in grasslands improvement, including channeling water from the Yellow River for daily use, investing the compensation for returning farm land to forestry and returning the pasture to grasslands in grass and trees planting, as well as measures for unified grazing. All these efforts help maintain the village's living standard, environment and harmony at a high level.

If climate change risks are the main causes of the livelihood vulnerability of poor population, the preparation and implementation of relevant policies that can effectively mitigate climate change risks become very important. Firstly, we need to identify groups who are highly likely to be exposed to livelihood vulnerability under climate change risks, and then reduce such vulnerability by feasible adaptation policies, including capacity building for the poor population and a living security system that mitigates climate change risks. Of course, these policies will be based upon adaptation measures by the poor population. Interventions of policies and projects are both to enhance the capability of adaptation of the poor.

Existing poverty alleviation funds play different roles in reducing the livelihood vulnerability of the poor population, and some of them help the poor population adapt to

Microfinance enhances adaptability of farmers, but is insufficient for them to deal with unexpected disasters

climate change in one way or another. Nevertheless, current ideas of poverty alleviation, in general, do not take climate change risks into consideration as the main causes of the livelihood vulnerability of poor farmers; therefore, policies, measures and funds do not give preference to the groups most likely to be exposed to climate risks. This paper gives a rough analysis of the functions of various poverty alleviation measures from the perspective of mitigating climate risks, mainly including microfinance projects, industrial poverty alleviation, poverty alleviation efforts for a whole village, poverty alleviation through voluntary migration and poverty alleviation in the form of providing job opportunities.

Of the many types of poverty alleviation loans, small loans can directly reach farmers, thus boost the diversity of income sources of poor farmers by capital and technological support and create conditions for diversified ways of living and capital accumulation for farmers (Box 7). Diversification of livelihood is a rational option for farmers to avoid risk, whilst capital accumulation can help them deal with bigger risks. Microfinance projects in some places also provide loans when clients suffer from unexpected disasters, to mitigate risk impacts. The comparison between project villages and ordinary villages showed that the borrower from the project could withstand severe natural disasters more successfully than farmers who had not participated in the project, and was less affected in consumption level by disasters (Wu Guobao et al., 2003). However, farmers cannot avoid losses of material assets in unexpected disasters when microfinance projects are in progress. Under such circumstances, it prevents farmers from forming new groups and borrowing from the projects; therefore, the livelihood vulnerability of farmers cannot be reduced and these farmers will remain poor. In other words, microfinance has its own limits in mitigating the negative effects of climate change risks on poor population, for example, it cannot take the place of micro-insurance when severe natural disasters occur.

Box 7: Role of the microfinance in reducing livelihood vulnerability of farmers

Farmers in Zheguoyuan Village of Liguan Town in Xingren County of Guizhou Province reclaimed wasteland and planted over 3,000 yews 15 years ago. Before they received any small loans, they had to cut down and sell trees as their main source of income. However, each yew could be sold only at a price of RMB50~200, but the price would increase to RMB1,000 each if it is cut down at the age of 20 and above. Thanks to small loans, they began to plant vegetables 3 years ago, the income from which has gradually become the main source. The farmers no longer cut down trees; instead, they can reserve the yews as a source of future income. Nevertheless, they still have to cut down yews that are supposed to be an asset reserve, when the yield of vegetables is affected by plant diseases and insect pests caused by changing temperature.

Source: Liu Yanli et al. Case Study on Influence of Microfinance on Reducing Livelihood Vulnerability of Farmers. Rural Economy, 2008 (4).

Industrial poverty alleviation activities aim to boost the sustainable livelihood of farmers and communities. They are by nature providing farmers with help similar to alternative livelihoods to avoid climate risks. Nonetheless, these activities cannot reach the poor population without adaptability, due to the limits of various conditions. As described in Box 8, farmers who cannot receive aid for industrial development have no choice but to continue with their traditional planting and their losses cannot be compensated with the yield of greenhouse crops. Moreover, the above-mentioned microfinance funds are

limited, thus cannot support alternative livelihoods. Besides, industrial poverty alleviation promotes scale production; then on the one hand, scale production can enhance the capacity to respond to natural risks including climate risks, if it is guaranteed by agricultural facilities, such as greenhouses for vegetables (Box 9), while on the other hand, it may reduce the diversity of production, and farmers will be more easily exposed to risks with unpredictable weather or when prices fluctuate.

Box 8: Exclusion of poor population from industrial poverty alleviation

Bujia Village in Shaanxi Province focuses on vegetable greenhouses in its industrial development. Each vegetable greenhouse can produce a net income of about RMB10,000 every year. Thus, the greenhouses are very popular with farmers. Currently there are altogether 36 greenhouses in the village. The project funds are from the specialized loans for poverty alleviation. The greenhouse project was won by the village relatively easily, since the village is a poverty alleviation point designated by the deputy secretary of the Municipal Party committee and greenhouses are an important means for creating wealth in the village. However, the threshold for this project is rather high for farmers. A greenhouse is about 10 meters wide and with a length of 50-100 meters. A total of RMB14,000 is needed to build a 50 meter-long greenhouse and RMB17,000-18,000 for a 100-meter-long one. With RMB9,000 subsidized loans provided by government, a farmer has to pay RMB5,000-9,000 for a greenhouse. Additionally, he also has to pay about RMB150 for technical guidance per year. Therefore, poor households cannot participate in this project. For example, a villager named Pei Gencai's family has four members and is at the middle level in terms of financial ability. The family sold an ox in 2003 and borrowed from friends and loan sharks (at an interest rate of 30%), and got nearly RMB20,000 finally, so that they could participate in the project of migration and relocation. Though they had a methane tank and running water at home after the project, the family cannot afford a vegetable greenhouse any more.

Source: the State Council Leading Group Office of Poverty Alleviation and Development (LGOP) Synthesis Report of Program for Poverty Alleviation and Development in Rural Areas of China, 2009.

Box 9: Facility agriculture to reducing the livelihood vulnerability to climate

Among the 60 households surveyed in Guantan Village of Ningxia Hui Autonomous Region, one household is of the lowest vulnerability (mainly engaging in transportation), 8 of medium vulnerability and the other 51 of high vulnerability. Over 50% (5 households) of the 8 medium-vulnerability households plant more than 4 varieties of crops, and all 5 of them plant two drought-resistant crops (sunflower and castor-oil plant) and three greenhouse crops (cucumber, tomato and watermelon). Sunflower and castor-oil plants have relatively stable harvests even in drought or with little rain, and have realized higher prices as economic crops in recent years. As the local government promotes the non-staple food supply project and talks about the benefits of vegetables and fruits to change the diet of the local people, the market in vegetables and fruits keeps expanding, so farmers with greenhouses benefit a lot from the process. Thanks to the water-saving and effective agricultural planting system, farmers can avoid the situation in which the others are trapped, when yield of crops declines or even results in failure due to drought and the reduction of water channeled from the Yellow River.

Source: The survey of "Social Adaptation to Climate Change" conducted by College of Humanities and Development Studies, China Agricultural University in March 2010.

Poverty alleviation projects for a whole village gain significant achievements in resources integration, promoting community and local participation and increasing utilization efficiency of resources, but do not give sufficient consideration to reducing the livelihood vulnerability caused by climate risks, since the projects focus more on the general development of communities. However, climate change risks can reduce the effects of poverty alleviation policies and measures to a great extent.

According to the *Synthesis Report of Program for Poverty Alleviation and Development in Rural Areas of China* (State Council Leading Group Office of Poverty Alleviation and Development, 2009), poverty alleviation projects for a whole village are all based upon village-level poverty alleviation plans, and most of them are proposed by village cadres and villagers through participation. The projects are mainly concerned with issues of roads, drinking water, bio-gas, migration and relocation and industrial development. From the cases studied in the report, we can see that the farmers most vulnerable to climate change, i.e. those who have not enough material reserves or labor force to engage in diversified livelihoods, cannot benefit from these projects. For instance, the bio-gas project planned by the village development program through the participation of farmers, which requires that participants have their own facilities, while the households that cannot provide enough counterpart funds due to the low level of living capital cannot benefit from the project. The same issue exists in the house construction project as well: with a subsidy of RMB2,000-3,000, some farmers may scrape up the counterpart funds of RMB5,000-10,000, but they will be trapped in a difficult situation once there is any unexpected cost during construction. As a result, there are half-constructed new houses in some villages. Thus on the one hand, the project drains farmers' limited funds; on the other hand, these farmers have to live in a vulnerable environment, but with increased livelihood vulnerability they cannot avoid falling into climate poverty when natural disasters such as mud-slides break out⁷².

Moreover, some poverty alleviation projects for a whole village even cannot play a full role in some cases. For example, a survey in Maduo County of Qinghai Province showed that some poor households could not get preferential treatment from the village based poverty alleviation project, since they were within the project of returning pasture to grasslands (Chen Jie, 2009).

Poverty alleviation measures through voluntary migration include removal and relocation of a whole village or community, ecological migration and so on. Though removal and relocation of a whole village or community and ecological migration have taken the livelihood vulnerability and sensitivity to vulnerable ecosystem of the poor population into consideration, there are still cases where poor people are excluded from these policies due to the limits of their material, human and social capital (Tang Lixia, 2003). Box 10 describes such limits.

The farmers most vulnerable to climate change cannot benefit from poverty alleviation projects of village approach

Poor population faces more restrictions in poverty alleviation through voluntary migration

⁷² The data comes from the survey of the interim assessment of the poverty alleviation projects for a whole village in Dali Bai Autonomous Prefecture of Yunnan Province, conducted by College of Humanities and Development Studies, China Agricultural University in 2005.

Box 10: Exclusion on poor population during migration and relocation

In the migration and relocation project carried out in Bujia Village of Bujia Township in Chunhua County in Shaanxi Province, all the farmers living in gullies and in basement-like pit dwellings can register for the project, but every household has to pay RMB17,500 in cash, then they can get the “5+1” subsidies from the poverty alleviation financial funds, i.e. RMB5,000 for each household plus RMB1,000 for each family member. With this subsidy policy, a family of 4 members can get a migration subsidy of RMB9,000 in total. The subsidy is mainly used for house building, methane tank, tap water and community greening. More than 42 households need to move, but poor ones have to quit as they cannot afford the removal.

Source: LGOP, 2009

Nevertheless, some poverty alleviation policies and measures, such as investment in employment generation as a measure of poverty alleviation, are positive in enhancing adaptability to climate change to some extent in practice, even though they only pay attention to access to infrastructure for the poor population in general, but give no special consideration to adaptation to climate risks. The main tool is to promote a more effective combination of various natural resources through the establishment of various infrastructures, so that resources can better play their role. Table 5 shows that the work-relief funds have no direct yields in irrigation and water conservancy, farmland capital construction and small integrated watershed management, while small-scale irrigation and water conservancy and farmland capital construction create conditions for improving the unbalanced distribution of rainfall and temperature and for the poor population to utilize natural resources such as land, water and total temperature in a more efficient manner (Box 11). Road construction in counties, townships and villages enables them to enter into the market. Drinking water projects for humans and livestock improve the living conditions of poor households directly.

Table 5. Investment and effects of the work-relief funds

Project	Funds (unit: RMB100 million)				Effects	
	National funds	Govt. bonds	Local counterpart funds	Total	Unit	Amount
Small-scale irrigation and water conservancy	179	58	69	248	10,000 mu	8,000
Farmland capital construction	61	16	29	90	10,000 mu	2,480
Road construction in counties, townships and villages	302	108	148	450	10,000 km	45
Drinking water project for human and livestock	64	20	29	93	10,000 persons/10,000 heads	4,200/3,000
Integrated Small watershed management	35	15	17	52	10,000 km ²	4
Total	641	217	292	933	10,000 mu	8,000

Source: Regional Economy Division under National Development and Reform Commission, “National Work-relief Policy”, Monitoring Report of Rural Poverty in China 2008, China Statistics Press, 2008.

Box 11: Water conservancy facilities in reducing vulnerability to climate risks

The per capita area of irrigated land is 2.5 mu in Guantan Village of Ningxia Hui Autonomous Region after the village channeled water from the Yellow River 10 years ago, and its grain output has been increasing steadily. Compared with villages with only arable dry land, Guantan Village can respond more adequately to a changeable climate. Villagers use the maize grown on irrigated land as feed for livestock and poultry, thus saving RMB8,000 on feed costs every year, which can make up their shortage of cash income and help them develop animal husbandry.

Source: the survey of "Social Adaptation to Climate Change" conducted by College of Humanities and Development Studies (COHD), China Agricultural University in 2010.

To sum up, we can use current poverty alleviation strategies and relevant policies and measures for reference in mitigating climate change risks, but we need to pay more attention to such risks when developing future policies, especially for the population who may be excluded, and take more direct and effective policies and measures, to reduce more effectively the vulnerability of the poor population.

3. Mitigation of climate change, adaptation policies and livelihood vulnerability

The policies and supplementary measures for ecologically sensitive areas cannot reduce the livelihood vulnerability of the poor population, but rather can increase the number of the poor population. In the program for national ecotones, the regional programs for the 19 key areas of the 8 national ecotones focused more on ecological protection actions. The National strategy for coping with climate change in China (2007) presents the objectives of adaptation to climate change, including effective protection of 90% of typical forest ecological system and national focused wild animals and plants, and nature reserves accounting for 16% of country land areas, and 22 million hectares of decertified land being rehabilitated. In policy cases, we could make a preliminary analysis of the impacts of the current macro policies on the livelihood of the poor population in ecologically sensitive areas.

The policies for nature reserves have multiple influences on the people concerned. In the management of many nature reserves, there are measures of ecological compensation and alternative livelihoods, instead of simple protection for nature. However, these supporting policies give little consideration to the livelihood vulnerability of the poor population who, therefore, are excluded to some extent. Box 12 describes the situation in a nature reserve in the Sanjiang Plain, where the villagers lose their income from crop farming as well as the policy subsidies for grain growing.

Box 12: Ecological protection and opportunity cost of farmers' living in nature reserves

The nature reserve has nothing to do with us. No benefits at all. In the past, people from Yongfeng Village and Jiahe Town went in for farming in the nature reserve. They could plough after paying a small amount of money to Raohe Land Administration (during 1989 and 1994, farmers could bring wetland under cultivation after paying the reclamation fees of RMB50/mu) for the approval. The land, as approved by the land administration, is unrecoverable and can also receive "two subsidies" (direct and comprehensive grain subsidies). But now, the wetland is under the management of the forestry administration, and farmers are not allowed to plough the land. (An interview with a villager of Yongfeng Village)

Source: Wang Libin et al., 2009: 107-108

Much attention has been given to ecological compensation which is even described in the program for ecotones. It is very important to relate the methods for compensation and ecological compensation to reducing the livelihood vulnerability of poor farmers.

Besides the existing ecological policies, the policy promises of mitigating climate change have new requirements, which are closely related to rural livelihoods⁷³. The measure of reducing carbon sources aims to promote the using of biofuel and clean energy in rural areas. Additionally, the measure of increasing carbon sequestration includes afforestation and enhancing the productivity of woodland and grasslands. There will be a series of macro policies coming along with these measures. Financial Research Institutes of the Ministry of Finance did forecasting analyses on carbon tax policy. The result of this dynamic research finds that discretionary income in rural areas will decrease gradually and that the accumulated decreased percentage will be 0.44 and 3.21 respectively at minimum and maximum tax rates, and that in urban areas it will be 0.25 and 1.92 respectively (Su Ming et al. 2009). All these measures will increase the livelihood vulnerability of the poor population to some extent within a certain period of time. Therefore, we should provide the poor population with various transfer payments, including technical support.

Table 6 shows some ecological policies or projects related to mitigation of climate change. Though they all provide ecological compensation to some extent, the compensation does not necessarily help reduce the livelihood vulnerability of farmers (see Box 13). The key point is that these measures of ecological compensation are mostly in nature economic compensation for the poor population, not really ecological compensation, and do not consider farmers' contribution to mitigating climate change risks. However, we can still learn from the ideas and implementation of ecological benefit subsidy in some projects, so that the ecological contribution of such compensation or subsidy can be included in future policies. The forest ecological benefit compensation system is of this type. Actually, the policies and projects related to climate change are not operated in an isolated way, but together with other agriculture-supporting projects, which are not included in the general plan of these policies or projects. For example, the project returning farm land to grasslands is operated with a pen-feeding project for animal husbandry, a straw planting promoting project for agriculture, a protected agriculture project and a grass planting project for animal husbandry and forestry. The problem here

⁷³ China has set objectives on carbon emission reduction, which is that CO₂ emission will be reduced by 40~45% in 2020 when comparing with that in 2005. It is a controlled indicator being listed in mid-term and long-term national economic and social development planning.

is the uncertainty and lack of clear mechanisms for ecological compensation, and the effects depend upon how a local government positions itself in implementing relevant policies and its own capacity for resource integration.

In general, during decision-making and implementation of policies on mitigation and adaptation to climate change, if there is no specific consideration on climatic risks in poor people's livelihood, it won't be helpful for alleviating livelihood vulnerabilities.

Table 6. The ecological policies or projects related to mitigation of climate change and farmers' livelihood

Policy/ project	Covered area Contribution to climate change mitigation	Requirements of or restrictions on farmers' livelihood	Compensation for farmers' livelihood or their contribution to ecological benefit	Other opportunities beneficial to livelihood
Bio-gas project in rural areas	As of 2008, there had been 30.5 million rural households with home based bio-gas and 24,000 households under small-scale bio-gas projects, as well as 12,000 rural energy management and service organizations, 38,000 technical professionals and 227,000 skilled methane technique workers Reduction in carbon emission	Surplus of breeding and planting Supporting facilities Technology	Supporting facilities Small loans for breeding activities	Carbon sink trading
Returning farmland to forests	By the end of 2008, the area of afforestation had totaled 403 million mu, with investment from the central government totaling RMB196.1 billion. The projects had covered 25 provinces (municipalities and autonomous regions) and Xinjiang Production and Construction Corps, with over 32 million rural households of 124 million farmers Increase in carbon sources	No agricultural activities conducted Expenditure on afforestation	The subsidy for returning farm land to forests is not less than RMB200/mu. By the end of 2008, every household involved had been subsidized with RMB5, 113 on average.	Forest carbon sink trading
Funds for forest ecological benefit compensation	Ecological benefit compensation was first launched in 11 provinces and autonomous regions in 2001. The funds were set up in 2005 and reached up to over RMB20 billion by 2010, and 700 million mu of key ecological public forests had been covered by the funds of compensation Increase in carbon sources	Protection of ecological public forests	The subsidy standard is RMB5/mu (there are extra subsidies in economically developed provinces)	Carbon emission permits trade mechanism for forestry

Returning the pasture to grasslands	The project was fully started up in 2005, covering desert steppe in the western parts of Inner Mongolia Autonomous Region, Gansu Province and Ningxia Hui Autonomous Region, degraded grasslands in the east of Inner Mongolia Autonomous Region and in the north of Xinjiang Uygur Autonomous Region, as well as the grassland in the source regions of the Yantze and the Yellow Rivers in the east of Qinghai-Tibet Plateau Increase in carbon sources	Grazing prohibited, seasonal suspended grazing, determining livestock carrying capacity according to the amount of grass, regional rotating grazing	Grazing is prohibited through the year in the first three regions. Each household is subsidized with feed grain of 5.5kg/mu/year. Seasonal suspended grazing is calculated based upon 3 months per year, and each household is subsidized with feed grain of 1.375kg/mu/year. The standards of the two subsidies for households in the grassland in the source regions of the Yantze and the Yellow Rivers in the east of Qinghai-Tibet Plateau are 2.75kg/mu and 0.69kg/mu respectively. Subsidies for infrastructure construction such as fences or cash compensation for the households in the areas of prohibited or suspended grazing or for the migrated households	Establishment of grassland ecological compensation mechanism
Wetland protection	Since 2006, the Central Government has included the wetland protection engineering and the construction of Sanjiangyuan Nature Reserve in the 11th Five-Year Plan for the national economic and social development. A wetland protection network mainly based upon wetland nature reserves has taken initial form. Reduction in carbon emission	Cultivation prohibited Wetland reconstruction	Support for projects of alternative livelihoods	Establishment of ecological compensation mechanism
Construction of nature reserves	The number of nature reserves had reached up to 2,395 by December 2007 Reduction in carbon emission and increase in carbon sources	Restrictions on the productive activities in core area	Relocation of migrants, alternative livelihoods, update of production technologies, production restructuring and other aids	Establishment of ecological compensation mechanism

4. Adaptation to climate change: Reducing livelihood vulnerability

Fortunately, the poor population has conducted many activities to adapt to climate change during the development of their livelihoods. Their experiences and capacities are both prerequisites for more aid and support for mitigating the negative effects of climate change, and key points for reducing their livelihood vulnerability. The poor population often takes the following measures to reduce livelihood vulnerability caused by climate change:

- Responsive measures based upon the traditional livelihoods structure, such as collecting rain water, changing the farming cycle, preserving soil moisture, water-saving irrigation and so on.
- Alternative livelihoods, like changes with a small scope, i.e. alternative crops, livestock and poultry, or changes with a wider scope, i.e. changing from fishing to planting and animal husbandry, or developing an orchard, or going out for employment opportunities.
- Adaptation with external interventions combined with the traditional living structure, such as state-funded construction of irrigation and water conservancy facilities and water-saving irrigation technology, or in agriculture-animal husbandry areas, adjusting grazing time and livestock carrying capacity by combining with stable breeding, with technological and financial aid.
- Adaptation and adjustments to alternative livelihoods via external interventions. For example, poor women in arid areas can start small businesses or engage in animal husbandry with the aid of a microfinance project; people in ethnic-minority inhabited areas where economic activities are limited can develop tourism, or produce and sell handicrafts; and those in areas too harsh for living can rebuild their livelihoods in new areas through voluntary migration.

The enhancement of the poor population's adaptability to climate change is essentially aimed at enhancing these groups' resilience to climate impact, not only short-term responses, but also long-term adaptation. This prolonged process includes creating a good environment for the locals to take appropriate action, increasing their awareness and improving the prediction of climate change, to prevent climate risks from pushing the poor population back into poverty. Actually, we have now seen the autonomous adaptability of poor populations from community and individual actions in ecotones in China.

When drought or other extreme weather events occur, livelihood vulnerability is related to the causes long hiding behind it. For example, the possibilities of extreme weather events such as drought exist in the prolonged changing process of temperature and moisture. At the same time, various development activities begin to adapt to and reduce such possibilities. Thus, enhancing the capacity building of daily activities can make the poor population better prepared for climate risks and more efficient in adapting to extreme events.

The vulnerability of the ecological environment in the North agriculture-animal husbandry ecotones features a dry climate, shortage of water resources, loose earth, low vegetation coverage and being vulnerable to the impact of wind and water erosion and human activities. Such ecotones are mainly in arid and semiarid grasslands in the north, with annual precipitation of 300~450mm and aridity of 1.0~2.0, covering administrative

The poor population's adaptability to climate change and various planned adaptation-related policies and administrative measures can reduce the poor population's vulnerability to climate change to some extent

All the poor population in ecotones has certain capability of adaptation when facing climate change

regions including the Inner Mongolia Autonomous Region, Jilin, Liaoning, Hebei, Shanxi, Shaanxi, Ningxia Hui Autonomous Region and Gansu. The important types of ecosystem are typical steppe, desert steppe, sparse woodland and sand land and farmland (Ministry of Environmental Protection, 2008). In the Ningxia Hui Autonomous Region, climate change risks, especially drought, affect the normal production and living of farmer households. In addition to going out for job opportunities, farmers also try their best in agriculture. Their major measures for adaptation include preserving soil moisture (covering with plastic film, ploughing and soil grinding, and sand pressing), collecting water and water-saving irrigation (Wu Yanjuan, 2008); furthermore, farmers also reduce livestock carrying capacity, and the self-management of grassland adopted by some cooperatives helps reduce the pressure on grassland and promote the sustainable development of livelihoods. Of course, various social and economic factors (such as the policies and measures for grasslands protection) have positive influences on adopting these adaptation measures. Spontaneous labor service export has become of one the most common adaptation measures taken by farmer households, and those with a higher ratio of nonagricultural income are less vulnerable to climate risks. With government aid and on a voluntary basis, however ecological migration in the North ecotone is at a high cost. Studies conducted by Sara Brogaard and Jonathan Seaquist (Brogaard et al., 2005) showed that in Inner Mongolia, the dry climate threatens the local grain safety-net, thus resulting in the locals' vulnerability to drought. Only a small part of the land in local rural areas can be irrigated. If drought hits in spring, the major responsive measure for rainwater-irrigating agriculture is to plant broomcorn instead of maize, and sunflower instead of chestnut. In cases of severe drought, farmers have to give up planting any crops. Besides, non-agricultural income is temporary when farmers go out to work. They return to the village for agricultural activities in busy farming seasons.

The eco-environmental vulnerability of the Southwest karst and desertification ecotone results from heavy precipitation through the year, severe water erosion, thin soil in the karst mountainous areas, slow process of soil formation, excessive cutting of timber on mountains, low vegetation coverage, serious soil erosion and frequent landslides and mud-slides. This ecotone is mainly in the limestone karst mountainous areas in the southwest of China, covering the provinces and municipalities of Sichuan, Guizhou, Yunnan, Chongqing and Guangxi Zhuang Autonomous Region. Major types of ecosystem in this ecotone include the typical karst landform ecosystem, karst forest ecosystem, karst drainage basin, lake and waters ecosystem and habitats of animals and plants endangered and peculiar to the karst mountains (Ministry of Environmental Protection, 2008).

The case of Wuming in Guangxi Zhuang Autonomous Region shows that drought and floods are considered by the farmers the biggest difficulty they have ever encountered. Climate change has made production more vulnerable. For example, the area of irrigated land has fallen from over 300 mu in the past to the present 64 mu, due to the loss of water reserved in the reservoir. Adaptation solutions consist of responsive and adaptive measures. Under the adaptive measures, many farmer households make adjustments by planting cassava, a cash crop, instead of cereal crops. In the case of responsive measures, farmers go to the reservoir to pump water or sit waiting for rainfall, when they suffer from drought and water shortages (Wang Xiufen, 2007). In this case, the planting restructuring reduces the livelihood vulnerability of farming households; nevertheless, the market also plays an important role in technical support and guidance for product sales. Then, farming households in the areas where adaptive activities cannot be further aided and supported have to face a more difficult situation.

The Southwest mountainous agriculture-animal husbandry ecotones are mainly in the Hengduan Mountains from the Qinghai-Tibet Plateau to the Sichuan Basin, covering over 40 counties and municipalities such as Aba Tibetan and Qiang Autonomous Prefectures, Ganzi Tibetan Autonomous Prefecture and Liangshan Yi Autonomous Prefecture in Sichuan Province, Diqing Tibetan Autonomous Prefecture, Lijiang city and Nujiang Lisu Autonomous Prefecture in Yunnan Province and Liupanshui city in the northwest of Guizhou Province. Eco-environmental vulnerability takes the form of undulating terrain, complex geological structures, remarkable vertical hydrothermal changes, undeveloped soil, infertile soil and thin vegetation, being strongly affected by human activities and with notable regional eco-degradation (Ministry of Environmental Protection, 2008).

Studies conducted by Hui Xue (2006) on risks for farming households in Zhongdian, Yunnan Province showed that in assessments of covariant risks, farming households living on rivers thought floods the most serious, followed by misty rain and hail, whilst those living in highland areas considered snowstorms and the death of livestock to be more serious. As for measures to reduce the above-mentioned risks, the studies showed that rich farming households could depend on loans, whilst the poor could only rely on aid from neighbors and the government. Nonetheless, both of them were affected when covariate natural risks happened, and it was hard for poor households to rely on aid from their neighbors under such circumstances, so they had no other choice than to sell assets, mainly livestock. However, there were still 40% of poor households that could only rely on neighbors' aid during the most difficult time. Generally speaking, when covariate risks such as natural disasters happened, in addition to government aid, the assistance funds set up by communities previously, going out to work and collective construction of dams, also played a role in mitigating the negative effects of risks. According to their experience and expectations, farming households thought that of all the risk-reducing strategies, a community safety net was the most effective, and education for children was an effective long-term strategy. Access to training for new agricultural and farming technologies, joint decision-making and increasing the number of grazing herds were considered to be effective long-term strategies that could enhance risk-resisting capacity. Farming households also considered that diversified forms of income and strengthened family ties would be effective in the sort-run.

The Qinghai-Tibet Plateau complex erosion ecotones are mainly in the arctic-alpine mountain valleys in the middle reaches of the Yalu Tsangpo River, the North Tibet Plateau and Sanjiangyuan region (the source region of the Yantze, the Yellow and the Lancang Rivers) in Qinghai Province. Eco-environmental vulnerability is manifested in arctic-alpine terrain, harsh natural conditions, sparse vegetation and multiple phenomena of soil erosion including wind, water and freezing erosion (Ministry of Environmental Protection, 2008).

The survey conducted by Chen Jie et al. (2009) in Maduo County in Sangjiangyuan region of Qinghai Province indicated the deeper impacts of climate change on impoverishment in this region. During 1979 and 1981, Maduo County boasted the highest per capita income in China. In 1979, the total livestock inventories in the county reached up to 676,700, with per capita of 115.1. However, as a result of the drought in the 1980s, the grasslands degraded and livestock carrying capacity reduced, and thus there was not enough feed for livestock. In 2004, the total amount of herbivorous livestock inventories reduced to 238,600, declining by 64.7% compared with that in 1979, while the per capita amount reduced to 19, declining by 83.5%. More than 630 households of herdsmen became eco-refugees every winter, comprising 26.9% of all herdsman households. More than 2,800 small lakes have dried up, with field areas shrinking year by year, and the conservancy of water sources became weaker.

By the end of the 1990's, the section between Zhaling Lake and Eling Lake at the source of the Yellow River had dried up, so that the people in Maduo County were short of electricity and water, with no water for drinking, even though they lived in the source region of three rivers. Grassland degradation seriously affected the production of animal husbandry and made the poverty suffered by herdsman worse. In 2004, there were 839 poor households in Maduo County, comprising 35.82% of the total, and 3,219 poor people, accounting for 31.9% of the total population in the pastureland. The adaptive measure taken by some herdsman was to leave their pasture and go out to graze herds as hired herdsman, or conduct other productive activities.

5. Adaptation to climate change: Corresponding external assistance

The poor population has accumulated many experiences during the prolonged process of adapting to and resisting risks caused by climate change. However, there are still a considerable number of problems:

- Not all the people are aware of climate change risks, so that they may lose opportunities to take adaptive actions.
- Even though they may be aware of climate change risks, they may not counter these risks in an effective way, i.e. the vulnerability caused by climate change risks cannot be reduced, due to the lack of various resources.

The adaptability of communities and organizations can be affected by the unpredictability of climate change, such as frequent biological disasters caused by increasing temperature and the change of ecosystems due to exotic species. There is greater unpredictability when the development of poor communities is cut off by natural disasters. However, in the areas more vulnerable to drought, hurricanes or disease, such unpredictability can be reduced by collecting relevant data and conducting necessary experiments. Experiences in water resources management in China show that unpredictability can be transformed into predictability.

Constant migration and adjustments to and changes in agricultural production patterns and production mode in Chinese history have been the results of the joint efforts of social and economic factors and the changes in living and production conditions caused by climate change, particularly natural disasters. Migration caused by climate change in Chinese history shows that adaptive processes that have features of both planned and autonomous measures is vital for social and economic stability and sustainable livelihoods. The natural features along the Yellow and the Yangtze Rivers make the surrounding areas more vulnerable to floods. Construction of water conservancy facilities lays a foundation for the people's staple life and well-being. The river courses in the lower reaches of the Yellow River were fixed after the large-scale construction of dams in the middle of the Warring States Period (475-221BC), and people could settle down in these areas. At the same time, people's proactive adaptive measures reduced disasters. For example, the safe passage of water in the Yellow River in the Eastern Han Dynasty (25-220 AD) came from changes in the mode of land-use in the middle reaches, where the previously cultivated farmland became pasture or was left wild, so that natural vegetation was restored and soil erosion controlled (Ge Jianxiong, 1997).

Understanding and forecasting climate change risk and corresponding prevention measures will help reduce livelihood vulnerability. However, the groups that may be affected by such risks have to possess capacities or relevant information to achieve this goal. First of all, they should be aware of the possibility and time of climate change risks,

and then take various measures in immediate response and long-term adaptation, as well as provide conditions for these measures. Unfortunately, the poor population is short of these necessary capacities and conditions. It was the poorest and least-educated people who were not made adequately aware of the government warnings when Hurricane Katrina hit in 2005. Education for the most vulnerable groups will improve their capacity to respond. Moreover, education is quite important for these people, in relation to issues of equality. For instance, education for girls is a major way to get rid of intergenerational poverty. Besides, education is closely related to healthier children and families and to sustainable environment management (Human Vulnerability and Environment, 2009). Similar cases in China also indicate that the poor needs to enhance its capacity for identifying risks, namely, the vulnerability caused by climate change risks, and make better use of various resources to effectively coordinate all stakeholders for prevention and responses. In addition, other capacities for mitigating climate change risks also need to be enhanced for individuals and communities, so that they can make use of existing human and material resources to adapt and deal with risks in a more effective manner (Box 13).

Box 13: Limits of the capacity of mitigating climate risks by a village in the coastal water-land transition areas

After planting white poplars as part of the agricultural restructuring effort to mitigate climate risks such as rainstorms, the village has to face new problems, such as insect plagues and hurricanes. What makes the situation worse is that, as most young men have gone to work in neighboring towns and cities, leaving behind only the elderly, less able laborers and children, who are unable to deal with emergencies without assistance from able youth. In addition, organizations do not fulfill their responsibility in disaster management, for example, they do not organize villagers to maintain drainage ditches. Therefore, it is vital to strengthen village-level institutional development, so as to encourage local community self-management organizations, farmer's cooperatives, women's societies and the Communist Youth League to participate in the management of disaster risks.

Farming households hope to gain external assistance to improve their own adaptability. The studies in Ningxia Hui Autonomous Region showed that farming households in the northern irrigated area hoped that the government could provide substantial support for "farmland capital construction", "input of agricultural materials" and "cash transfer", for the locals engaged in agriculture and animal husbandry, thereby enabling them to develop businesses as alternative livelihoods. Though the farmers in the middle arid area also expressed their hopes for the above-mentioned assistance, what they needed most was a direct "cash payment" from the government, since quite a proportion of local agriculture has been seriously affected by drought and many farmers thought that the problem could not be solved by farmland capital construction or increases in input of agricultural materials, and that cash subsidies would be more effective. Similar to the situation in the middle area, the farmers in the southern mountainous area relied more on cash payment and input of agricultural materials (Wu Yanjuan, 2008).

External assistance from government institutions, non-governmental organizations or other social service organizations are all vital for the poor population to counter climate change risks. Government and assistance organizations had worked out programs before the floods hit India and Bangladesh in 2000. These organizations drew maps of

In the process of enhancing the adaptability to climate change, it is vital for external assistance to transform the unpredictable into the predictable

External assistance can help poor population work out pre-disaster aid programs

External assistance can help poor population and communities take the measures that combine traditional and modern technologies to ensure the livelihood safety

The alternative livelihoods from external assistance can improve the autonomous adaptation to climate by enhancing the reserve capacity

village vulnerability, helped villagers identify safe, low-risk and highly-vulnerable areas, estimated the number of local households, considered the situation of local vulnerable groups/population in relation to the elderly, the disabled, women and children, and especially the sick, gave forecast of floods, prepared first-aid facilities, daily necessities, sanitary facilities, and organized site maneuvers. By so doing, they saved the locals' lives and assets and helped establish a self-response and recovery system (GOWB, 2005).

The importance of external assistance can be also seen in the case of pasture restoration and livelihood maintenance in the Republic of Sudan (Dougherty *et al.*, 2001): to mitigate the local drought, between early 1992 and 2000 aid organizations helped the locals restore the over-exploited and highly-vulnerable pasture, through managing technology for basic natural resources in communities. The various actions for sustainable livelihoods included training, pasture restoration and community development. Similar to the above-described measures for pasture restoration, and as indicated in a joint report (IISD *et al.*, 2004), Turkish herdsmen began to take action to restore woodland ecosystems in the north of Kenya after the famine caused by the drought in 1960, since woodland ecosystems provided them with major livelihood products and met their needs. The Turkish herdsmen restored about 30,000 hectares of woodland by adopting traditional management systems such as fences, and provided the locals and livestock with basic forest products, ensuring their livelihood. To mitigate the impacts of floods, some local governments constructed flood dykes, made adjustments to policies, reforested, improved monitoring systems, built reservoirs, added aid from private funds, established drainage systems, invested in cooperative projects jointly launched by individuals, government and relevant institutions, and adopted economic incentive mechanism (Vari *et al.*, 2003; Manuta *et al.*, 2001).

Some external assistance is in the form of cash. The survey in three villages in Ningxia Hui Autonomous Region (Table 7) showed that development activities carried out by farming households earning income mainly from sheep breeding reflected the farmers' autonomous adaptation to climate change: they had sufficient reserves to counter risks when drought affected the growth of grass or the yield of maize. In addition, governments played an important role in such activities. In 2005 and 2006, the government of Yanchi County invested more than RMB20 million in the construction of fences on grasslands, and of warm sheds.

Table 7. Development activities conducted by the farmer households during sheep breeding in three villages in Yanchi County

Development activities	Advantages	Disadvantages	Opportunities	Risks
Grass and trees planting and reseeded of quality herbage	Protection against wind and sand fixation		Quality seeds provided by the county-level administrations of animal husbandry and grassland stations	No risk
Grassland contracted and fencing	Contracted to and managed by household to achieve better result	Big investment needed	Large amount of government subsidies	No risk
Sheep sheds building to increase the amount of pen-raised sheep	Increases in income from sheep breeding and obtain experience in breeding	Lack of technology and funds	Free government investment and subsidies and training for pen breeding	Low risks
Reduction of livestock amount carrying in pasture	Vegetation restoration	Farmers' livelihoods affected		No risks
Feed processing machines provided	Planting maize in irrigated land, to increase stalks and remarkably reduce the cost of sheep breeding	Shortage of funds	Aids from government and other projects	Low risks

Services of engineering technology and information-based forecast also help enhance adaptability

External assistance shall be based upon locals' initiative and knowledge

External assistance can often enhance the locals' adaptability by providing support for engineering technology. For example, floods are the most frequent and damaging natural disaster in Asia. Flood control gets more complex due to climate change. Jesse Manuta thinks that it is necessary to control floods and mitigate the impacts with technological and engineering measures. Take the type of aquifer management adopted in Iran for flood control for example. Traditional technologies were adopted to collect, store and distribute water resources, enriching livelihood diversity and reducing vulnerability caused by floods (IUCN *et al.*, 2004; Jesse Manuta *et al.*, 2005).

Release of and access to forecast information is of equal importance in enhancing adaptability. Studies carried out taken by Gina Ziervogel and Rebecca Calder (Gina Ziervogel *et al.*, 2003; quoted from a secondary source, Wu Yanjuan, 2008) showed that farmers in South Africa devote considerable time to assessing weather information, deciding accordingly when to sow seeds, what crops or vegetables to plant, when to sell livestock and raw materials, how to manage water and soil, whether to let children go to school and which market should be chosen. For instance, they will choose a drought-resistant variety of maize or a variety with a shorter growing period, or use fences, if rainfall is around 40 % less than normal precipitation, according to forecasts.

Locals' initiative and knowledge also play an important role in the process of autonomous adaptation. When the Senegal River flooded, relevant agencies organized local people to take a series of actions to protect the local wetland ecosystem and to resist the floods (Hamerlynck *et al.*, 2004). It was proved to be both feasible and beneficial for the local residents to take part in the management of wetland protection. Ecological measures could control the flood and restore the structure and functions of the severely-damaged wetland ecosystem. These measures were also beneficial for biodiversity and local livelihoods (Sherbinin *et al.*, 2000; Pirot *et al.*, 2000; UNDP *et al.*, 2005). In Hungary, many people who are repeatedly affected by floods try to earn their living through diverse activities, such as planting plum and walnut on flooded plains, processing primary products (jam manufacturing), family handicrafts (traditional carpet weaving and embroidery), or taking flooded plains as pasture (Vari *et al.*, 2003; quoted from a quotation by Wu Yanjuan, 2008).

Adaptive measures are diverse. Various economic activities play an important role in reducing vulnerability caused by climate change risks. Cooperation during the process of adaptation is also vital. There was almost no rainfall in B Village in Xilingol League of Inner Mongolia Autonomous Region in the spring of 2006, and most herdsmen adopted "aoteer", i.e. a way of grazing in various pastures, to prevent herds from dying. Some herdsmen households became friends and established reciprocal relations. In some years, B Village also received herdsmen households in the way of "aoteer" (Li Wenjun *et al.*, 2009). In a region of India, farmers deal with drought with a series of strict measures of drainage reconstruction, including management of soil, land and moisture, crops management, afforestation, rural energy management, animal husbandry management and community organizations such as "rural self-aid organization", to reduce vulnerability to drought and to strengthen, enrich and guarantee the livelihoods of local farmers (Watershed Organization Trust). In a case study on Mexico, Hallie Eakin (Eakin, 2005) suggested adopting measures for increasing nonagricultural income by choosing varieties of crops. Some studies show that agricultural eco-measures can resist typhoons, mainly by conserving water and soil, using organic fertilizer, improving management of plant diseases and insect pests, and changing modes of grazing (reduction in grazing or zero grazing) etc. A typical case is in some areas of Vietnam, where local residents mitigate the impact of typhoons by restoring the mangrove ecosystem along the coastal line, and this has enhanced the local capacity of natural protection and consolidated the

The alleviation mechanism of external interventions concerns governments, communities and markets

foundation of resources for residents' livelihoods (IFRC, 2001; World Neighbors, 2000). In areas in Mexico where frost occurs frequently, farmers compensate for the loss of rainwater-dependent crops through changing crop varieties, increasing nonagricultural income and developing animal husbandry. (Eakin, 2005; quoted from a secondary source, Wu Yanjuan, 2008).

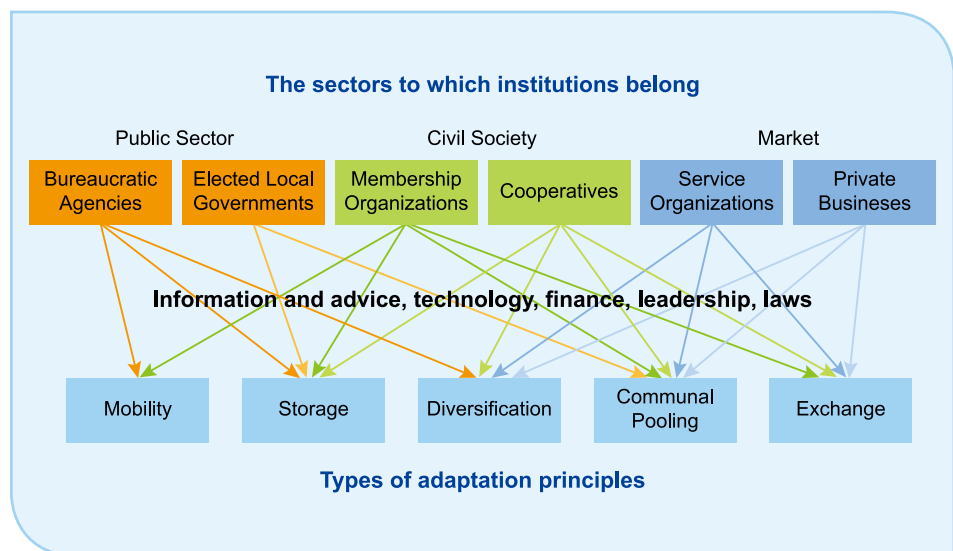
Migration is another adaptive option. In Senegal, floods cause loss of natural resources on most land, so many people, especially capable youth, have migrated to other countries for a better life (Hamerlynck et al., 1999b). Furthermore, in the above-described case of Mexico, migration has become an effective responsive measure for farmer households to strengthen the stability of their future living conditions. When drought hits, farmers in Sri Lanka leave for work outside their villages in slack farming seasons and earn income from petty goods business, to guarantee grain safety (Hidellage, 1998; quoted from a secondary source of Wu Yanjuan, 2008).

6. Foreign experiences: Including climate change risks in PA framework

In reality, long-term adaptive measures are better than short-term responsive ones in reducing livelihood vulnerability caused by climate change risks and in promoting livelihood sustainability (Kinyangi, 2009). From the perspective of asset accumulation for poor farming households, actions that can help farmers gain long-term assets become important (Mahoney, 2007). Ever-increasing economic opportunities and the extension and establishment of social relations are vital for the poor population to improve their adaptability. Long-term and effective national supporting policies can play an important role here, including ecological compensation mechanisms, budgetary aid for alternative livelihoods and long-term mechanisms for the capacity development of organization and cooperation for farmer households during adaptation to climate change.

Based upon Agrawal and others, the Commission on Climate Change and Development proposed in its report a framework where adaptation is promoted through alleviation via external interventions (Fig. 13).

Fig. 13: The alleviation mechanism of external interventions to promote the adaptation to climate change



Source: Ian Christoplos et al. (2009).

This framework concerns all the relevant parties: governments, communities and markets. The framework shows that the market provides various opportunities for production, so that the poor population can increase wealth, health and knowledge for their adaptability through product sales and small business activities conducted in the market. Ecosystem services determine the natural capital possessed by the poor population, and they are also an important part of adaptability. All the parties can provide adaptive groups with support via information and advice, technology, finance, leadership and laws through structured and interactive mechanisms. Such external interventions promote resource mobility, capital storage, diversification of livelihood activities and communal pooling, so that communal and individual adaptability can be enhanced.

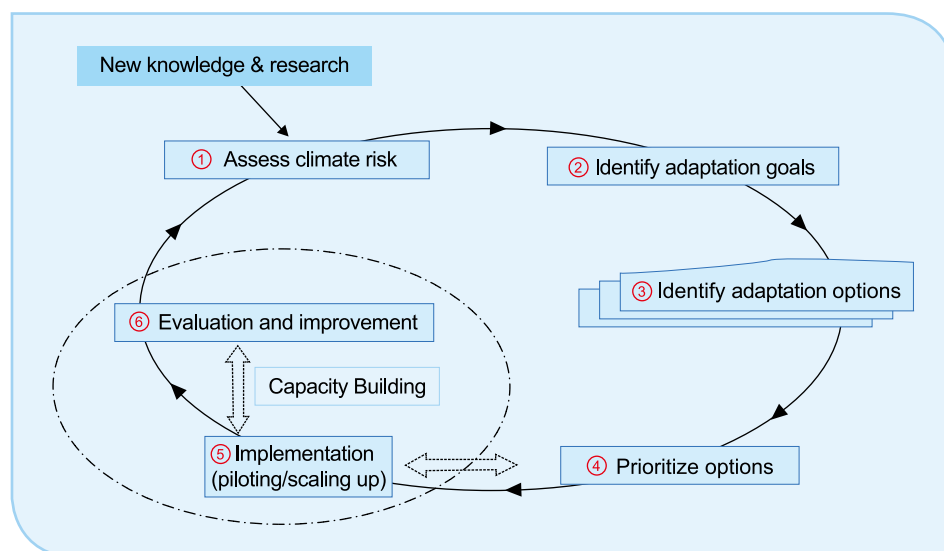
Women in Guatemala, Nicaragua, El Salvador and Honduras have planted 400,000 maya trees in the four countries since 2001. With grain safety guaranteed, women and their families can also benefit from aid funds for climate change, such as the “Balanced Funds” initiated by the US and Europe in pursuit of carbon credit trade opportunities (World Bank, 2010). Calculating the contribution of tree planting to mitigating climate change impact and setting up corresponding incentive mechanisms can actually carry forward such actions. In the meantime, such behavior can be facilitated by marketing mechanisms.

A forestation and re-forestation project on degraded land in northwest Sichuan is the first forest carbon marketing project in China based on climate, community and bio-diversity (CCB). After five years’ preparation and authentication, the project was completed on 26th November 2009. The owner of the project is Daduhe Afforestation Bureau and it sold 460000 tons of its carbon emission quota to the Hongkong Low-carbon Asian Company, at a price no lower than US\$5 per ton, and the income exceed US\$2.3 million. This project will build up 2251.8 hectare artificial forest on degraded land in 28 villages of 21 townships in five counties of Li Xian, Mao Xian, Bei Chuan, Qing Chuan and Ping Wu. With regard to the than US\$2.3 million income from the carbon emission quota, the official responsible in the Bureau claimed that it will be shared with 12745 farmers in five counties on a ratio basis, and the farmers in the project implementation district will obtain a stable income for 20 years (Hu Yanshu, 2009).

Supported by DEFRA (UK Department of Environment, Food, and Rural Affairs) and DFID (UK Department for International Development), the Chinese Academy of Agricultural Sciences, Ningxia Municipal Commission of Development and Reform Commission, Ningxia Meteorological Bureau and the University of East Anglia have drawn up a framework for adaptation for Ningxia Hui Autonomous Region, as shown in Fig. 14. In the framework, there are six steps for adaptive strategies: assessing climate risks within the framework for adaptation (risks in the coming 20 years); identifying adaptive objectives; identifying adaptive measures and technologies; ranking priorities for adaptive measures and forecasting possible problems in implementation; monitoring, evaluation and capacity building in implementation; and a new round of adaptive activities after adjustments.

Framework for adaptation to climate change has been started up and implemented in Ningxia Hui Autonomous Region, China

Fig. 14: Framework for adaptation to climate change in Ningxia Hui Autonomous Region



Source: Declan Conway (2008).

Within this framework, the Ningxia Hui Autonomous Region is divided into southern, eastern and northern parts, following a risk assessment and an analysis framework for identifying and choosing adaptive activities is developed subsequently. The analysis framework takes poverty alleviation, ecological protection and responses to disasters as its objectives, and evaluates the intended effects of agricultural restructuring (subdivided into farming restructuring and introduction of new crops), water-saving technology and the construction of water-saving infrastructure (including cultivation of drought-resistant seeds, film-covering water-reserving technology, water-pumping irrigation and construction of water-storing cellars and reservoirs) and poverty alleviation activities (including returning farmland to grasslands and ecological migration).

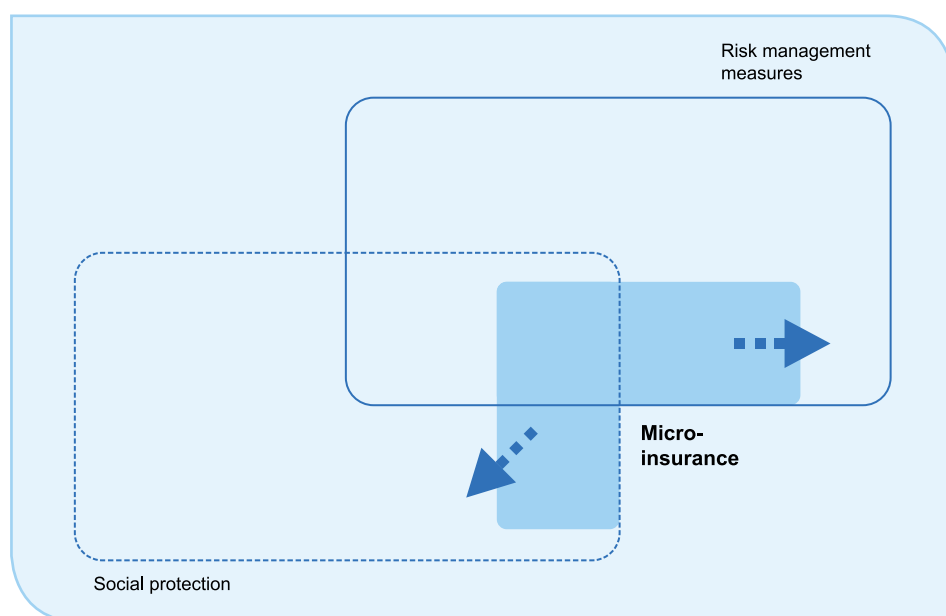
The analysis framework will also evaluate the autonomous adaptability of these activities. Afterwards, it will choose the activities with high scores but not very high adaptability and in need of external aid, and provide support for them. After determining the adaptive activities, the analysis framework will identify relevant institutions, and determine ways of participating in various activities for all the chosen institutions, in relation to coordination, technological support, specific activities and capacity building.

More and more countries and organizations consider social transfers as an effective measure and include them in policies aiming to promote equal access to resource opportunities. Social transfers are referred to the regular preset donations targeting the poor population. However, social transfers in many areas do not cover climate risks, and top-to-bottom plans have overlooked the security demanded by individuals and families when they face risks. Nevertheless, the assessment of social transfer mechanisms in Mexico, Brazil and Ethiopia show that compared with the other adaptive channels, state-managed social transfer projects have a higher potential capacity for helping enhance the poor population's adaptability to climate change.

A social transfer project has influences on a wider scope and is operational and of higher comparative advantage. The result of poverty reduction can be visible, if the poor population's adaptability to climate change is enhanced through social transfers. A social transfer has the following features: First of all, specific security is required in the aspects of support and time limit, since adaptability building aided by social transfer

needs long-term and pre-fixable funds. The awareness of the poor population's rights to climate adaptation can help intensify policies. Secondly, policies for social transfer, divisions for wider services and plans for climate adaptation should be consistent, and then government coordination between divisions of health, education, social welfare and agriculture is important. Thirdly, capital aid from social transfers will go together with institutional capacity building, and technological change is essential. (Christoplos et al., 2009).

Fig. 15: Microinsurance: risk management and social protection mechanism



Source: ILO/STEP-GTZ (2006)

A research report by the International Labor Organization (2006) indicates the significance of risk management and social protection mechanisms in poverty alleviation strategies, and points out that micro-insurance can be effective as a specific measure for risk management and improving social protection mechanism. Institutions and organizations relevant to micro-insurance are diversified public organizations. They need direct functional departments (health service department in the report), cooperatives, associations, federations, non-governmental organizations and microfinance institutions to support their system setting and operation, and to provide insurance service to their members, and they also may cooperate with public or private insurance companies. These mechanisms can cover various risks in fields such as health, maternity, property, life, crops and so on, and have some features in common: adopting insurance mechanism; excluding at least some beneficiaries, for example, workers in unofficial departments and their families, from the formal social protection mechanism; non-compulsory membership; fees partly paid by members; and providing social security different from that offered by official departments. Micro-insurance mechanisms should be based upon risk analysis and the priority demands of targeted groups. Furthermore, issues such as whether micro-insurance has comparative advantages compared with the other measures, whether it can be linked with the other mechanisms and how it can be integrated into social protection mechanism will be analyzed.

Micro-insurance services already launched in China are relevant for devising policies aiming to counter climate change risks and reduce the poor population's livelihood vulnerability. The China Insurance Regulatory Commission has launched agricultural

insurance pilot projects in 5 provinces (municipalities and autonomous regions) including Heilongjiang Province and Xinjiang Uygur Autonomous Region since 2004. Micro-insurance has been promoted in 9 provinces and autonomous regions in 2008 and spread to 19 provinces and autonomous regions. In recent years, a service system for agricultural insurance and rural micro property insurance has been established, combining the national service network consisting of national insurance companies such as the People's Insurance Company of China (PICC) with the five insurance organizations specializing in agricultural insurance. The 2010 "No. 1 Document" clearly states the aim to "develop micro-insurance in rural areas". The Opinions of Strengthening the Cooperation between Agricultural Loans and Agricultural Insurance jointly published by the China Insurance Regulatory Commission and the China Banking Regulatory Commission stated from the angle of policy that insurance penetration should be increased among providers of agricultural loans, and requested financial institutions in the banking industry to expand the scope and increase the varieties of policy mortgage for agricultural insurance. This means that policies with cash value held by farmers can be used as collateral for the application for loans. Microfinance services take the purchase of agricultural insurance as a credit factor.

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7. Suggestions

7.1 Long-term PA strategies: Reducing climate change risks

Egalitarian principles should pervade the entire processes of both poverty reduction and mitigation and adaptation to climate change. In the processes of mitigation and adaptation to climate change, such as carbon marketing, carbon taxation acquisition, and tax utilization, focus should be placed on equal access to benefits. At the same time, poverty alleviation strategies taking into consideration climate risks is a concrete approach for enabling poor farming households to obtain equal access to benefits.

Poverty alleviation strategies should be sensitive to climate risk. Systematic poverty alleviation strategies should give full attention to the threats of climate change risks to the poor population, and reduce the livelihood vulnerability of the poor population in ecotones, through working out strategic direction, contents and modes.

The contribution of the poor population to mitigating the impact of climate change (via nature reserves/areas prohibiting exploitation, grassland ecological construction projects, afforestation and re-forestation projects, food security projects, and bio-energy projects etc.) must be fully compensated. Compensation should be combined with the implementation of development strategies for the livelihoods of the poor population, to ensure that compensatory measures can promote their asset accumulation and secure sustainable livelihoods.

Specialized poverty alleviation measures and financial budgets, as well as specialized transfer payments will be established for ecotones.

The enhancement of local residents' adaptability to climate change risk should be combined with the communal and cultural development of ethnic minority communities in ecotones where ethnic minorities are concentrated, such as Sichuan, Guizhou, Yunnan, Chongqing and Guangxi in the Southwest karst and desertification ecotone, over 40 counties and municipalities such as Aba Tibetan and Qiang Autonomous Prefecture, Ganzi Tibetan Autonomous Prefecture and Liangshan Yi Autonomous Prefecture in Sichuan Province, Diqing Tibetan Autonomous Prefecture, Lijiang city and Nujiang Lisu Autonomous Prefecture in Yunnan Province and Liupanshui city in the northwest of Guizhou Province in the Southwest mountainous agriculture-animal husbandry ecotone, and the Tibet Autonomous Region and Qinghai Province in the Qinghai-Tibet Plateau complex erosion ecotone.

7.2 Medium-term policies and programs: Adaptive policies for climate change in a PA framework

Firstly, analysis⁷⁴ and evaluation of climate change risks should be an important part of poverty alleviation programs. Analysis and evaluation shall be made within the scope of ecotones, and indices such as changes in rainfall and frequency of drought and floods

Poverty alleviation strategies should be sensitive to climate risks

Analysis and evaluation of climate change be included in poverty alleviation programme

⁷⁴ China has set objectives on carbon emission reduction that CO₂ emission be reduced by 40~45% in 2020 compared with that in 2005. It is a mandatory indicator being listed in mid and long-term national economic and social development plan.

Social protection mechanism with earmarked funds for adaptation

included in the existing data system, providing basic support for risk assessment.

Secondly, social protection measures should be transformed into adaptive measures, and policy support required by adaptive measures quantified and included in budgets as “specialized aid funds for adaptation to climate change in poverty alleviation”. The measures will include the technological support required for production restructuring, technologies and funds required by alternative livelihoods, market information, information required by migrant workers, technological and network support, and other support required for the prevention of, and resistance to natural disasters (this support can be realized through organizing relevant institutions to evaluate adaptive activities aiming to reduce climate change risks for the poor population. The evaluation can be based upon the research results of the Chinese Academy of Agricultural Sciences and via participatory evaluations). It is important to focus on women’s needs, particularly in those communities where most men leave for off-farm work, yet decision-making remains the preserve of men remaining behind in the village.

Under these conditions, capacity building is necessary. As analyzed previously, local governments are often in a weakened position, due to the impact of covariate shocks. Therefore, relevant inputs are needed, to establish a management structure at local and state levels, ensuring the poor population’s access to various services and social protection mechanisms, and their participation in the effective management of natural resources, so that they are capable of responding to risk. During the implementation of various policies, we should be more fully aware of the risks of changes resulting from climate change. Capacity building should attempt to enhance capacities such as leadership, information, capacity of technology and capital services, and the capacity to improve the local business environment to assist in the development of sustainable livelihoods.

Lastly, select representative pilots should be developed in different ecotones, and alternative activities designed for livelihoods with the involvement of multiple-stakeholders. These activities should be combined with capacity building and “specialized aid funds for adaptation to climate change in poverty alleviation”, looking for activities suitable for replication, dissemination and implementation.

7.3 Immediate policies and measures

More attention to the measure of work for relief in ecotones

Firstly, the use of labor for relief work is still important, since infrastructure construction can help improve the poor population’s adaptability to climate change. More attention should be paid to ecotones during the implementation of such measures, and this should be combined with migration or other measures.

Setting up funds for climate change risks

Secondly, the Ministry of Finance should set up “funds for climate change risk” (or raise funds through social transfer mechanisms), to respond to natural disasters and reduce losses. Such funds can provide aid for improving the ability of the poor population to adapt to climate change risk, so that they can obtain relevant material and aid when faced with the challenges of climate change, especially natural disasters. Funds can be managed either by poverty alleviation offices or by poverty alleviation foundations.

Establishing micro-insurance mechanism against climate change risks

Thirdly, micro-insurance mechanisms⁷⁵ can be established in areas with higher climate change risk (or in the 19 key protection areas listed in the protection program of Ministry of Environmental Protection), so that farming households can be compensated at the

⁷⁵ Microinsurance mechanism relies on mutual trust and cooperation between communities, to reduce the chance of covariate shocks transforming into idiosyncratic shocks. The mechanism can prevent uncertainties of pure post-disaster relief from happening and covers a wider range. It can be operated on the basis of the current practice of microinsurance.

maximum level for their asset losses when climate change risks hit, and prevented from sliding back into poverty or suffering from aggravated poverty (as with risk funds, micro-insurance mechanisms have different criteria for various insurance types, and we need to determine and evaluate insurance types, probably testing ‘weather-index’ insurance mechanisms in some poor areas).

The operation of micro-insurance mechanisms should include:

- Establishment of prepaid funds: Regular prepaid funds will be set up in areas sensitive to climate change risks before these risks occur. Most of the funds are from budgetary sources and included in “specialized aid funds for adaptation to climate change”, and a small part is paid by people in key protection areas.
- Risk sharing: Compensation from prepaid funds for people affected by risks; no withdrawal of the prepaid amount allowed for unaffected people.
- Administrative structure: Micro-insurance mechanisms will be included in existing poverty alleviation operations. Current communal development funds/mutual aid funds and microfinance can be combined with micro-insurance. Based on experiences with agricultural micro-insurance in some areas, some poverty alleviation funds can be used in the form of premium subsidies⁷⁶. Furthermore, with support from current policies, micro-insurance policies can be used as collateral in applications for small loans, and managed together with mutual aid funds. Such an administrative structure can be tested in cooperation between governments, communities and market, to reduce climate-based poverty. Current organizations for implementation and monitoring poverty related policies, farmers’ cooperative organizations, and long-term pilot sites of research institutes are all bases for experimenting with micro-insurance schemes.

Fourthly, improvements in the ability to adapt to climate change risks can be integrated with the implementation and monitoring and evaluation of poverty alleviation programs. As with the participatory village-level development program, people affected by idiosyncratic shocks (diseases, incidents etc.) and covariate shocks (failure of harvest due to drought and floods) will be treated as a separate group, and provided with solutions and suggestions for relevant activities. Various groups, especially women, will be given special attention in relation to their participation in the process. Monitoring and evaluation systems will include dynamic evaluations of climate change risks and corresponding adaptability (at regional- and communal-levels), utilization and effects of specialized aid funds for adaptation to climate change (at regional-level), adaptation and climate-change managing capacity-building for staff at all levels, utilization and effects of funds for climate change risk (at communal- and individual-levels) and the implementation of micro-insurance (at communal- and individual-levels).

“Enhancing awareness of and adaptability to climate change risks” is a key issue throughout the whole process, and will be assisted by the provision of cash transfers.

Integrating adaptation to climate change into the development program

⁷⁶ In accordance with the requirements of accelerating pilot projects of agricultural insurance by the state and Shandong Province, Ji’nan municipality worked out 2010 Implementation Plan for Pilot Projects of Agricultural Insurance in Ji’nan. In 2010, the pilot projects concerning planting are launched in Pingyin County, Shanghe County and Changqing District, and Pingyin County for animal husbandry. Farmer households in these pilot counties (districts) are organized in the unit of village to buy insurance. The insurer in Ji’nan is PICC Ji’nan Company. 80% of insurance premiums for wheat, maize and cotton are subsidized by government finance, the other 20% paid by farmer households. Central and provincial finance pay 60% of the premiums. The agricultural insurance subsidies in Changqing District and Pingyin County are shared between the municipal and county (district) finance, with 10% each. And the agricultural insurance subsidies in Shanghe County are shared by the municipal and county finance, with 15% and 5% respectively.

When working out these programs or designing projects, we will take climate change risks as an important index of evaluation to assess the rationality and effectiveness of programs and projects, to provide assistance for the final approval of projects and decision-making.

7.4 Fields for potential international cooperation

We can cooperate with relevant international organizations to design and implement climate-sensitive poverty alleviation strategies. International cooperation may be conducted in such fields as the “establishment and management of pro-poor specialized funds for climate risks”, “micro-insurance mechanisms targeting the poor population in ecotones” and “enhancing community capacity building and promoting adaptation to climate risks”. Such research can provide conclusions, suggestions and recommendations for the above policies and measures. If implemented, the applicability and feasibility of these suggestions will still require further studies and timely adjustments in practice. At the same time, we can also learn from foreign experiences during implementation.

Additionally, there should be continued research on the impact of coping with climate change on poverty in China, with analysis on its impacts pathway. Analyses can be undertaken of how coping activities can influence production, resources utilization and employment structures, and then influence poverty. On the basis of this analysis, the responsibilities of China’s Government and international society for minimizing negative impacts can be specified.

Appendix Five

Climate Change and Poverty Reduction Policies: International Experiences and Case Studies

During the last decade, a considerable amount of research has been undertaken in both developed and developing countries on the impact of climate change on poverty conditions. The vast majority of assessments conclude that poverty is a powerful influence on household's abilities to deal with the impact of climate change. They indicate that households living in poverty often rely heavily on climate-sensitive resources as a basis for their livelihoods. Indeed, overall, poor households appear to rely more heavily on these resources than non-poor households. Additionally, poor households usually have fewer assets available to deal with the adverse impact of climate change. Poor households also often live on the least productive or more disaster-prone lands (flood plains, urban slum areas, low-lying coastal areas, hillsides), which make them particularly susceptible to the impact of climate change. Poor households thus are particularly vulnerable to climate change, and it is difficult for them to deal with its impact.

Internationally, the main concepts used in recent years to assess the impact of climate change on poor households, and—more importantly—to plan for assisting households and communities to deal with the impact of climate change are *vulnerability*, *resilience* and *adaptation*. These ideas have influenced strongly the case study examples outlined later in this Note.

Vulnerability is concerned with the degree to which households and communities have the ability to cope with, resist and recover from the impact of stresses or shocks induced by climate change. *Resilience* is often used alongside vulnerability. It usually refers to the ability of communities to cope with the adverse impact of climate change—to their capacity to anticipate, prepare for, respond to, and recover from the impact of climate change. *Adaptation* is concerned with adjustments or changes in household/community conditions that can enhance their resilience and reduce their vulnerability to observed or expected changes in climate. Examples of adaptation are communities reforesting to deal with flood-induced landslides; regenerating vegetation to reduce land degradation; erecting local wall defences to deal with rising sea-levels.

Internationally, a key issue for most research and policy formulation in recent years has been to improve our understanding of the main features of poor communities' adaptive capacity. This has enabled both national and local governments to assist poor communities in dealing with climate change. The Intergovernmental Panel on Climate Change (IPCC)'s 2007 Assessment Report stresses the importance of human capital and governance in assisting communities' adaptation. Most comprehensively, the recent ACCRA Framework states that building communities' adaptive capacity depends on six basic features:

- Strengthening communities assets base;
- Ensuring equitable access to these assets by all groups in the community;
- Disseminating within communities detailed information on the impact of climate change;
- Assisting innovation within communities to address the impact of climate change;
- Assisting the community in responding to change via improving groups participation in decision-making;
- Provision of formal settlement rights.

All these features need to be taken into consideration in planning for assisting households and communities. Based on these, there appears to be emerging a degree of consensus on how best to protect poor communities from the impact of climate change. This consensus highlights the following strategies:

- Use of social transfers (cash transfers, conditional transfers).
- Design and implementation of basic safety nets.
- Diversification of livelihoods
- Promotion of weather-induced insurance schemes.
- Access to credit –and particularly to microfinance.
- The promotion of public works.

For the current Chinese context, the most relevant of these suggestions seem to be in the area of social protection for poor communities. Much of what is suggested internationally in relation to areas such as managing disasters, provision of infrastructure, monitoring of changing climate conditions, and integrated flood management is already well known and practised in China.

However, lessons from the experiences of other countries in providing social protection for poor communities under threat of climate change may have some relevance for addressing vulnerability and facilitating adaptation in the Chinese context. By way of illustration, these experiences can be categorised as follows:

- Ensuring climate information is available to, and is disseminated within communities;
- Using community based knowledge in assessing the local impact of climate change;
- Developing comprehensive strategies for infrastructure mitigating climate impact;
- Creating Insurance Schemes for Social Protection;
- Creating appropriate safety nets for affected communities.

In what follows, we give examples in each of these areas:

Dissemination of Information within Poor Communities:

In the United Kingdom, following a recent, comprehensive survey of the social impact of flooding in both rural and urban areas, the Government's Department for the Environment, Food and Rural Affairs (DEFRA), concluded that addressing the impact of flooding on poor households depends crucially on developing meaningful dialogue with flood-affected communities. Successful dialogue was found to depend on: the provision of the results of flood mapping via internet sites; dissemination of regular and reliable updates on changing conditions primarily via television and radio; regular consultations with potentially affected communities; involvement of communities in monitoring; participation of community representatives in decision-making bodies, particularly in decisions on local infrastructure requirements⁷⁷.

Many commentaries focus on the importance of developing capacities within poor communities for monitoring and (if possible) forecasting of local climate conditions, given their importance for the livelihoods securities of poor households. For example: in transmitting warnings of sudden changes in temperature or in rainfall patterns, or involving community representatives in work on systems for longer-term seasonal forecasting. This is crucial particularly in rural communities, enabling farmers to respond to potential climate induced problems by adjusting their planting decisions, or by changing the crops they plant. References are made on several occasions

⁷⁷ See *The impact of flooding on urban and rural communities*, DEFRA and the Environmental Agency Flood and Coastal Erosion Risk Management Research and Development Programme, UK Government, 2005.

to the case of the national meteorological service in Mali⁷⁸, which has developed a programme for transmitting rainfall and soil moisture information through a network of farmers' organisations, non-governmental organisations, and local governments. Perhaps of relevance for the Chinese context is the success of distributing to poor farming households regular bulletins on agro-meteorological information. Based on several assessments, the programme appears to have been successful. For example, maize yields were higher in those areas participating compared with communities who did not participate. Assessing community involvement in monitoring, UNDP cites a key problem area in community involvement in monitoring, namely the unequal distribution of information, with poor households often located in what it terms "information-free" zones⁷⁹.

Community-Based Knowledge

The importance of drawing on community based knowledge in assisting poor households in adapting to the adverse economic and social aspects of climate change is stressed repeatedly in many commentaries. It is argued, for example, that "In general, communities have better time, place and event specific knowledge of local climate hazards and of how such hazards affect their assets and productive activities. Communities also have greater capacity to manage local social and ecological relationships that will be affected by climate change. And they typically incur lower costs than external actors in implementing development and environmental projects"⁸⁰ Recent reports, such as that of the World Bank 2010 Development Report, *Development and Climate Change*, cite examples of the use of community knowledge and participation by poor communities in reforestation programmes, in fisheries renewal, in nature reserve management and in protection of coastal areas. There is little point in describing these cases in detail, since the practices described are used widely in Chinese programmes, in each of these areas. There are, however, some case studies that may be of interest: Recent developments in several countries reveal the cost-effectiveness of using poor communities' knowledge. In Bangladesh, for example, the low-lying islands in the Ganges/ Brahmaputra Delta contain some of the poorest communities in the country, and are subject to frequent flooding. With donor and government assistance, groups of poor households have constructed earth platforms, planted with trees and grass to restrict erosion, to protect their homes. They have also installed hand pumps and basic latrines, to improve access to clean water and sanitation. Poor communities supply their labour and input their local knowledge. Creating the 125,000 raised platforms to protect the poor households in the delta will cost US\$17 million. However, it is estimated that for each US\$1 spent, US\$2-3 will be saved in protecting productive assets that would otherwise have been lost during floods⁸¹. There are many similar cases: In Nepal, for example, where local communities have designed and built watchtowers as part of a local early-warning system⁸²; in Sri Lanka farmers have recently developed rice varieties to withstand saline intrusion⁸³; farmers in Ecuador have designed U-shaped detention ponds to recharge aquifers

⁷⁸ See International Research Institute for Climate and Society, "Climate Risk Management in Africa: Learning from Practice", *Climate and Society* No.1, The Earth Institute, Columbia University, New York, 2007.

⁷⁹ See *Human Development Report 2007/2008 Fighting Climate Change: Human Solidarity in a Divided World*, UNDP, New York, 2007

⁸⁰ Quote taken from *World Development Report 2010: Development and Climate Change*, the World Bank, Washington, 2010, p.106.

⁸¹ See Tanner, T.M, et al, "ORCHID: Piloting Climate Risk Screening in DFID Bangladesh", Research Report, Institute of Development Studies, University of Sussex, Brighton, UK, 2007. Also, Department for International Development (DFID), "Bangladesh Chars Livelihood Programme", London, 2002.

⁸² See UNDP, 2007, 4, above.

⁸³ See Practical Action, "Rainwater Harvesting", October, 2007.

during drought years. In each of these cases, local knowledge from poor communities has proven cost-effective in devising solutions.

Comprehensive Strategies for Poor Communities

China has substantial experience in dealing with the impact of environmentally induced disasters—flooding, mudslides, drought, etc, and its agencies and bureaus have developed systems of co-operation in dealing with their impact, notably on poor communities. Consequently, there are few experiences, internationally, from which China can learn. A possible exception, however, is the Vietnamese case, where a comprehensive strategy has been developed in response to flooding—a strategy which also inter-relates with poverty alleviation. The Ministry of Agriculture has devised a strategy for reducing disaster risk to poor households in the Mekong River Delta. This relies heavily on community participatory assessments, and involves poor communities in reinforcing dykes and ditches, and rehabilitating mangrove areas. The Ministry of Agriculture’s work is co-ordinated with the implementation of the country’s overall poverty reduction strategy, and with its medium term economic framework, and its safety net provision and local health policies address directly the needs of poor households in the Delta⁸⁴. By such means, the strategy becomes comprehensive in its approach.

Social Protection for Poor Communities: Insurance Schemes

The UNDP Strategic Initiative Report on Climate Change and Poverty Reduction focuses on the importance of relevant safety nets and compensation mechanisms for poor households at risk from climate change. In relation to this, it may be helpful to consider examples from other developing countries in the areas of social protection. Based on the areas covered in the Report, we are interested mostly in the use of insurance related cash transfers, appropriate safety nets, cash/in-kind transfers, and employment/workfare programmes.

In recent years, there has been considerable discussion of micro-insurance mechanisms and their role in adaptation to climate change⁸⁵. In general, insurance, and micro-insurance in particular, can protect against losses resulting from the impact of climate events, but it is particularly important for poor households whose assets base can be quickly eroded. To meet such needs, in India, for example, smallholder farming households participate in a “weather-index” insurance scheme providing compensation when the shortfall in precipitation becomes severe⁸⁶. Index-based insurance has also been introduced in recent years in other countries—Thailand, Mexico, Malawi and Mongolia. In each case payments are made as a result of climate events triggered by a public index, such as rainfall recorded on a local rain gauge. Experiences in these countries indicate that payments can be calculated and disbursed quickly, often through the use of local microfinance organisations, without households needing to file insurance claims. Such rapid payments are useful particularly when households are poor and have limited financial assets. Critics have suggested that poor farmer’s participation may be

⁸⁴ See Nguyen Than Binh, “Vulnerability and Adaptation to Salinity Intrusion in the Mekong Delta of Vietnam—Preliminary Findings from Tra Vinh Province”, Institute for Environment and Human Security, United Nations University, Bonn, 2010. See also the documents produced for the *Mekong Delta Climate Change Forum*, Hanoi, 2009.

⁸⁵ See, for example, J.Linnerooth-Bayer and R.Mechler, “Insurance for Assisting Adaptation to Climate Change in Developing Countries: A Proposed Strategy”, *Climate Policy*, 6:621-36.

⁸⁶ See, for example, P.O.Manuamorn, “Scaling Up Micro-insurance: The Case of Weather Insurance for Smallholders in India”, *Agriculture and Rural Development Discussion Paper no.36*, World Bank, Washington DC, 2007. More generally, see also, B.J.Barnett and O.Mahul, “Weather Index Insurance for Agriculture and Rural Areas in Lower Income Countries”, Department of Applied Agricultural and Applied Economics, University of Georgia, 2006.

limited by household credit constraints and by partial understanding of the insurance scheme. Overall, however the weather index schemes seem to have been successful in the countries in which they have been implemented⁸⁷. In China, weather-index based insurance schemes could be included in overall micro-insurance programmes, which have developed rapidly in recent years⁸⁸, despite problems of lack of sufficient skilled partners for distribution, inadequate local product design and adaptation, and lack of data on exposure and risk.

As the Climate Change and Poverty Report notes, the adverse impacts of climate change can erode the assets of poor households, seriously affecting their employment, income, health and nutrition. As it also notes, well-designed social protection schemes can afford some protection to poor households. In relation to these schemes, relevant case studies from other countries can usefully be categorised into three areas: cash transfers for those in poverty as a result of the impact of climate change; transfers in kind; and employment programmes.

Cash Transfers

One of the most notable results of the impacts of climate change—particular in relation to floods, landslides, and drought—is the removal of children from school by poor families, in an attempt to increase their supply of labour, and to reduce costs. Cash transfers conditional on school attendance can meet short term needs and give households an incentive to keep their children in school. Transfers similarly can address worsening health conditions through requiring attendance at health clinics. The most well-known conditional transfer schemes are in Brazil, with its Bolsa Familia Programme (currently covering almost 50 million people, or a quarter of the population) requiring health clinic and school attendance⁸⁹. Similar larger-scale schemes can be found in other Latin American countries such as Mexico and Nicaragua. Indeed, almost every country in Latin America now has a cash transfer programme. In Asia, Indonesia and Bangladesh have such programmes, and Cambodia and Pakistan have pilot cash transfer schemes. Currently, Africa's most notable Cash Transfer scheme is in Zambia, providing basic subsistence funds dependent on regular school attendance. The Ethiopian Government similarly targets families facing food insecurity, guaranteeing five days employment in return for food or cash transfers.

Much evidence suggests that conditional cash transfers (CCTs) can benefit poor households, and particularly so under crisis conditions⁹⁰. If they are appropriately targeted, they can raise consumption levels and reduce poverty. However, the evidence for CCTs improving health and education conditions as a result is rather more mixed. For example, whilst CCTs appear to increase the likelihood of children from poor households going for preventive health checks, this has not always led to improved nutritional

⁸⁷ An interesting and relevant weather insurance scheme case is that implemented for livestock herders in Mongolia. Herders are compensated for losses during severe winters. Compensation is based on the average livestock mortality rate in their district. The scheme is operated by the government in co-operation with local insurance organisations.

⁸⁸ *China Life Insurance* sold its first micro-insurance policy in September, 2008, in Shaanxi Province. Currently the company is the world's largest insurer by value, having issued nearly 4 million micro-insurance policies, valued at \$US 20.2 billion, as of July 2010. See Anuradha K.Rajivan, *Addressing Multiple Risks through Microinsurance: Lessons from the Field in India*. Presentation to the *International Workshop on Challenges and Response to Poverty Reduction in China's New Development Stage*, UNDP/IPRCC, 20/2/2011, Beijing.

⁸⁹ See, for example, Vanessa Maria de Castro and Marcel Bursztyn, *Social Inclusion or Poverty Alleviation? Lessons from Recent Brazilian Experiences*, CID Graduate Student and Research Fellow Working Paper no. 27, Center for International Development, Harvard University, 2008.

⁹⁰ See, for example, Ariel Fiszbein and Norbert Schady, *Conditional Cash Transfers: Reducing Present and Future Poverty*, World Bank Policy Research Report, Washington DC, 2009.

status for the children. Similarly, whilst school enrolments have increased, there is little evidence thus far of improvements in learning outcomes in schools.

Transfers made under crisis conditions need not necessarily be made in cash. Climate shocks such as droughts or floods can destroy crops with households facing serious, short-term, nutritional problems. Farmers are left without seeds, and without cash to purchase seeds. Under these conditions, transfers can comprise packages of “productive inputs”—seeds and fertilisers, for example.

Workfare Programmes

As is the case in China, workfare programmes are an important part of the safety net response to climate change in many countries⁹¹. Successful programmes have focused on asset-building and the strengthening of poor community resilience, in areas such as water storage, irrigation systems, and embankments. In addition to the tried and tested successes of China’s employment programmes, a notable case is that of India’s Employment Guarantee Programme, with its provision of 10 days of employment for every volunteering poor household. Most importantly, the programme also provides for at least a third of the work to be made available to women, in addition to providing on-site child care and medical insurance for work injuries. Since the programme began in 2005, 45 million households have contributed 2 billion days of labour for the completion of 3 million tasks⁹².

Gender Issues

The specific requirement for women’s employment in the Indian programme raises the important issue of the particular impacts of aspects of climate change on women. Climate change affects women and men in poor households differently. In many societies, men and women have distinct roles, responsibilities and status, giving rise to differences in vulnerability and adaptive capacity⁹³. Women are often particularly disadvantaged through unequal access to resources and opportunities. They are affected through their multiple roles as food producers and providers, as guardians of health, as care givers, and as economic actors. Women are more likely to become direct victims (mortalities and injuries) of climate-related disasters, such as hurricanes and floods, as a result of cultural norms that mean they have not learned to swim; they are more likely to be at home when disasters occur; they try to protect their children before themselves; they are less likely to receive critical information for emergency preparedness and warning information usually transmitted in public spheres; or they are unable to leave their house without a male relative to escort them. In the 1991 cyclone and flood in Bangladesh, the death rate was almost five times higher for women compared with men⁹⁴.

Drought, deforestation, and erratic rainfall force women, who are often already marginalized and dependent on local natural resources, to work harder in order to meet household needs for food, water, and fuel. Consequently, they have less time to earn an income, receive an education or training, or to participate in decision-making processes.

⁹¹ See C. del Ninno, K.Subbarao and A Milazzo, “How to Make Public Works Work: A Review of the Experiences”, *Discussion Paper 0905, Social Protection and Labor*, World Bank, Washington DC, 2009.

⁹² See National Rural Employment Guarantee Act, 2005: <http://nrega.nic.in> 2009.

⁹³ For examples of these differences, see UNDP, Global Water Alliance et al, *Gender and Climate Change: Training Manual*, 2008. For a well researched and document case study of the impact of climate change on women, see Oxfam, *Responding to Climate change in Vietnam: Opportunities for improving gender equality*, Hanoi, 2009. See also, UN-Vietnam, *Gender and Climate Change in Vietnam*, written by a team led by Tran Van Anh, Hanoi, 2009.

⁹⁴ Cited in Oxfam, *Responding to Climate change in Vietnam: Opportunities for improving gender equality*, Hanoi, 2009.

In many areas, climate change creates resource shortages and unreliable job markets that lead to the increased migration of men, leaving women alone with additional agricultural and household duties. Traditional roles are therefore reinforced, the ability of women to diversify their livelihoods or to access income-generating jobs is diminished, and girls are often taken out of school to deal with the increased burden. Women's high level of vulnerability is itself a significant factor in the overall vulnerability of communities, given that women produce more than 50 per cent of the food grown worldwide and considerably more in many developing countries (for example in sub-Saharan Africa women contribute 60 to 80 percent of the labour in both food production for household consumption and for sale), in addition to their significant roles as carers of children, the elderly and the sick.

Endnote: Tackling Poverty through Building and Managing Household Assets:

The Assets Framework is useful for understanding poverty conditions in villages and communities, and in developing appropriate strategies for tackling poverty. In this approach we assess the assets held by poor households. These may be one or several of the following types:

Natural Assets: forests, water, land, energy sources;

Physical Assets: basic infrastructure;

Financial Assets: monetary resources;

Human Assets: skills, knowledge, beliefs, attitudes;

Social Assets: relationships, social networks, customs.

Managing these assets is critical for poor households and communities as they try to improve their poverty conditions. Households can create different livelihood options by improving access to, and control over relevant sets of assets. For example: social networks can be utilised to create more secure conditions for gaining access to financial resources; local knowledge can deal with changing conditions in access to natural capital (such as forestry, changing soil fertility); cultivation skills can be used in crop diversification, etc.

The assets approach focuses on the ways in which poor communities adapt to their changing conditions in order to maintain and improve their livelihoods. It begins with an analysis of household and community strengths, and emphasises the importance of building the potential of poor households and communities for achieving sustainability. It enables us to identify and deal with constraints to the fullest use of available assets, through designing appropriate policies for poor villages.

In managing their assets to promote more sustainable livelihoods, communities can deal with their poverty by using a range of strategies. These differ from one location to another. Once we understand these strategies, we can devise ways of directly assisting poor villagers to manage their assets more productively and efficiently. We can design relevant strategies to reduce poverty, in partnership with poor village communities.

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UNDP China Mission Statement

UNDP promotes sustainable human development to help people build better lives. As the UN's development network, UNDP draws on world-wide experience to assist China in developing its own solutions to development challenges. UNDP's main focus areas in China are: poverty reduction, inclusive growth, rule of law, governance, energy, environment and climate change. In 2010, UNDP Administrator Helen Clark and Premier Wen Jiabao signed a strategic partnership agreement in recognition of China's growing support and further potential to contribute to human development world-wide.



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IPRCC Mission Statement

The International Poverty Reduction Center in China (IPRCC), based in Beijing, was jointly initiated and established by the Chinese government, the United Nations Development Programme (UNDP) and other international organizations in December 2004. The IPRCC is designed to provide a platform for knowledge sharing, information exchange and international collaboration in the areas of poverty reduction and development. Specifically, the Centre's work is mainly focused on four key areas: research, exchange, training and cooperation. All of these areas aim to optimize poverty reduction policies and strategies through an intensive research programme, facilitating and strengthening international exchange and collaboration by organizing a wide range of activities, and promoting knowledge sharing and South-South learning through organizing a series of training courses. Through these areas, the Centre's overall goal is to enhance poverty reduction process and contribute to world-wide poverty reduction.