
CLIMATE CHANGE ADAPTATION AND MIGRATION IN THE MEKONG DELTA

Workshop report

Can Tho University
4th-5th June 2012



Can Tho University
Trường Đại học Cần Thơ



IOM International Organization for Migration

IOM Tổ chức Di cư Quốc tế





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Proceedings of a workshop organized by the IOM, UNDP, & CTU
Can Tho University 4th – 5th June 2012

Opinions expressed in this report by named contributors are those of the contributors and do not necessarily reflect the views of IOM

Executive Summary

Climate change-induced environmental change and related disasters are transforming livelihoods in the Mekong Delta and figure among the most serious challenges the region faces, now and in the future. The particular vulnerability of the Mekong Delta to climate change impacts coupled with rapid economic growth in Vietnam have encouraged migration to urban centres. However, the consequences of climate change for human mobility in the Mekong Delta have not been thoroughly assessed. There is a growing body of evidence that migration can enhance the resilience of individuals and communities, and is therefore a significant adaptation strategy. The workshop 'Climate Change Adaptation And Migration In The Mekong Delta' was convened to explore the latest research on the topic in the Mekong Delta, to discuss issues and challenges of migration and climate change in the region, and to identify possibilities for improving responses through a migration-sensitive approach.

The workshop brought together over 60 climate change experts, migration researchers and representatives from local and international NGOs, international organizations and provincial authorities from climate change affected provinces in the Mekong Delta. Presentations were delivered by Can Tho University, IOM, UNDP, An Giang University, Swiss Red Cross, Oxfam and CARE international. Presentations were selected to address 3 key areas:

- ❖ Dynamics, drivers, and context of climate change adaptation and migration in the Delta;
- ❖ Community resilience and vulnerability in relation to climate change and migration;
- ❖ Policy and programmatic responses to climate change.

Climate Change, Migration and Adaption in the Mekong Delta

The research presented highlighted the challenges in addressing the climate change-migration nexus, and shows a historical trend of high out-migration rates from rural areas towards Ho Chi Minh City, Can Tho and the south-east. Speakers noted that the Mekong Delta is particularly vulnerable to climate change impacts: projections show increased severity and frequency of extreme events, and such environmental changes are expected to impact rural-urban migration. Speakers highlighted that the UN has acknowledged the urgent need to address the climate change-migration nexus and called for action on this issue.

Regarding current dynamics in the Delta, research showed that communities have high awareness of climate change and perceive negative climate trends which are expected to continue. Research highlighted that the impact of environmental change on livelihoods is the major concern among affected communities, with households reporting significant reduction in income due to environmental factors. Major livelihood stressors were lack of land and unpredictable weather events like unexpected flooding.

The workshop also showed that communities are developing or considering adaptive responses, including diversification of livelihoods, but that there are technical and economic barriers to adapting livelihoods in situ.

Community resilience and vulnerability in relation to climate change and migration

These sessions identified social vulnerabilities that shape the impact of climate change and also shape migration decisions. A key conclusion was that climate change exacerbates existing social vulnerabilities and that vulnerable groups are likely to be most impacted by climate change-induced environmental change. Social vulnerability is also key mediating factor in migration drivers and outcomes. Speakers reported how environmental change is affecting livelihoods, including costs in property damage and lost crops. Poor households are least able to cope with these economic impacts and are vulnerable to a cycle of impoverishment which constrains their adaptive capacity.

Migration was highlighted as a common and potentially beneficial adaptive strategy for vulnerable households. Presentations explored the complex dynamics of the migration decision, pointing to environmental change as one of several drivers of migration. It is seen to be an indirect driver of migration through its effects on livelihoods. Direct drivers in sending areas are primarily economic, while pull factors in receiving areas include better infrastructure and services and more opportunities for work and advancement. However some research participants also identified environmental change as a factor directly affecting their migration decision.

This session also explored outcomes of migration for resilience and vulnerability. Remittances are an important outcome for sending households but not all migrants remit successfully. High income migrants are better able to benefit from migration, while poor and vulnerable migrants face more challenges throughout the migration experience. Vulnerability at destination is caused by higher living costs, difficult job situations, reduced social networks and barriers to services. Vulnerable persons may fall deeper into poverty, and some migrants may not be able to remit as planned.

Policy and programmatic responses to climate change

The final session reviewed benefits and challenges of resettlement programmes in response to climate change. Comparison of resettlement areas with dyke areas found that structural mitigation measures were seen as a somewhat effective, but lack of technical expertise and capital was a significant constraint to this type of adaptation. Most resettled households were poor or near poor, and faced challenges in establishing livelihoods. In some cases, incomes were lower after resettlement, and living conditions and facilities at resettlement were often poorer.

Research found the resettlement process itself was problematic when it lacked financial accountability and transparency, and community participation. Factors which improved resettlement outcomes were targeted livelihood support programmes and maintenance of the social fabric from the community of origin.

Conclusions and actions

The workshop emphasised that environmental change impacts most on vulnerable populations, who face challenges to successful adaptation. Mobility is a significant strategy to cope and to reduce exposure to hazards, but also creates new vulnerabilities. A number of priority areas were highlighted for further action, including improving the resettlement process, increasing technical and economic support for livelihood adaptations, enhancing information provision along rural and urban migration routes, and development of policy to increase co-ordination among provincial authorities and support adaptations that utilise mobility.

Contents

Executive Summary.....	3
Agenda	6
Introduction	9
Workshop Objectives.....	9
Introductory sessions.....	10
‘Climate Change in the Mekong Delta’	10
‘Climate Change Adaptation and Migration: Debates and Issues’	10
Session 1 ♦ Climate Change Adaptation and Migration	12
‘Internal Migration in the Mekong Delta’	12
‘Perception and Adaptive Capacity to climate change of Coastal Communities in the Mekong Delta of Vietnam’	12
‘Climate Change, Migration and Resettlement’	13
Session 2 ♦ Community Resilience, Vulnerability and Migration	15
‘Climate change, gender and migration’	15
‘Where the Rain Falls’	16
‘Fishery livelihoods and adaptation under the threat of ecological uncertainties’	17
Session 3 ♦ Policy and programmatic responses to climate change	18
‘Lessons learnt from the “Living with floods” experience in the Mekong Delta’	18
‘Residential clusters in the Mekong Delta’	18
‘Climate Change experience in the Mekong Delta: Resettlement and Awareness- raising in Ca Mau province’	19
Discussion Sessions.....	20
Vulnerability: Who is most vulnerable? Who is most affected?	20
Adaptation and migration: What are the issues for adaptation, and migration as an adaptation strategy?.....	21
Governance: What is needed in order for authorities to deal effectively with the challenges of climate change and migration?	22
Conclusions	23
Annexe 1 ♦ Abstracts of presentations.....	25
Annexe 2 ♦ Opening remarks, Mr. Florian Forster, Chief of Mission, IOM Viet Nam	31
Annexe 3 ♦ Notes of group discussion sessions	33
List of participants.....	38

Agenda

Day 1
Opening speech by IOM Chief of Mission, Mr. Florian Forster
Opening speech by UNDP Technical Specialist, Disaster Risk Management, Dr. Ian Wilderspin
Welcoming remarks by Can Tho University, Vice-Rector of CTU, Dr. Lê Việt Dũng
Climate Change in the Mekong Delta, Can Tho University, Dr. Le Anh Tuan
Climate Change Adaptation and Migration: Debates and Issues, IOM, Dr. Jobst Koehler
<i>SESSION 1: Climate Change Adaptation, and Migration</i>
<ul style="list-style-type: none">❖ What are the figures and the migration patterns in the Mekong Delta? What are the push and pull factors of human mobility in the Mekong Delta?❖ Where are the (potential) linkages between environmental change/climate change and push and pull factors? What are the migration dynamics associated with climate change?❖ How do people in the Mekong delta respond to different types of climate change impacts and problems of environmental degradation? What are the main social vulnerabilities created by these different types of climate change impacts and environmental degradation? Who is most affected by these changes?❖ What are the key livelihood/adaptation strategies in response to different climate change challenges at individual and community levels? To what extent is migration a livelihood and adaptation strategy for those affected by climate change and environmental degradation?
<i>Presentations</i>
Chair/Moderator: Mr Florian Forster <ul style="list-style-type: none">❖ Internal Migration in the Mekong Delta, UNDP, Dr. Le Thanh Sang -Q&A
Chair/Moderator: Dr. Le Anh Tuan and Mr Nguyen Chi Quoc <ul style="list-style-type: none">❖ Perception and Adaptive Capacity to climate change of Coastal Communities in the Mekong Delta of Vietnam, Can Tho University, Le Xuan Sinh❖ Climate Change, Migration and Resettlement, UNDP, Ms Jane Chun -Q&A
<i>Discussion group 1</i>

SESSION 2: Community Resilience, Vulnerability, and Migration

- ❖ What is the specific quality of environmental change/ climate change and its impacts on the livelihoods of the people in the Mekong Delta?
- ❖ What are the specific challenges linked to rural-rural and rural-urban migration?
- ❖ Does migration strengthen or weaken community resilience to climate change at destination and origin? How do these effects on community resilience differ between migration in response to rapid-onset and in response to slow-onset changes?
- ❖ How do environmental factors influence the decision to migrate? Is the relationship direct or indirect? Do environmental factors play a role in heightening or reducing the vulnerability of those on the move?
- ❖ In what areas is assistance required to strengthen community resilience?

Presentations

Chair/Moderator: Dr. Nguyen Hieu Trung and Ms Olivia Dunn

- ❖ Climate change, gender and migration, Oxfam, **Ms. Vu Minh Hai**
 - ❖ “Where the Rain Falls”, CARE International Viet Nam, **Mr Nguyen Cong Thao**
Fishery livelihoods and adaptation under the threat of ecological uncertainties, Can Tho University, **Tran Thi Phung Ha**
- Q&A

Discussion group 2

SESSION 3: Policy and programmatic responses to climate change

- ❖ What is the rationale for the government to relocate people?
- ❖ Does resettlement happen as a result of infrastructural adaptation measures?
- ❖ How do livelihoods and way of life of people change after resettlement/ in residential clusters? What is the vulnerability context before and after moving into residential clusters?
- ❖ What are the socio-economic costs and benefits of resettlement/ residential clusters?
- ❖ What are the biggest challenges for organized resettlement?
- ❖ What policy frameworks and programmes are in place to respond to different climate change impacts (i.e. slow-onset/rapid onset events) and problems of environmental degradation at community, provincial and national levels? What are some of the gaps in the current frameworks and interventions? How can they be addressed?
- ❖ What is the potential role of migration management policies in the context of slow-onset and rapid-onset changes?

Presentations

Chair/Moderator: **Dr Ian Wilderspin** and **Mr. Nguyen Thanh Phuong**

- ❖ Lessons learnt from the “Living with floods” experience in the Mekong Delta, HELVETAS Swiss Intercooperation, **Ms Trần Thị Triều**
- ❖ Residential clusters in the Mekong Delta, An Giang University, **Mr Pham Xuan Phu**
- ❖ Climate Change experience in the Mekong Delta: Resettlement and Awareness raising in Ca Mau province, Swiss Red Cross, **Mr Nguyen Phu Son**
- Q&A

Discussion group 3

Day 2 Closing Session: The Way Forward

Recap of day 1, **Ms Jane Chun** and **Mr Nguyen Chi Quoc**

- ❖ Presentation and discussion of results of working group on session 1
- ❖ Presentation and discussion of results of working group on session 2
- ❖ Presentation and discussion of results of working group on session 3

Wrap up of workshop, **Dr Ian Wilderspin** and **Dr Jobst Koehler**

Introduction

Climate change-induced environmental change and related disasters are affecting and transforming livelihoods in the Mekong Delta and figure among the most serious challenges the region faces now and in the future. The vulnerabilities of the Mekong Delta region to climate change coupled with opportunities created by the rapid economic growth in Vietnam have led to increased migration towards industrial and commercial cities – a trend that is ongoing. However, the consequences of climate change for human mobility have not been well assessed or researched. Migration is still largely perceived as a negative consequence of environmental change, even though growing evidence suggests that migration can enhance the resilience of individuals and communities, and is therefore a significant adaptation strategy.

The International Organization for Migration (IOM) Viet Nam, Can Tho University, and UNDP Viet Nam recognise the urgent need to raise awareness of the relationship between climate change and migration. Bringing together climate change experts, researchers, local and international NGOs, potential donors and provincial authorities from climate change affected provinces, this workshop also aims to facilitate dialogue and cooperation between relevant stakeholders on human mobility adaptation strategies and policies in the Mekong delta region.

40 delegates from seven Mekong Delta (MD) provinces affected by climate change participated in the workshop, as well as donors, researchers and experts from UN agencies.

Workshop Objectives

1. **To take stock of government policies, adaptation strategies and the latest research** on the relationship between migration, environmental degradation and climate change in Viet Nam, especially in the Mekong Delta.
2. **To facilitate information- and experience-sharing** between practitioners at national and provincial levels and between researchers and practitioners on migration and climate change issues.
3. **To identify challenges and constraints** in addressing the nexus among climate change, environmental degradation and migration.
4. **Agree on issues and actions** where a migration-sensitive approach to climate change adaptation and environmental degradation would be beneficial.

The workshop opened with an introductory session, followed by three thematic sessions. Introductory presentations set the context and background of the workshop. Session 1 gave an overview of migration and the link to environmental change in the MD, detailing key livelihood and adaptation strategies. The second session focussed on the relationship between community resilience, vulnerability, and migration as an adaptation. The final session focused on policy responses to climate change. Sessions were followed by discussion in working groups to incorporate the experience and knowledge of participants.

Introductory sessions

Sessions were opened with the welcoming remarks of Mr Florian Forster, IOM Viet Nam's Chief of Mission, Dr. Ian Wilderspin, UNDP technical specialist on Disaster Risk Management, and Can Tho University Vice-Rector, Dr. Lê Việt Dũng. Introductory sessions highlighted the key issues at the local and the global level regarding migration and climate change.

'Climate Change in the Mekong Delta'

Dr. Le Anh Tuan, Can Tho University

Dr. Le Anh Tuan described the key environmental characteristics of the MD, highlighting its importance for the food supply of Vietnam and the world. He noted that the MD is a very sensitive biosphere based on a fragile balance with difficult weather conditions throughout the year. Droughts are common in April and May, while flooding is a regular phenomenon from late September to early November. Dr. Le outlined the issue of climate change in the MD, where projections show that several climate trends will change, resulting in an increase in severe weather, heat waves and riverbank erosion. It was highlighted that the MD is also a low elevation coastal zone and therefore especially exposed to hydrological changes.

Dr. Le then discussed the long term migration patterns in Vietnam, where migration trends are from highlands to lowlands, from northern to southern regions and from rural to urban areas. He connected climate change with migration in rural to urban migration, highlighting social and environmental challenges underlying migration trends. Dr. Le concluded with remarks on the '5A's' approach, which outlines the need to undertake analysis, awareness, advocacy, action and adaptation in climate change responses.

'Climate Change Adaptation and Migration: Debates and Issues'

Dr. Jobst Köhler, Senior programme development officer, IOM Vietnam

Dr. Jobst Köhler highlighted the fact that **"migration has always been linked to environmental change but in today's world the reality of climate change adds a new complexity to this nexus."** He described how climate change is likely to aggravate and exacerbate the frequency of natural disasters and induce other slow-onset environmental changes that altogether will have significant socio-economic consequences.

Dr. Köhler elaborated the current global migration picture and highlighted that 2011 data recorded **new magnitudes of migration**. There were 1 billion migrants worldwide, 215 million international migrants and 740 million internal migrants. In fact, 2011 was the first time in human history when half of the world's population lived in urban areas. Fifty per cent of migrants were women. A staggering US\$440 billion in remittances were generated in 2010, with US\$325 billion directed to developing countries.

At the policy level, Dr. Köhler noted that the UN Framework Convention on Climate Change has already recognised the severity and importance of addressing the nexus of migration and climate change. As early as 1990, the Intergovernmental Panel on Climate Change posited that: **“the gravest effects of climate change may be those on human migration”**. Twenty years later, the Cancun Agreements of December 2010 put the need for action in these words:

“14. Invites all Parties to enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following: ... (f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels;”

Finally, Dr. Köhler outlined the key challenges in addressing the migration-climate change nexus. The main issues are:

- i. **Knowledge base**, where there are challenges in measurement and where there is a need to acknowledge the various dimensions of environmental migration;
- ii. **Adaptive capacity**, which depends on political, social and economic ability to cope with climate change; and
- iii. **Policy**, where policies to date mostly focus on in situ adaptation and where there is a need to develop policies that facilitate migration away from areas at risk of environmental change. Furthermore, policies should recognise that the poorest are the least able to migrate due to their limited resources and connections.

Session 1 ♦ Climate Change Adaptation and Migration

Session 1 explored current research on migration patterns in the Mekong Delta and laid a foundation for subsequent discussions. It focused on addressing the linkages between environmental change and migration, and exploring livelihood impacts and adaptation strategies in response to environmental change.

‘Internal Migration in the Mekong Delta’

Dr. Le Thanh Sang, The Southern Institute of Sustainable Development

The opening presentation outlined migration characteristics, patterns and trends in the Mekong Delta, based on the 2009 Vietnam census.

Dr. Le Thanh Sang noted that about 80 per cent of the population in the MD live in rural areas and 25 per cent are hired labourers without land. The Delta has the lowest in-migration rate (16.5 per cent) and the highest out-migration rate (5.6 per cent) in Vietnam, with out-migration mainly from rural areas. Dr. Sang showed that a trend of increasing agricultural mechanization in recent years led to reduced labour demand in rural areas. However, the industry sector in the MD is not strong enough to generate a sufficient supply of jobs. As a result, **non-agricultural labour demand from HCMC and the southeast create strong pull factors for migrants from the MD**. He noted that the rate of female migration is higher than male migration, both between communes and between provinces.

Dr. Sang also highlighted the limitations of census data in measuring migration. Firstly, the analysis of internal migration is based on the comparison between current residence and places of permanent residence in the five years prior to the census. As a consequence, **some forms of migration such as return migration, short-term migration, and seasonal migration are not recorded**. Further, the census often underestimates the magnitude of migration as it does not include undocumented migrants, such as those in the informal sector. Finally, the census does not capture personal characteristics of migrants and causes of migration, and so **lacks data that would shed light on environmental migration in Vietnam**.

‘Perception and Adaptive Capacity to Climate Change of Coastal Communities in the Mekong Delta of Vietnam’

Dr. Le Xuan Sinh, Can Tho University

Dr. Le Xuan Sinh focused on perceptions and adaptive capacity to climate change of coastal communities in Vietnam. He shared results of research based on a survey of secondary data, 220 interviews of households and 68 interviews with local officials.

The research notes that aquaculture and fisheries are key sources of income and jobs in coastal communities and that non-farm labour was also an attractive opportunity. The **major concerns regarding climate change relate to livelihood impacts** and insufficient supply of good quality water.

The study analysed the perceptions of climate change among households and local officials. TV and radio were the main sources of information and through these mass media, **81.6 per cent of households and 94 per cent of local officials recognised signs of climate change**. According to the research, 71 per cent of households perceived past weather trends as negative and 85.6 per cent of households expect negative trends to continue in the future. As a consequence, 94.9 per cent of households and 93.8 per cent of officials were concerned regarding the impact of climate change on livelihoods. The **major areas of concern considered most affected by climate change were jobs, food and clean water**. Poor households, elderly persons, and children were perceived to be most affected by climate change.

The second component of the research surveyed adaptation priorities. Households and local officials prioritised occupations in the field of aquaculture, rice, and fisheries, and identified some non-farm activities as good alternative income sources. However, there was a **mixed outlook regarding the feasibility of changing occupations** to adapt to climate change. Aquaculture and fisheries were seen as considerably adaptable, but rice and salt production were seen as difficult to adapt to changing conditions. Asked to identify the adaptive strengths of the community, households and local officials ranked the support of the government first (75.4 and 45.7 per cent respectively), followed by good experience (43.8 and 23.4 per cent respectively).

The main obstacle to adaptation was unanimously stated by both groups as **increasing production costs leading to higher risk in production**, followed by **lack of capital, trained labour and information** (69.7 per cent of households and 76.1 per cent of local officials). The main suggestion by households for improving adaptation was appropriate planning for climate change (60.9 per cent). Among local officials, the main suggestion was improving awareness among the community (65.2 per cent). Dr. Sinh concluded that there is a **need for economic cost-benefit evaluations of adaptations** based on a value chain approach in order to identify feasible responses to climate change.

‘Climate Change, Migration and Resettlement’

Jane Chun, UNDP

Ms. Jane Chun presented preliminary results from current research on climate change, resettlement and migration in Viet Nam. The research objective is to draw out lessons on migration and resettlement for Viet Nam in relation to past and present climatic stresses. The study aims to recommend policy directions to strengthen resilience in both sending and receiving areas. Preliminary findings outlined the impacts for population groups that are vulnerable to the effects of climate change “according to different but realistic climate change and adaptation policy and investment scenarios for the coming years and decades.” Data was collected in rural areas, urban centres and resettlement sites in Long An, Dong Thap, Can Tho City and HCMC through 588 structured questionnaires, 72 in-depth interviews, and 14 focus group discussions.

Preliminary findings show that rural **migrant sending areas are affected by rain variability, wind, and storms** which significantly impact land owners and hired workers, although the latter to a lesser extent than land owners. Riverbank erosion has a noticeable effect on hired workers, as it causes loss of land which impoverishes land owners, and in turn leads to less hired work. Analysis of livelihoods in rural migrant sending areas indicated that poverty and near poverty status was high in the group of agricultural labourers. Remittances were important in sending households for health care, school fees and daily expenses however, poor migrants were often not able to send remittances.

Ms. Chun outlined the cycle of vulnerability faced by poor and near poor households with debt, lack of financial planning skills, dependency on local authorities, poor health and social assets resulting in **limited capacity to deal with economic shocks, including those caused by environmental change**. Thus, **the main reasons for migration in rural sending areas were lack of jobs, seasonal employment, and low wages**.

Preliminary findings at resettlement sites showed that **outcomes of resettlement for livelihoods were mixed**, with reduced livelihood options for farmers and fishers, but improved livelihoods for small businesses. Maintaining the social fabric of support networks from the area of origin was found to be important for positive livelihood outcomes. There were also mixed outcomes in terms of infrastructure and public services, with **some facilities and public services not operational at the destination**. Findings also indicated that the resettlement process itself was problematic, due to a **lack of financial transparency and accountability** in resettlement support programmes, and a **lack of community participation in planning and implementation**.

In urban migrant receiving cities, HCMC & Can Tho City, **pull factors were identified as higher income, perceived availability of jobs, year-round work which is less labour-intensive, and better infrastructure and services**. Social networks were also a key factor in determining migration destinations and in providing support at destination. Challenges identified for migrants in urban areas were the comparatively weak urban social fabric, and higher expenditure in the city. It was noted that migration is risky for elderly and sick migrants, who may fall deeper into poverty. Preliminary findings concluded that **climate change is one of multiple drivers of migration**, and the impact of climate change is mediated by social vulnerability and coping capacity of household livelihoods.

Session 2 ♦ Community Resilience, Vulnerability and Migration

Session 2 explored the ways in which migration may be shaped by environmental change, and the adaptive qualities and challenges of migration. These presentations explored the relationship between environmental change and migration with a focus on resilience and vulnerability.

‘Climate change, gender and migration’

Ms. Vu Minh Hai, Oxfam

Ms. Vu Minh Hai presented results of a collaborative research project by Oxfam and UNDP. The research aimed to understand the nexus between migration trends and patterns, climatic changes/stresses and gender aspects and make recommendations for climate change and resettlement policies and programmes to reduce poverty and gender inequality, enhance adaptive and mitigation capacities, and offer adequate protection and enhance opportunities in a gender sensitive manner. The research explored who migrates and how migration decisions are made, with reference to gender, social characteristics, drivers, and impacts on both sending households and migrants.

The research area was Quang Tri province as sending area and resettlement area, and HCMC as receiving area. Research was based on a desk review, group interviews and in-depth interviews with a total of 118 people.

Findings highlighted that permanent migrants were mostly young, between 20-35 years, and employed in factories. The financial impact of permanent migrants on sending households before and after migrating was not highly significant. However, **permanent migration was difficult for migrants as they had poor living conditions, high costs, and hard working conditions.**

Seasonal migrants were older than permanent migrants, with an age range of 40-60 years. They migrated during off-farming seasons and worked as labourers during harvest season. Seasonal migrants were better able to save money at destination as they had lower food and living costs. The financial impact of seasonal migration is more significant for the sending household than that of permanent migration, as seasonal migrants tend to send more remittances which are a critical addition to the sending household’s income. However, an extra workload to compensate the loss of labour at home was noticeable. The findings also highlighted that both permanent and seasonal migration has emotional impacts on families.

Key **reasons for migration were a lack of employment and difficult living conditions** for permanent migrants, whereas seasonal migrants were seeking additional income in the off season. Pull factors for permanent migrants were expectations of permanent employment while among seasonal migrants, alternative or additional employment opportunities in other locations were the major pull factor. Common pull factors for both groups were family networks, better services, better career development opportunities, and peer pressure.

This study also analysed the gender dimension of migration. **Gender did not influence the household's decision about who should migrate, but does appear to influence the type and availability of work.** Among permanent migrants more women than men migrated, and it was presumed that women would have more job opportunities. There was no change in the gender roles in the households left behind among this group. In contrast, female seasonal migrants faced gender stereotypes and social pressures when leaving their 'traditional' roles to migrate. However, gender roles within the household tended to blur with seasonal migration, as households accepted changing roles as a necessity under the circumstances.

Neither group specifically identified climate change or environmental change as a significant push or pull factor, as the reasons cited for migration were mainly economic. However, environmental factors contributing to economic stress were noted, such as crop failures due to extreme weather. Thus, the research highlighted that **climate change has indirect impacts on migration decisions, in the form of impacts on livelihood security.**

In the resettlement area, **positive findings were that households felt more secure on the farmland with fewer disasters and a better economic situation.** In addition, local ethnic minority people had gained knowledge from new arrivals, and women's income sources had improved significantly. Negative findings were that resettled people reported a **lack of support and information** from the resettlement programme, **a reduction in quality of education and healthcare, and much poorer living conditions.** Some women in resettlement areas encountered a greatly increased workload. Further challenges were difficulties with local transportation, limited opportunity for socialization and exchange, and emergence of social conflict in the resettlement area. Noting this, the study highlighted the need for future resettlement programmes to:

- ❖ undertake more **comprehensive planning**;
- ❖ provide **better services and infrastructure**; and
- ❖ **improve livelihood support**, credit access, and resettlement resources provided to resettled groups.

'Where the Rain Falls'

Mr. Nguyen Cong Thao, CARE International

CARE's research addressed the impact of rain variability on migration in Dong Thap province. The objectives of this research were:

- i. to understand how rainfall variability, food and livelihood security, and migration interact today;
- ii. to understand how these factors might interact in coming decades as the impacts of climate change begin to be felt more strongly; and
- iii. to work with communities to identify ways to manage rainfall variability, food and livelihood security, and migration.

Research was based on household surveys and expert interviews. Main findings were that people **perceived a change in the rainfall pattern with rainy seasons starting earlier and lasting longer, with an increase in total rainfall and an increase in extreme weather events.** The climate is perceived as less predictable in general. This environmental change has impacted on livelihoods, particularly on agriculture, which is the main source of income. **The study noted that landless households were most vulnerable to impacts of rainfall variability and that selling labour was one of the main coping strategies.**

Survey findings show that households coped with livelihood stress by getting external help, reducing food consumption, trying to increase income, and reducing expenditure. **Migration ranked fifth in the list of coping strategies of households,** with flooding and the lack of farming land identified as important factors in migration decisions. The research also notes differences in migration drivers between income groups, with migration for education popular within wealthy groups, while income was the main reason for migration among poor households.

‘Fishery livelihoods and adaptation under the threat of ecological uncertainties’

Ms. Tran Thi Phung Ha, Can Tho University

Ms. Tran Thi Phung Ha’s research was located in Ca Mau province and focused on fishery livelihoods and adaptation. The research highlighted risks faced by small scale fishers in light of ecological uncertainties:

- i. **natural and environmental risks** in the form of fish stock decline, harsh weather and dangerous conditions;
- ii. **social risks** in the form of few chances to enhance skills, conflicts over resources with other fishermen, few educational opportunities for children, and few job opportunities; and
- iii. **economic risks** in the form of limited investment capital, increased gasoline costs and low selling price of fish.

Findings show that **small scale fishers are most exposed to threats and risks,** as they are extremely poor and near shore fishing is taken up as an occupation of last resort. These groups also face social pressures as they are accused of overexploitation and violation of fishery regulations. Ms. Tran outlined how **diversification, out-migration, intensification, collaboration and specialization are pathways to build resilience** to these risks. She concluded that key needs to build social resilience through these pathways are **building knowledge and skills, creating opportunities for self-organization, resource protection, and stabilising incomes.**

Session 3 ♦ Policy and programmatic responses to climate change

The aim of Session 3 was to highlight government policies and programme responses to climate change with a focus on human mobility. Emphasis was on resettlement policies and programmes as the Government of Vietnam has used these approaches extensively. Of special interest were the procedures and the livelihood impacts of resettlement.

‘Lessons learnt from the “Living with floods” experience in the Mekong Delta’

Ms. Trần Thị Triều, Can Tho University

This study focuses on adaptation to the Mekong Delta floods. The study was located in An Giang province, and compared livelihoods in no-dyke, semi-dyke, and full-dyke villages based on interviews, focus group discussions, GIS mapping and statistical analysis. The study highlighted that flooding in the MD is a natural part of life, and elaborated on the existing mechanisms that are in place when flooding occurs. **Structural (dyke, semi-dyke) and non-structural measures (resettlement, agricultural practices) have been put in place** in the MD to mitigate flood impacts. Most farmers agreed with non-structural measures for flood management, but farmers’ adaptation options depended on income status. Since aquaculture requires high investment and maintenance costs it is an adaptation option only for high- and middle-income farmers. Farmers also used short rice varieties to ensure their harvesting before flood season. Differentiation of adaptation options by income was also found in structural measures. Findings showed structural mitigation measures were seen as effective but that there were **high costs for farmers to adjust livelihoods to these measures**. Further, high- and middle-income groups had more options for adaptation to improve structural mitigation measures such as housing improvements.

The presentation emphasised that both **government and residents have experience and knowledge of the impacts and benefits of living with floods**, and that adaptation measures should capitalise on this to develop flexible and effective measures. Further, it is crucial that adaptation planning **recognise of the different effects and feasibility of adaptation measures for different income groups**.

‘Residential clusters in the Mekong Delta’

Mr. Pham Xuan Phu, An Giang University

Mr. Pham Xuan Phu presented results from research on residential clusters in the MD. The research area, Tan Chau district, is the area of An Giang province most heavily flooded during annual flooding and most affected by river bank erosion, which causes considerable and serious damage to humans and property in the district. The An Giang government implemented a program for stabilizing livelihoods and promoting sustainable improvements in the lives of communities facing annual flooding. The programme, “Living with Floods”, built residential clusters and dykes in order to solve the damage in the longer term. The objective of the study

was to understand how livelihoods changed when people relocated and the advantages and disadvantages of resettlement.

The study was carried out in Vinh Hoa and Tan An communes in Tan Chau district. A total of 72 households were interviewed to assess households' labour capacity, income, capital, employment, and their coping strategies for floods and changes of living before and after resettlement.

A large proportion of residents in the residential cluster and dyke areas were poor and were social welfare beneficiaries, who relocated due to flooding or riverbank erosion. Most had **low levels of education** with 17 per cent illiterate and 61 per cent at primary education level.

Results showed that **living conditions after resettlement were inadequate**, with only 55 per cent households using clean water and 14 per cent of households with a usable semi septic toilet. Incomes also suffered, as **job opportunities and total working days were lower than before resettlement**. Eighty-nine per cent of households found it difficult to find jobs, creating income instability. It was noted that the **residential clusters did provide a safer living area, however it was concluded that resettlement reduced livelihood security and opportunities**.

'Climate Change experience in the Mekong Delta: Resettlement and Awareness-raising in Ca Mau province'

Mr. Nguyen Phu Son, Swiss Red Cross

Mr. Nguyen Phu Son presented the outcomes of a resettlement and awareness raising programme in Ca Mau province which was supported by the Swiss Red Cross. He described the initial situation in Ho Gui, where 942 people with 205 very poor families lived in an eroded coastal area of the Hogui River, suffering from annual high tides and tornados. Families had no electricity, no clean water and no schools. The project resettled all 205 families, of whom 73 per cent were on the poverty list and 27 per cent on the near poverty list, in an area five kilometres from the original settlement. The project provided housing and public buildings, and constructed infrastructure to connect two areas of the resettlement. It also **included income generation programmes which provided livelihood support to resettled households, in the form of vocational training and provision of public facilities**. Overall, resettlement was viewed as successful, since after three years of resettlement the percentage of poor families was reduced to 27 per cent. The lesson highlighted in this project was that livelihood support is a key factor in successful resettlement, and provision should be made for this throughout planning and implementation of resettlement.

Discussion Sessions

Group discussion sessions enabled exchange of experience and knowledge among the 40 delegates from the MD provinces. Group discussions were guided by key questions and results shared in a plenary session.¹

Vulnerability: Who is most vulnerable? Who is most affected?

Discussion highlighted that poor, elderly, and disabled residents, women, and children are highly vulnerable to negative social, economic and health consequences.

Economic vulnerability. Poor communities are most vulnerable to impacts of climate change for several reasons:

- i. Livelihood impacts are a central concern, as poor households depend on wage labour, and agricultural and aquacultural livelihoods, which are significantly impacted by environmental change. In addition, the labour market is concentrated in areas affected by climate change, making incomes insecure.
- ii. Debt and lack of access to resources is a major constraint on coping capacities and livelihood adaptation.
- iii. Impoverished areas are made more vulnerable by insufficient or temporary infrastructure and are hit hardest by negative impacts of extreme weather on infrastructure.

Social vulnerability. Discussion highlighted several other social dimensions of vulnerability:

- i. **Health:** Climate change is expected to cause an increase in diseases, as such pregnant women and children are particularly vulnerable to negative effects. In turn, health costs form a burden on poor households which reduces their ability to cope with economic shocks caused by environmental change.
- ii. **Education:** Low levels of education were linked to low awareness of climate change effects, which increases vulnerability. Further, low skill levels restrict poor producers' capacity to cope with loss of land or livelihood.
- iii. **Landlessness:** Landless and land scarce households are particularly vulnerable. Further, loss of land due to development or riverbank erosion is a particular concern which both impacts most on vulnerable groups and increases vulnerability to other negative effects.

Poor households, young families, women, children, elderly, disabled, and ethnic minority groups are more vulnerable to the effects of climate change, while climate change impacts also exacerbate existing social vulnerabilities of these groups. **Strong community links were identified as a resource to enhance community resilience.**

¹ Notes of group discussion results can be found in full in Annexe 3.

Adaptation and migration: To what extent is migration an adaptation strategy to environmental change?

Key conclusions:

1. Migration will occur when environmental change causes livelihoods and quality of life to decline past a certain threshold;
2. Successful migration is more difficult for poor households; wealthy groups are better able to migrate successfully;
3. Planning for sustainable livelihoods after resettlement is needed in resettlement plans;
4. There is a need to increase skills of households in adaptation to climate change; and
5. There is a need for immediate, medium- and long-term planning and adaptation strategies for affected and high risk areas which should include:
 - a. adaptive planning for infrastructure and production;
 - b. structural and non-structural adaptation measures, including development of crop/livestock adaptations;
 - c. advocacy to increase public understanding of climate change impacts;

Discussion also addressed positive and negative aspects of migration and relocation as an adaptation, as well as challenges and recommendations for improving programmatic responses.

Advantages:

- ◆ Reduced exposure to environmental risks, reduced vulnerability;
- ◆ Beneficial in protecting life, health, and property;
- ◆ Residential clusters have lower investment costs.

Disadvantages:

- ◆ Less stability in housing and livelihoods;
- ◆ Higher protection and maintenance costs;
- ◆ Increase in 'social evils';
- ◆ Emergence of social conflict.

Challenges:

- ◆ Underdeveloped infrastructure in resettlement areas;
- ◆ Ensuring sustainable livelihoods and quality of life at least equal to situation at origin;
- ◆ Resettlement planning which is inappropriate or does not account for residents' needs;
- ◆ Continuing lack of sufficient data on migrants; there is also some debate on whether a conceptual distinction should be made between migration and resettlement;

- ◆ Although resettlement areas are safer, impacts of climate change will still be felt;
- ◆ The process of migration itself creates vulnerabilities.

Recommendations:

- ◆ Resettlement should prioritise vulnerable communities;
- ◆ Investment is needed to ensure adequate infrastructure in resettlement areas;
- ◆ There is need for local government to guide the development of the local economy;
- ◆ Resettlement planning should assess conditions of the origin community, resettlement community and receiving community to tailor support and services accordingly;
- ◆ Improve/increase data on migrants;
- ◆ Government guidance of economic development of resettlement areas;
- ◆ Migrants should receive education about the culture of destination area.

Governance: What is needed in order for authorities to deal effectively with the challenges of climate change and migration?

Participants highlighted several recommendations to improve the capacity and co-ordination of authorities in this area:

- ◆ Strengthen focus on the role of departments that are responsible for planning and implementation.
- ◆ Enhance international cooperation and attract investment and funding from abroad;
- ◆ Further research and larger studies to support agencies' action on climate change;
- ◆ Policies are needed to support migrants in adapting to new environments and provide skills to support responses to climate change;
- ◆ Local authorities should disseminate information in resettlement areas about migrants, the purpose of migration, and guide the economic development of destination areas.

Potential actions:

- ◆ Further research and development of climate resilient livestock and crops;
- ◆ Convene seminars for provincial authorities responsible for planning and implementation to support the provision of effective solutions;
- ◆ Provide education and information for migrants and resettling populations at origin and destination to ensure informed migration decisions and better social integration;
- ◆ Enhance information flows between provinces such as through an emergency warning system designed for mobile populations.
- ◆ Provide support for households to undertake self-improvement of their houses and facilities in resettlement areas, and to improve resilience of housing in at-risk areas.

Conclusions

The workshop findings identify several key issues and areas for action for addressing the climate change-migration nexus in the Mekong Delta, and highlight the importance of a migration-sensitive approach to climate change adaptation in the region.

Firstly, the workshop highlighted that communities in the Mekong Delta are aware of and observe the effects of climate change, and that these effects are having significant consequences for the livelihoods of land owners and hired labourers. It also highlights that existing trends of rural-urban migration in the Mekong Delta are likely to be affected by expected environmental changes which will increase the frequency and severity of extreme weather events. The livelihood impacts of environmental change are the major area of concern for households and responses to these changes therefore focus on livelihood protection.

Migration is a common strategy for households to cope with economic stress caused by insecure livelihoods, and economic factors are seen to be the main direct drivers of migration. The workshop emphasised that environmental change influences the decision to migrate through its impact on livelihoods, which causes significant economic stress. Thus, the workshop findings showed that environmental change is an indirect driver of migration as one of multiple factors affecting migration decisions.

The workshop highlighted that the impacts of environmental change are significantly shaped by social vulnerability, and that these impacts also exacerbate existing vulnerabilities. Social vulnerability is a key factor in adaptive capacities, migration decisions, and migration outcomes. The workshop findings emphasise that poor and vulnerable groups experience the worst effects of climate change and face greater barriers to adaptation. Some communities have implemented adaptations such as structural mitigation measures and adapting or diversifying farming practices. However, high costs of adaptations, lack of technical expertise, and in some cases, limited awareness, are obstacles to adaptation. Discussions concluded that communities need technical support and increased knowledge to support adaptation. The importance of developing appropriate adaptations was highlighted, including approaches which recognise the obstacles to adaptation faced by poor and vulnerable households.

Migration is seen to be a significant adaptation strategy, particularly for poor households, to diversify incomes in response to the livelihood stressors caused by environmental change. Workshop findings show that migration can increase the resilience of households by diversifying income, providing remittances and reducing exposure to risk. However, poor or otherwise vulnerable individuals also face challenges in migrating successfully. Migrants to urban areas may become more vulnerable at destination due to difficult employment and living conditions, higher living costs, and barriers to service access. Members of vulnerable populations, such as poor, sick or elderly groups, are at risk of poverty at destination and may have difficulty achieving successful outcomes from migration. As a result, there is a need for policy which supports internal migrants in general and environmental migrants in particular in

order to ensure beneficial outcomes for those who seek to adapt to climate change through migration.

The workshop findings also highlight the benefits and challenges of resettlement as a programmatic response to climate change. Resettled populations gain security and reduced exposure to extreme events. However, ensuring sufficient infrastructure, services, and livelihood opportunities is a challenge in the resettlement process. In addition, new social vulnerabilities can emerge in resettlement areas if the resettlement process is not planned appropriately, or if it has only limited accountability and community participation. Negative socio-economic outcomes can be addressed through improved planning and implementation of resettlement, which incorporates assessment of needs in the community of origin, community of destination, and the resettled population. The workshop also identified that key issues for improving resettlement outcomes are to provide livelihood support and guide economic development of resettled areas.

The Government of Vietnam's use of resettlement programmes shows the potential to increase resilience and security of vulnerable households through mobility. However, there remains a gap in policies to support internal migrants, particularly environmental migrants. Appropriate policy and planning, and support from government were identified as key needs for improved adaptation to environmental change.

Participants identified some potential strategies to enhance migration as a positive adaptation. One recommendation is to enhance information provision for potential migrants at origin and destination to ensure migrants make informed migration decisions and can adapt well to their new location. A second recommendation was to increase information sharing mechanisms between provinces to provide information about migration flows, to support better co-ordination and planning among authorities. Potential actions in this area include convening seminars for departments with responsibility for planning to support effective information sharing, and to develop an emergency warning system for migrant populations to ensure that people on the move and new migrants are included in early warning systems and responses. Finally, livelihood support programmes should be a key feature of resettlement programmes, along with policy and investment to support the economic development of resettlement areas.

The research presented at the workshop demonstrated that human mobility is a significant feature of adaptation to environmental change in Vietnam, both as autonomous migration and in policy responses. The workshop findings highlighted the benefits of migration as an adaptation and its potential to increase resilience of communities. However, they also note the challenges encountered in migration and resettlement, particularly for vulnerable groups, and identified several areas for action to enhance migration as a positive adaptation. The findings of the workshop suggest that there is a need for increased co-ordination and planning among authorities at all levels, to address the challenges of resettlement and to develop policy which supports both migrants and resettled populations to achieve successful migration outcomes.

Annexe 1 ♦ Abstracts of presentations

Climate Change in the Mekong Delta

Dr. Le Anh Tuan, Can Tho University

The Mekong Delta (MD) in Vietnam is the most downstream part of the Mekong River Basin. The Delta is very low and flat, with an average land elevation of about 1.00 – 1.50 meters above mean sea level. The MD is 4 million hectares in size, which currently more than 2.4 million ha are used for agriculture and aquaculture production. The Mekong Delta hosts more than 18 million inhabitants. Human life, agriculture and aquaculture production, and domestic water supplies in the Delta depend highly on the river water regime. Each year, the delta supplies more than 50 percent of the nation's staple rice and crop food, 65 percent of the total fish production, and 75 percent of tropical fruits for domestic and export.

Future climate projections from regional climate model indicates that the Mekong River Delta region will tends to be warmer in the future, with a longer and drier summer. Seasonal patterns could be altered under influence of global warming. Additional, changes in the river utilities pattern in the upstream region of the Mekong Basin will also create a crisis of water resources in the wide-basin that negative leading the food security, affecting the livelihoods of many vulnerable groups, threatening the ecological particular wetland, depleting biodiversity and resulting partly in the fluctuation of migration sector.

This report presents the potential climate change and the key concerns on future climate and environmental threats, particularly to the migration issues of the Mekong Delta. Finally, the approaches of climate change studies are proposed and discussed.

Internal Migration in the Mekong Delta

Dr. Le Thanh Sang, UNDP

Comparing the place of residence in 2004 and the place of residence in 2009 for persons aged 5 and above from the Census 2009, this presentation describes and analyzes macro patterns of internal migration in the Mekong Delta. Results show that the Mekong Delta is one of regions that has the lowest in-migration rate and the highest out-migration rate nationally. Most of inter-provincial in-migrants to the Mekong Delta are from other provinces within the region. Some of them are from the Southeast and only a small number of migrants are from other regions. On the other hand, most of inter-provincial out-migrants from the Mekong Delta migrate to the Southeast. Some of them migrate to other provinces within the Mekong Delta. Other regions do not attract many out-migrants from the Mekong Delta.

Because of high rural population rates, rural to rural migration is still the largest in- and out-migration flows to the Mekong Delta and from this region. Even many out-migrants from the Mekong Delta migrate to urban areas of the Southeast, rural areas of this region are their main destination (with most of industrial zones located in rural districts). Similarly, most of inter-

provincial in-migrants to rural areas of the Mekong Delta are from other provinces within this region, except some of them are from the Southeast to nearby provinces of the Mekong Delta, such as, Long An, Tien Giang and Ben Tre. Can Tho City also attract higher rates of migrants, especially urban in-migrants, compared to other provinces.

Female have higher rates of migration than male, especially migration within districts and migration between provinces. Although the Census 2009 is excellent for an analysis of internal migration in the Mekong Delta, it does not cover all kinds of migration and therefore underestimates the real magnitude of migration, especially numerous undocumented migrants.

Perception and Adaptation to climate change of Coastal Communities in the Mekong Delta in Viet Nam

Dr. Le Xuan Sinh, Can Tho University,

This study was carried out from December 2009 to May 2010 in 8 coastal provinces of the Mekong delta. Aquaculture, wild fish capture and horticulture are the most important livelihoods of the community, there. In general, the successfulness of occupations tends to be worse (decreased about 10% after 10-15 years), and poverty rate is still high. On average, the household size was 4.8 persons with the living expenditures of VND 2.9 million/household/month, covering 32.7% of total monthly net income. The households have to find water for living about 6 months per years with an average cost of VND 220,600/household/month, and the cost of fuels for living of VND 192,200/household/month.

Coastal community recognises the evidence and reasons of climate change. It was said that climate now is worse than that of 10-20 years before, and it would become worse in the next 10-20 years. The impacts of climate change on the production activities, health and water for living are recognised. The impacts of climate change on the vulnerable group are more serious to the children and elderly persons of the poor households.

Local people propose different solutions aiming to improve the efficiency in agriculture, forestry, aquaculture, fisheries, and salt production, but the number of crops or production cycles per year and survival rate of animals/plants tends to decrease while the production cost is increased. The community can adjust at different level to climate change but mainly depend on the supply of inputs and the marketing of outputs. The livelihoods and water for living that help the coastal community to adapt to climate change should be appropriate to the poor and vulnerable groups. To reduce the production costs, to improve the perception on food safety, and to organize a better marketing of products should be given more concerns. In addition, it is recommended to conduct the study on all of three ecological regions: coastal area, area where there is seasonal saline water intrusion and the area annually affected by floods.

Climate Change, Migration and Resettlement

Ms. Jane Chun, UNDP

This presentation covers the overall study design and methodology, as well as preliminary findings from the project's field work in four provinces – Long An, Dong Thap, Can Tho City and Ho Chi Minh City. The project's overall objective is to draw out the main lessons on migration and resettlement in the Mekong Delta in relation to past and present climatic stress, and recommend migration and resettlement policy directions to strengthen resilience in both sending and receiving areas and population groups that are vulnerable to the effects of climate change according to different but realistic climate change and adaptation policy and investment scenarios for the coming years and decades.

Utilizing purposive sampling, the study sample consisted of three main groups – (1) communities living in rural, migrant sending areas experiencing severe flooding (Long An) and riverbank erosion (Dong Thap), (2) communities resettled due to flooding (Long An) and riverbank erosion (Dong Thap), and (3) migrants from rural areas of the Mekong Delta (Can Tho City and Ho Chi Minh City).

Differences emerged between the Long An and Dong Thap study sites in terms of household level response to the different environmental stressors, as well as the degree of success of resettlement programs. Factors contributing to household level vulnerability included lack of livelihood options and consistent income, chronic debt, and poor health. A key household asset was found to be strong social support networks within communities, offering crucial support in times of need.

Climate change, gender and migration

Ms. Vu Minh Hai, Oxfam

The Vietnamese Government as well as many other stakeholders has long recognised the severity of slow- and sudden-onset weather related disasters and increasingly, the impacts of climate change in the country. Due to people's diverse vulnerabilities and resilience, several studies have shown that climatic stresses impact disproportionately on the poor, the elderly, on some ethnic minorities, and upon vulnerable women and children in rural and urban areas. However, to date there has been limited research on the linkages between climate change, migration and gender.

This research aimed at identifying the nexus between migration trends and patterns, climatic changes/stresses and gender aspects, in order to make recommendations for climate change, resettlement policies and programmes. These should simultaneously aim to address poverty, gender inequality, enhance climate change adaptive and mitigation capacities and also offer adequate protection and opportunities (and capacities) of those who are migrating and those that stay behind in a gender sensitive manner.

The research examined a ‘sending’ community in Hai Ba commune, Hai Lang district of Quang Tri, identified as a disaster-prone province that is susceptible to climate change impacts. The research followed some selected migrants’ route to Ho Chi Minh City. The team also studied Huong Hoa district, Quang Tri province, a relocation area for the people from Hai Lang district. A total of 118 people, of whom 49 were women and 69 men, were interviewed.

The main findings are around the impacts of migration on the household members ‘left behind’ and on the migrants themselves. The reasons behind their decisions to migrate, the kind of support that would help them benefit better from migration as a coping strategy and how to address the increasingly difficult living conditions in their home villages. Similar topics were also examined for people moving to resettlement areas.

Where the Rain falls

Mr. Nguyen Cong Thao, CARE International Viet Nam

The research in Vietnam took place in Hung Thanh Commune (Dong Thap Province), which is located about 135 km from the coast and is part of the commercial rice production region of the upper Mekong Delta. This area is flooded annually, with peak flood levels usually occurring between September and November; at the time of the fieldwork for this research in October–November 2011, Hung Thanh Commune was experiencing the highest flood level in 10 years and was inundated except for a small strip of land along the main elevated road. Poor, landless and land-scarce households are most vulnerable to changes in local climatic conditions and benefit least from the intensification of agriculture underway in the research area. The increased mechanization of agriculture decreases demand for employment of landless agricultural labourers. For this group, out-migration is an increasingly important adaptation to multiple livelihood threats, including changing rainfall patterns and flood regimes, increased concentration of land ownership, and reduced labour demand due to mechanization.

Fishery livelihoods and adaptation under the threat of ecological uncertainties

Tran Thi Phung Ha, Can Tho University,

Fishery in Ca Mau, Vietnam's most southern province in the Mekong Delta, plays locally an important role for human nutrition and has great potentials for export earnings. The overexploitation of inshore fishing resources is a major problem in Vietnam’s coastal areas along the Mekong Delta. As a result, the Catch per Unit of Effort of small-scale fishing enterprises has decreased, undermining the sustainability of livelihoods of fishing families. The paper focuses on livelihoods’ strategies and diversification in the context of overexploitation and exhaustion of near-shore resources in relation to fishery policies. The results show that overexploitation is unavoidable in near-shore waters because of the lack of enforcement of fishery regulations for offshore vessels and the limitation of alternative sources of income and opportunities for livelihood diversification for small-scale fishers. The present policies to prevent overexploitation need to be reconciled with livelihood sustainability and fishery management, resource conservation and socio-economic goals.

Lessons learnt from the “Living with floods” experience in the Mekong Delta,

Ms. Trần Thị Triều, HELVETAS Swiss Inter-cooperation

In last two decades, in the Mekong River Delta of Vietnam, the farmers have created a way to "living with flood". Government provided measures to help local people with seasonal dyke, or full dyke. The Semi-dyke ensured that the flood could not enter the early Summer-Autumn rice fields before harvesting. Full dyke height was designed based on the measured and calculated flood peaks; it ensured the safety for the people's daily activities and cultivation in the whole flood duration. It was assuming that "Semi-dyke" seem more closed with environment conservation than "Full dyke" solution and they give more benefits than "No-dyke" case. Local people created many way to live with flood: raising fish in field, ell in net, planting aquatic vegetable, or changing crop pattern.

The study also showed that both local government and people had experiences on flood adaptation and they understood clearly the damages and benefits from flood so that the flood adaptation and mitigation measures should be flexible to get more benefit and minimise the damages from flood. Semi-dyke should be again carefully researched to overcome its disadvantages and utilise its advantages. Semi-dyke is suitable for agriculture zone and full-dyke for residential areas. .

For local people, most of farmers agreed on the government strategy on flood management. They preferred to have dyke to protect their lives and crops. The semi-dyke was mostly appreciated. To reach a safe and full life and mitigate damages caused by flood, local people paid much attention in strengthening houses (pile or basement) and boats, taking care of the children or send them to the kindergarten, listening flood information on mass media includes TV which exist in every households to have actions of response to flood.

Residential clusters in the Mekong Delta

Mr. Pham Xuan Phu, An Giang University

Tan Chau district is the area most heavily flooded and most affected by river bank erosion by annual floods in An Giang province. The floods have caused considerable and serious damage to humans and property in the district. As in other flooded provinces in the Mekong Delta, An Giang Government implements a program for stabilizing livelihoods and promoting sustainable improvements of the lives of communities “living with floods“ by building residential clusters and dykes in order to solve the damage in the longer term. This is a new program, and there have been studies by AusAID and Care on residential clusters in An Giang, Dong Thap, Long An in Provinces in the Mekong Delta, Vietnam. This study looks more specifically at changes in household livelihoods and chooses a district which has not yet been studied. The aim of the study is to understand how people's livelihoods change when they move and the advantages and disadvantages of moving. The study explores livelihoods of people who moved and did not

move to residential clusters and dykes; to understand the impact of the resettlement program on livelihoods after resettling as well as to explore how the livelihood strategies.

Climate Change experience in the Mekong Delta: Resettlement and Awareness raising in Ca Mau province

Mr. Nguyen Phu Son, Swiss Red Cross

The SRC is engaged in active in humanitarian emergency activities, medical and social aid as well as post-disaster reconstruction since the mid-sixties. Thanks to its steady and very close contacts with Vietnam over almost half a century, the SRC has been able to watch at close range the out-standing resilience of the Vietnamese people to the impact of natural disasters.

Core-principles of the SRC-reconstruction projects

- ❖ Concentration of operational focus on the most needy/indigents population segments;
- ❖ Search for the best possible cost-efficiency ratio (in order to secure a numerical maximization of the impact);
- ❖ Development of a standard disaster-proof house-design in order to allow a simultaneous, speedy (4 days per house) large-reconstruction in an important number of different project sites;
- ❖ The experience made over the last 8 years shows that this relatively inexpensive type of house resists extremely well to various natural disaster events, is of a long life-span and is highly appreciated by its beneficiaries. As a result, poor families are able to economize approx. 200 USD per year, as no more damage occurs during the recurring natural disasters. Cheaper houses, made of locally available resources (bamboo, wood, palm leaves, etc.) have a very limited life-span, need steady and costly maintenance, not to speak of the cost of their replacement after 5 or so years.

Parallel improvement of the livelihood of the families concerned (vegetable/fruit gardens, fish raising, etc.), so as to allow them to stay in their new location.

Annexe 2 ♦ Opening remarks, Mr. Florian Forster, Chief of Mission, IOM Viet Nam

Mr. Le Viet Dzung, Vice Rector of Can Tho University, distinguished guests and delegates, ladies and gentlemen;

It gives me great pleasure to represent IOM Viet Nam at this workshop on “Climate Change Adaptation and Migration in the Mekong Delta”. On behalf of the organizers, I would like to welcome all of you, distinguished representatives of the Consular Corps in Ho Chi Minh City, international organizations and NGOs, researchers, scientists, policy-makers, and practitioners. Thank you for joining us at this workshop, the first of its kind ever organized by IOM in Viet Nam, to explore the links between climate change and migration. This is a workshop which, from the IOM’s perspective, is urgently needed in response to the rapid environmental and migration changes taking place in the Mekong delta region.

You will no doubt already know from your climate change research, from government reports and from the media that climate change, related disasters and resulting population movements figure among the most serious challenges Viet Nam may face in the future. The Mekong Delta remains particularly vulnerable as one of the top three regions most heavily affected by climate change. Recent studies found that if sea water levels rise by one meter, up to one third of the Mekong Delta could be submerged. As an area with already today ongoing high levels of out-migration, the Mekong Delta region will likely be particularly affected by climate change and its impact on migration. With negative effects of climate change becoming more severe, it is reasonable to assume that out-migration will become even more frequent.

Against that backdrop, one has to acknowledge that so far there has not been many studies and/ underlying research that highlights the links between climate change and migration. In particular in Viet Nam more targeted research and subsequent studies could greatly help donor agencies as well as the Vietnamese government to become aware and to better include the migration dimension - mainstream migration! - into their climate change planning.

Migration and climate change have various linkages: Migration in its form of “displacement” is a negative consequence of natural emergencies (in the Mekong Delta notably flooding) that are themselves influenced/triggered by climate change. Migration also appears in the form of organized “resettlement”. And migration can constitute a positive, more individual or family-based, adaptation strategy to growing environmental stress influenced by climate change.

As a leading international agency on migration, IOM recognises the need to fill the gap by raising awareness among policy-makers, and the community in general, on the migration dimension in the context of increasingly complicated climate change incidents around the globe. Toward that end, IOM Viet Nam - an active member of the ONE UN initiative in Viet Nam

- has partnered with its sister agency UNDP and with the Dragon Institute at Can Tho University to organize this workshop.

Bringing together researchers, policy-makers and practitioners and giving them the opportunity to exchange views and share their experience, we hope to achieve the following 4 major objectives:

1. **To take stock of government policies**, adaptation strategies and the latest research on the relationship between migration, environmental degradation and climate changes in Viet Nam, especially in the Mekong Delta.
2. **To facilitate information and experience-sharing** between practitioners at national and provincial levels and between researchers and practitioners on migration and climate change issues.
3. **To identify challenges and constraints** in addressing the nexus between climate change, environmental degradation and migration
4. **Agree on issues/actions** on where a migration-sensitive approach to climate change adaptation and environmental degradation would be beneficial.

Having been able to bring to today's forum this strong and diverse representation of stakeholders and relevant players in the field, I am confident that Viet Nam will be able to gain a better insight into the modes of climate change adaptation in the Mekong Delta and possible interventions to build up resilience for the affected population, as well as exploring migration as a possible adaptation strategy.

I would like to take this opportunity to offer (on behalf of IOM and I am sure also on behalf of UNDP) our sincere thanks and appreciation to Can Tho University and the Dragon Institute for their effective cooperation and strong support in the organization of this workshop. We look very much forward to partnering with the Dragon Institute and other relevant players in the Mekong Delta to develop further projects on climate change and migration for this region in the near future.

On that note, I would like to open the workshop on "Climate Change Adaptation and Migration in the Mekong Delta". I look forward to interesting presentations and fruitful discussions from all the participants in the next one and a half days.

I wish the workshop every success.

Thank you

Annexe 3 ♦ Notes of group discussion sessions

The group discussion sessions aimed at making possible an exchange of experience and knowledge of the delegates from the MD provinces, researchers, and other experts. The group discussions were guided by questions. Results of the different group discussions were shared in a plenary session.

SESSION 1

1. What are the main social vulnerabilities created by the different types of climate change impacts and environmental degradation? Who is most affected by the changes?

The group discussions resulted in highlighting several issues in response to this question:

- an increase of diseases due to global warming was seen as affecting humans, especially children and pregnant women.
- Erratic weather patterns were seen as affecting the livelihoods of poor people.
- the geographical location made residents vulnerable: coastal, near river and flood-prone areas.
- poor areas with simple and temporary infrastructure were seen as vulnerable.
- Low awareness on the impacts of climate change due to low educational levels played also a role.
- Access to resources played a major role as resources training and production were not good, which created difficulties to adapt
- The job structure was seen as a problem, as labour was concentrated areas that made the jobs vulnerable, examples were agricultural labour, aquaculture in coastal rivers.
- A strong community as seen as a resource for better adaptation.
- The role of customs and habits was highlighted, as some areas had lots of ethnic minority people, who practised customs that made is difficult to access them.
- Social Conflicts were also named as challenges
- Vulnerable groups were identified in communities located in vulnerable areas and communities with high poverty. Specifically women, children, elderly, disabled people and ethnic were seen as vulnerable.
- Climate change and environmental degradation was seen as likely to impact upon agricultural production through droughts and floods.
- Some descriptions referred to central areas that were affected by high tides, which resulted in environmental pollution and had severe impact on production, transport and other activities. Especially, poor people are hit hardest.

- One issue was riverbank erosion that causes the loss of land, which affects households living near river. For example, Vinh Long province had 54 point erosion and with average level about 0.5 – 1 m every year.
- Psychological effects of climate change were also named. Here also poor people were perceived as most vulnerable
- Some respondents claimed that environmental degradation in Vietnam was more severe currently than climate change.
- Other vulnerable groups were:
 - Poor and near-poor households
 - Farmers:
 - who have lost their land for some reason e.g. to development and the compensation money they receive is eventually used up by their children who then don't have any skills to earn ongoing income
 - who fail at their business (usually on a repeated basis) e.g. those who are unsuccessful at raising shrimp, rice farmers who lose their crop because of floods
 - who are in debt e.g. because of failing farming business or spending on household health problems
 - Young Families:
 - young couples who are just married and starting their own household
 - young families with children below working age
 - Landless and land-scare households
 - The elderly

2. To what extent is migration a livelihood and adaptation strategies for those affected by climate change and environmental degradation?

The group discussions resulted in highlighting several issues in response to this question:

- It is perceived that rich family were more successful with migration strategies, whereas making migration a success was more difficult for poor families
- Discussants presumed that migration will happen when habitat and production environment exceed a certain threshold of people suffering.
- Discussants claimed the need for an appropriate strategy that depends on 3 levels:
 - Level 1: Affected regions: Here there is a need to have investments and specific action plans.

- Level 2: Regions with high risks: Here there is a need to have adaptation planning, which should include measures that also incorporate non-structural projects.
- Level 3: Region with existent risks: Here there is a need to have medium-term plans and long term plans.
- Migration: planning sustainable livelihoods after resettlement.
- The coastal provinces must be based on predictions and forecasts about the impact of climate change.
- Streamlining the production areas and infrastructure planning for climate change adaptation; more research on livestock and crop that can adapt to climate change. Developing and researching plants that adapt to wind and salinization.
- Dykes are seen as effective solutions to prevent saline intrusion and sea level rise.
- Increasing protection and development of mangroves.
- There is a need to relocate affected households, especially households living in estuaries and forests.
- There is a need for increased mobilization and advocacy so that people understand the impact of climate change on them.
- Capacity building for disaster warning should be updated and adapted from time to time.
- Support self-improving the home where they live and raise embankments in the area of aquaculture.
- Participants expected: IOM and UNDP to visit the coastal provinces to witness the impact of climate change.

GROUP DISCUSSION - SESSION 2

1. What kind of impact, if any, does migration have on the ability of communities to cope with climate change impact? Please list some of the positive and negative impacts of migration.

Discussants highlighted that resettlement programs reduced the vulnerability of the community. However, assessment on production experiences, development of the infrastructure and investments in the region should be made to resettlement.

The advantages of resettlement are seen in that residential areas concentrated, have lower prices than residential investments. However, the downside was seen in the problem of social evils and a higher protection costs and higher maintenance.

2. What kind of Interventions, in both sending and receiving areas, could enhance the positive and reduce the negative impacts of migration on the communities' ability to cope with climate change?

- Discussants highlighted that when climate change occurs, the solution to have people living in higher grounds with better living conditions is a good solution: Benefits were seen in the reduction of the loss of life, and the reduction of diseases that affect communities because of climate change.
- In general approaches that increased the safety of life, health and property and planning for people to live in areas with higher, less prone to flooding with less environmental problems are seen as good approaches. Furthermore, there is a need to create skills to get used to adapting to climate change.
- Negative issues were seen in: less stable housing, livelihoods, difficult job situation and resettlement projects that were not appropriate to the needs of the resettled population.
- Participants identified the need for an approach by which three communities are included: (1) origin community, (2) resettlement community and (3) receiving community. Here, each community is affected differently. Example: If group 1 is rich community, group 3 can get better development conditions. If group 1 is poor communities as well as group 3 there is a need for more support for receiving communities.
- It was perceived that resettlement to areas with better conditions is a good solution, however, climate change will still be felt.
- In addition, it is suggested that communities that are less resilient should be prioritised for resettlement.
- There is a need to distinguish the concepts of migration and resettlement. There is a need to collect more information on migrants.

3. How do resettlement programs decrease or increase the vulnerabilities of communities living in conditions of environmental stress? What are the different outcomes between clusters and dykes?

- Discussants pointed to the need that local authorities should inform local people about migrants: who they are, the purpose of migration.
- There is need to guide the development of the local economy with the support of the local government and migrants.
- The livelihoods in new place should at least equal the living conditions of the area of origin.
- The process of migration is seen as making people vulnerable.
- Migrants are in need of learning about the culture and religion of the destination area
- Some discussant argued that migration and resettlement should be seen as similar without a conceptual distinction.

4. Is there a need for greater coordination among and between provincial authorities to deal effectively with the challenges of climate change impacts and migration? Please explain.

The discussants highlighted the need to focus on the role of departments that are responsible for planning and implementation. Here, seminars would support the provision of effective solutions. Furthermore, there is a need to enhance international cooperation and attract investment and funding from abroad. Moreover, a need for more research and larger studies was raised to support agencies. Specifically on migrants, there was a suggestion to have policies to support migrants in adapting to new environments and provided them with the skills to support response to climate change. Here, one proposition was to develop an emergency warning system for people on the move.

In addition to that, the issue was raised that provinces should provide information on infrastructure and services for new migrants and support them within the social welfare system.

List of participants

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