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Resilience, Pathways and Circumstances:

Unpicking livelihood threats and responses in the rural Philippines.

Georgina Nora Mary Jordan

The response of small scale agricultural producers in the Philippines to livelihood threats arising from market integration has received less attention than responses to other threats. The ability of agricultural producers to respond to changes in their production environment is an important component of livelihood resilience. This research unravels the patterns of livelihood response used by small scale agricultural producers in the Philippines affected by livelihood threats resulting from changes in their production environment as a result of agricultural trade liberalisation.

Research was conducted at the household level using a sustainable livelihoods based approach in order to examine the following research questions: (1) Does current livelihood and disaster theory adequately account for and explain the diverse livelihood options pursued by small scale agricultural producers facing threats based on deterioration?; (2) Are current distinctions between different patterns of responses and the rationale of such responses appropriate?; (3) Are current research methods adequate to the task of picking out individualized patterns and rationales of response?; and (4) What is the role of historical factors (institutional and personal) of past events – in moulding patterns of response?

Findings from this study contribute to the limited existing empirical data on livelihood strategies in Mindanao. In particular the research shows that while current research methods capture the various livelihood activities that people engage in, they tend to take a static view of livelihoods, failing to capture the complexity of historical influences on livelihoods and livelihood pathways over time. The findings from the study also demonstrate that factors beyond context which are embedded in personal circumstance play a significant role in the rationale and patterns of livelihood response used by small scale producers in the research sites. The implications of these findings are considered from a wider policy and practice perspective and recommendations as regards the future directions of current research methods are presented.

**Resilience, Pathways and Circumstances:
Unpicking livelihood threats and responses
in the rural Philippines.**

Georgina Nora Mary Jordan

Thesis submitted for the degree of
Doctor of Philosophy

Department of Geography
Durham University

2012

Table of contents

Table of contents.....	i
List of Figures	vii
List of Tables	ix
List of Boxes	xi
List of Acronyms and Abbreviations.....	xii
Declaration.....	xv
Acknowledgements.....	xvi
Dedication	xviii
1 Chapter One: Introducing Livelihood Threats and Responses in the Rural Philippines.....	1
1.1 General Introduction	1
1.2 Rationale for the study	3
1.3 Research aims and research questions	11
1.4 Structure of the thesis	13
2 Chapter Two: Livelihoods Research, Livelihood Threats and Livelihood Response: where from, where to?	16
2.1 Introduction	16
2.2 The Sustainable Livelihood Approach: origins and directions.....	18
2.3 Components and measurements of Sustainable Livelihood analysis	24
2.4 Livelihood research: a pillar of the Sustainable Livelihoods Approach	33

2.5	Disaster Risk Reduction theory and vulnerability	37
2.5.1	The multiple faces of vulnerability	40
2.5.2	Capacity as a component of vulnerability.....	45
2.6	Livelihood strategies, portfolios and pathways in the wider vulnerability context	52
2.7	Issues and challenges of current approaches	55
2.7.1	Livelihood research: moving forward	58
2.8	Conclusion.....	62
3	Chapter Three: Methodology	63
3.1	Introduction	63
3.2	Justification of research approach	65
3.3	Security Considerations	68
3.4	Rationale for case strategies and selection	69
3.4.1	The household as a unit of analysis.....	74
3.5	Methods.....	76
3.5.1	Exploratory key informant interviews (non-commodity specific).....	82
3.5.2	Banana Agrarian Reform Beneficiaries focus groups	83
3.5.3	Corn Industry key informant semi structured survey.....	84
3.5.4	Producer Survey	85
3.5.5	20 Case Studies across the Philippines	94
3.5.6	PRA workshops.....	96
3.5.7	Life story workshops.....	102
3.6	Data analysis	105
3.7	Research constraints, ethical considerations and positionality when working in another culture	109
3.8	Reliability and validity	115
3.9	Conclusion.....	116

4	Chapter Four: The Philippine Vulnerability Context	118
4.1	Introduction	118
4.2	The Philippine Context	120
4.2.1	Philippine agriculture and the corn industry	125
4.3	The rationale for trade liberalisation in the Philippines	129
4.4	Philippines historical agricultural trade policies	133
4.5	Philippine agricultural modernization and liberalisation	140
4.5.1	Philippine liberalisation mechanisms	145
4.5.2	Corn and trade liberalisation	147
4.6	Trade liberalisation as a livelihood threat	150
4.7	Conclusion.....	156
5	Chapter Five: Mindanao and the Study Site Vulnerability Context.....	157
5.1	Introduction	157
5.2	Mindanao.....	158
5.2.1	Mindanao threat context.....	160
5.2.2	Mindanao and conflict-historical perspectives	162
5.2.3	Mindanao and development.....	165
5.2.4	Mindanao corn and infrastructure issues.....	169
5.3	Study site context.....	173
5.3.1	Magpet.....	174
5.3.2	Malabog	176
5.4	Demographic trends in Malabog and Magpet.....	185
5.5	Malabog and Magpet change in cropping patterns and livelihoods	187
5.6	Conclusion.....	189
6	Chapter Six: Coping in Magpet.....	190

6.1	Introduction	190
6.2	Magpet producer respondent production and vulnerability context.....	191
6.2.1	Access to affordable credit and inputs	196
6.2.2	Transportation costs	201
6.2.3	Low production outputs	206
6.2.4	Rationale behind non diversification in Magpet	208
6.3	Is non-response a strategy in Magpet?	210
6.4	Asset access as a rationale for non-response.....	212
6.4.1	Physical and Financial Assets and input relationship	213
6.4.2	Human assets	218
6.5	The role of remittances	221
6.6	Issues which contribute to uncertainty.....	224
6.7	Exceptions to the rule.....	228
6.8	Conclusion.....	232
7	Chapter Seven: Adaptation in Malabog.....	234
7.1	Introduction	234
7.2	Malabog producer respondent production context	235
7.2.1	Asset and vulnerability context.....	240
7.3	Diversification as an adaptation strategy.....	241
7.4	Rationale for diversification as identified through the research.....	244
7.4.1	Community level diversification.....	254
7.4.2	Gender and diversification in Malabog	257
7.4.3	The role of remittances	259
7.4.4	The role of social and human assets in study site response	261
7.4.5	Historical influences	264
7.5	Exceptions to the rule and why exceptions.....	267
7.6	Conclusion.....	268

8	Chapter Eight: Livelihood Pathways Over Time	270
8.1	Introduction	270
8.2	Beyond livelihood strategies and context	273
8.3	Livelihood options through a pathway lens	282
8.4	Unpicking pathways	286
8.4.1	Patterns of pathways.....	289
8.4.2	Circumstances, videoke and pathways.....	292
8.5	Historical influences on livelihood Pathways	299
8.6	Conclusion.....	301
9	Chapter Nine: Unpicking Livelihood Threats and Responses in the Rural Philippines.....	303
9.1	Introduction	303
9.2	Summary of research findings	306
9.2.1	Does current livelihood and disaster theory adequately account for and explain the diverse livelihood options pursued by small scale agricultural producers facing threats based on deterioration?.....	306
9.2.2	Are current distinctions between different patterns of responses and rationale of such response appropriate?.....	310
9.2.3	Are current research methods adequate to the task of picking out individualized patterns and rationales of response?	313
9.2.4	What is the role of historical factors (institutional and personal) of past events – in moulding patterns of response?.....	317
9.3	Contribution of this thesis to knowledge, policy and practice	319
9.4	Areas for further research	329
9.5	Limitations of this research	331
9.6	Conclusion.....	334

Appendices.....	336
Appendix 1 Corn industry key informant email survey questionnaire and participants by affiliation	336
Appendix 2 Corn industry key informant semi structured questionnaire, participants by affiliation and location	338
Appendix 3 Magpet producer household survey	340
Appendix 4 Malabog producer household survey	341
Appendix 5 List of NGOs who conducted case studies throughout the Philippines	344
Appendix 6 Overview of case study research process.....	345
Appendix 7 First PRA workshop (March 2004) design	346
Appendix 8 SLA workshop guide and summarized findings	349
Appendix 9 Second PRA workshop (November 2004) design.....	357
Appendix 10 Selected SPSS outputs from producer surveys	358
Bibliography	360
References List	361

List of Figures

Figure 1.1 Map of the Philippines	6
Figure 2.1 DFID Sustainable Livelihood Framework	25
Figure 2.2 The Asset Pentagon	28
Figure 2.3 Ellis rural livelihood framework (A framework for micro policy analysis of rural livelihoods) (Source: Ellis, 2000:30)	34
Figure 2.4 Pressure and Release Model (Source: Adopted from Wisner <i>et al.</i> , 2004:51) ..	49
Figure 2.5 The access model in outline (Source: Wisner <i>et al.</i> , 2004:89).....	50
Figure 3.1 Map of Magpet, North Cotabato (Source: Provincial Government of Cotabato, 2010)	88
Figure 3.2 Map of Malabog, Davao City (aerial view) (Source: The Department of Environment and Natural Resources Davao City, 2011).....	91
Figure 3.3 Write shop participants, 2003.....	95
Figure 3.4 AFRIM staff with SLA workshop participants, 2004	98
Figure 5.1 Map of the regions of Mindanao (Source: Mindanaomaps, 2010).....	159
Figure 5.2 Figure internally displaced person's camp, Cotabato 2008	163
Figure 5.3 Picture of the main road into Malabog during the rainy season.....	167
Figure 5.4 Photograph of a habal- habal (Source: Hearne, 2006).....	177
Figure 5.5 Photograph of a Jeepney (Source: Hearne, 2005)	178
Figure 5.6 Resource map of Malabog (Source: Participatory workshops Malabog, 2004) ..	179
Figure 5.7 Resource Map of Magpet (Source: Participatory workshops Magpet, 2004) ..	179
Figure 6.1 Magpet seasonal cultivation calendar for corn (Source: PRA workshops, March 2004)	192
Figure 7.1 A sari sari store	236
Figure 7.2 Malabog consolidated decision tree (Source: Adapted from participatory workshop, Malabog 2004)	245
Figure 7.3 Venn diagrams Magpet (Source: adapted from participatory workshop Magpet,2004)	249

Figure 7.4 Venn diagram Malabog (Source: adapted from participatory workshop
Malabog, 2004) 250

Figure 8.1 Livelihood strategies and livelihood pathways, context and circumstance 277

Figure 9.1 Disaster Resistant Sustainable livelihoods (Source: ITDG South Asia, 2005) ... 323

List of Tables

Table 2.1 Overview of selected key events in the evolution of the Sustainable Livelihoods Approach, 1987-2008.....	23
Table 2.2 Vulnerability issues	26
Table 2.3 Categories of vulnerability	43
Table 2.4 CVA matrix.....	47
Table 3.1 Sequence of research and data collection tools	77
Table 3.2 Respondent profile of Household Producer Survey in Magpet	89
Table 3.3 Respondent profile of Household Producer Survey in Malabog.....	92
Table 3.4 The problems associated with the group decision making process.....	100
Table 3.5 Intra-group issues paramount to the decision making process.....	101
Table 4.1 Poverty incidence per cent by population of the regions of the Philippines	121
Table 4.2 Natural disasters in the Philippines from 1900 to 2010	123
Table 4.3 Agriculture as a per cent of GDP 1998-2004, for selected Asian and all developing countries.....	127
Table 4.4 Philippine agricultural trade policies 1940-2000s.....	135
Table 4.5 Republic of the Philippines commitments on signing the Agreement on Agriculture (AoA)	141
Table 4.6 Philippine tariff rates 1995 and 2004	142
Table 4.7 Agricultural statutory instruments 1995-1999	143
Table 4.8 Percentage of AFMA budget released 1999-2002	144
Table 4.9 Agricultural trade liberalisation mechanisms 1992-2003.....	146
Table 4.10 Policy implications-a two pronged approach.....	153
Table 5.1 Livelihood assets and vulnerability context in order of importance as identified by SL analysis workshop participants, 2004.....	160
Table 5.2 Mindanao corn production, by region in metric tons, 1995-2009.....	170
Table 5.3 Land use pattern in Magpet 2003	175
Table 5.4 Tundan Banana Prices 2003 (PHP/kg)	181
Table 5.5 Overview of prevailing farm gate and retail prices 2003 (PHP/Kg).....	182

Table 5.6 Vegetable (Cauliflower) producer terms of trade per hectare in Malabog and associated problems 2003	183
Table 6.1 Livelihood threats identified and ranked in Magpet, 2004	195
Table 6.2 Corn production costs per hectare in Magpet, 2003	198
Table 6.3 Cost structure of Corn from Magpet to Manila, 2001.....	203
Table 7.1 Malabog respondent's crop production context	238
Table 8.1 Examples of circumstance and context identified through research.....	275

List of Boxes

Box 2.1 DRR terminology	38
Box 7.1 Malabog timeline	265

List of Acronyms and Abbreviations

ACEF	Agricultural Competitiveness Enhancement Funds
AFMA	Agriculture and Fisheries Modernization Act
AFRIM	Alternate Forum for Research In Mindanao
AoA	Agreement on Agriculture
ARB	Agrarian Reform Beneficiaries
ARMM	Autonomous Region of Muslim Mindanao
CADTEC	Cotabato Agribusiness Development on Technology Centre
c.i.f.	Cost Insurance Freight
CVA	Capacities and Vulnerability Analysis
DFID	Department for International Development (UK)
DRR	Disaster Risk Reduction
EO	Executive Order (Government of the Republic of the Philippines)
FAO	Food and Agricultural Organisation of the United Nations
FOB	Free on Board
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
HDI	Human Development Index
IDS	Institute of Development Studies based at the University of Sussex
IFAD	The International Fund for Agricultural Development
IFRC	International Federation of the Red Cross and Red Crescent
INGO	International Non-governmental organisation
IRD	Integrated Rural Development

ISF	Integrated Social Forestry programme
ISI	Import Substitution Industrialization
ITDG	The Intermediate Technology Development Group
Kg	Kilogram
LGU	Local Government Unit
MAV	Minimum Access Volume
MFN	Most Favoured Nation
MIEDECO	Malabog Integrated Enterprise Development Cooperative
MMT	Million Metric Tons
MT/ha	Metric Ton per Hectare
NGO	Non-Governmental Organisation
NPA	New People's Army
NTB	Non-Tariff Barrier
OFW	Overseas Foreign Worker
PAR	Pressure and Release Model
PHP	Philippine Peso
PIPs	Policies, Institutions and Processes.
PRA	Participatory Research Approach
PPA	Participatory Poverty Assessment
SAAD	Special Area for Agricultural Development
SLA	Sustainable livelihood Approach
SL	Sustainable Livelihood
SPSS	Statistical Package for the Social Sciences
STRIVE	Society Towards Reinforcing Inherent Viability for Enrichment
WTO	World Trade Organisation
OECD	Organisation for Economic Cooperation and development

QR	Quantitative Restrictions
UK	United Kingdom of Great Britain and Northern Ireland
US	United States of America
USDA	United States Department of Agriculture
UN	United Nations
UNDP	United Nations Development Programme
URAA	Uruguay Round Agreement on Agriculture
UR-GATT	Uruguay Round General Agreement on Tariffs and Trade
V2R	From Vulnerability to Resilience framework (Practical action)
VCA	Vulnerability and Capacity Assessment
VSO	Voluntary Services Overseas

Declaration

I confirm that no part of the material presented in this thesis has previously been submitted by me or any other person for a degree in this or any other university. The research reported here has been conducted by the author unless stated otherwise.

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and all information derived from it should be acknowledged appropriately.

Georgina Jordan

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For Darcy

1 Chapter One: Introducing Livelihood Threats and Responses in the Rural Philippines

1.1 General Introduction

“The livelihoods of poor rural households are diverse across regions and countries, and within countries. Livelihoods are derived, to varying degrees, from smallholder farming – including livestock production and artisanal fisheries – agricultural wage labour, wage or self-employment in the rural non-farm economy and migration. Whilst some households rely primarily on one type of activity, most seek to diversify their livelihood base as a way to reduce risk. Agriculture plays a vital role in most countries – over 80 per cent of rural households’ farm to some extent, and typically it is the poorest households that rely most on farming and agricultural labour.” (The International Fund for Agricultural Development (IFAD), 2010:16)

In recent years the Sustainable Livelihood Approach (SLA) has become a maxim in much development work and humanitarian interventions. Livelihood research and analysis in particular have come to play an important role in rural development projects, “‘livelihoods’ can be attached to all sorts of other words to construct whole fields of development enquiry and practice” (Scoones, 2009:3). Increasingly livelihood research forms the baseline data and rationale for intervention in development and early recovery projects post humanitarian crisis. Considerable amounts of development and humanitarian funds are allocated based on the findings of livelihood research and analysis, perhaps more importantly large numbers of people worldwide are beneficiaries of projects and programmes based on the output of Sustainable Livelihood (SL) analysis. Project beneficiaries are allocated assets and ‘encouraged’ to pursue livelihood options which stem from these outputs.

This chapter lays out the rationale and justification for this study, which attempts to answer the following question: When confronted by livelihood threats arising from market integration, what patterns of livelihood response are used by affected small scale agricultural producers? In this case, those threats are seen to arise from agricultural trade liberalisation in the Philippines. In order to answer this question, consideration needs to be given to the SLA and how livelihoods are currently 'measured' and viewed over time. The SLA forms the main organizing framework for this inquiry. In addition, however, developments in Disaster Risk Reduction (DRR) theory and its underpinning concepts are also incorporated where relevant and appropriate. As we will see, DRR theory makes an important contribution to thinking on resilience and vulnerability.

1.2 Rationale for the study

The incidence of rural poverty, food insecurity and increasingly volatile food prices in the developing world has forced agriculture and food related poverty issues to the forefront of global trade and economic summit agendas. The incidence of poverty has been revealed to be not only regionally but also sector specific, as indicated by findings from IFAD (2001, 2010) which shows that the proportion of the poor making their living in rural areas has remained and is expected to remain strikingly high. Over half the world's extreme poor depend primarily on farming or on farm labour for their livelihoods. Recently IFAD (2010:16) stated that "At least 70 per cent of the world's very poor people are rural". Poverty statistics and sometimes harrowing coverage of famine and starvation by the press in a 'world of plenty' heightens tensions. Perhaps most striking is the fact that this observation remains as prominent today as it was thirty or more years ago. As Chambers outlined in 1983:2 "The outrage is not just that avoidable deprivation, suffering and death are intolerable; it is also that these coexist with affluence".

This high incidence of rural poverty has forced an examination of the nature and causes of rural poverty and attempts to address it. Various methodologies and conceptual frameworks have emerged over the last 20 years which attempt to address the root causes of rural poverty. These methodologies include Farming Systems Analysis, Integrated rural development (IRD) and, more generally, approaches that take a more holistic view of poverty and well-being from which emerged the SLA. The term sustainable livelihood is widely used by Non-Governmental Organisations (NGO's), bilateral agencies, governments, funding agencies and the Bretton Woods institutions.

As early as 2002 there were over fifty definitions of the term sustainability (Faber *et al.*, 2005), whilst the term livelihood, almost by connotation, is complex and diverse. Once only a concise way to say 'modes of making a living', the term SLA now delimits a field of poverty-related research and a framework for development co-operation and implementation.

Perhaps the most widely used definition of sustainable livelihoods is that coined by Chambers and Conway in 1992, who define a sustainable livelihood as:

“A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable which can cope with and recover from stress and shocks maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.” (Chambers and Conway, 1992: 7-8)

An important question is whether there is something analytically distinctive in the SLA, or is livelihoods discourse just another passing trend in development studies? O’Laughlin (2004) and Scoones and Wolmer (2003) suggest that it has become a development buzzword and umbrella term, and as a result sustainable livelihoods has come to mean many different things to different people. In many respects, by encompassing all bases of contemporary development thinking, it has come to mean everything and nothing. Notwithstanding the breadth of definitions for the term sustainable livelihoods, the general ethos of a sustainable livelihood is certainly well understood by development practitioners. Increased awareness of what makes small scale agricultural producers vulnerable has led to an examination of shocks, seasons and trends and the resulting threats that they pose to small scale farmers’ livelihoods. Advances in the area of DRR have also heightened awareness of vulnerability.

Livelihood programmes now form key components of early recovery and reconstruction activities following humanitarian crisis as well as playing a key role in development programming. A glance at the mission statements or ‘what we do’ sections of the major development agencies websites will include some form of the term sustainable livelihoods¹. However, the complexities of the components of a sustainable livelihood are often oversimplified. Livelihood projects are important post humanitarian crisis in returning people’s lives to some form of normalcy.

¹ See for example http://www.oxfam.org.uk/oxfam_in_action/what_we_do/index.html, http://www.savethechildren.org/site/c.8rKLIXMGlpI4E/b.6153013/k.9328/Program_Areas.htm

Livelihoods work plays a crucial role in improving people's resilience to a host of hazards and threats. In development programming livelihoods projects strive to decrease people's dependency on aid interventions as well as enabling upward mobility of people in normal times.

This study focuses on the Philippines (Figure 1.1) and in particular the island of Mindanao as depicted in Figure 5.1. Agriculture in the Philippines is an important contributor to Gross Domestic Product (GDP) (see Table 4.3) and the agricultural sector in the Philippines consists of a large number of mainly small scale farmers who, as we will see, also constitute a large percentage of the Philippines 'poor'. Huvio *et al.* (2005) discuss the difficulties around defining small farmers. Here a small scale farmer refers to farmers that are income poor and use mostly household labour in line with the peasant farm household model (Ellis, 1988).



Figure 1.1 Map of the Philippines (Source: The Central Intelligence Agency, 2011)

The Philippines acceded to the World Trade Organisation (WTO) in 1995 and undertook to implement the necessary liberalisation of agriculture under the Uruguay Round Agreement on Agriculture (URAA). Prior to the Uruguay trade round (1986-1994) the WTO rules that applied to agricultural primary products deviated from the general rules. The URAA which came into effect in 1995 was implemented until 2000 (2004 for developing countries). The URAA imposed specific commitments to reduce support and protectionism in the areas of agricultural domestic support, market access and export competition. The Philippines, along with numerous other countries, engaged in policy reforms aimed at liberalising its domestic market, removing quantitative restrictions² on trade, gradually removing tariffs³ on imports, and in general opening up its economy to international trade opportunities. It is this changing policy context which provides the backdrop to the exploration of farmer vulnerability that forms the core of the study.

Whilst much attention has focused on the impact of chronic crisis and natural hazards on rural livelihoods⁴ (for example Longley and Maxwell 2003, Morris *et al.*, 2002) less focus has been given to livelihood threats due to trade policy changes. The International Federation of the Red Cross and Red Crescent (IFRC) (1996:60) divides potential threats into three categories, related to: “nature (earthquakes, cyclones, droughts, floods or pathogens); violence (war, intimidation, harassment, sexual assault); and deterioration (declining health, education and other social services, trade shifts, government policy or environmental degradation)”. In the Philippines, studies have tended to focus on the impact of threats related to nature and violence on livelihoods and food security. Whilst no doubt important, it can be argued that some of the largest changes facing small scale farmers in recent years have resulted from changes in trade policy and, more particularly, the liberalisation of agriculture (Food and Agriculture Organisation of the United Nations (FAO), 2003).

² An example is an import quota, where a quantitative restriction on the level of imports is imposed by a

³ A tax imposed on a good imported into a country.

⁴ A whole series of papers entitled “Livelihoods and Chronic Conflict, Working Paper Series” has been published by the Overseas Development institute London.

Whilst much has been written as regards the patterns of response of those affected following a humanitarian crisis, the literature tends to separate policy changes (such as market integration) and resulting impacts and views them solely from an economic and price perspective.

The perceived failure of trade liberalisation to attain its much published benefits to small rural agricultural producers in the developing world has been the subject of much discourse in the mass media, academia and policy making circles⁵. This has left both governmental and NGO's under no illusion that they desperately need to seek alternative approaches to rural and agricultural development in order to 'make markets work' for the rural poor. In order to facilitate access to 'effective' markets by small scale agricultural producers, an understanding of how global market forces impact on local livelihoods and how threats and opportunities are responded to and dealt with is required. It is this critical gap in our knowledge which this research aims to fill. Scoones (2009) raises important questions in terms of the articulation of the global and the local and the challenges that this poses for the future. He highlights the need to develop livelihood analysis which can take into account "the multiple contingent consequences of globalisation on rural livelihoods" (Scoones, 2009: 17).

Agriculture is often referred to as the political landmine of WTO orchestrated trade liberalisation as it is perceived in some quarters to leave small scale producers unprotected against the price volatility of global agricultural commodity markets. However, full trade liberalisation in theory would increase, "by around 9 per cent developing countries share of global agricultural exports, with the greatest gains in cotton and oil seeds, but also in wheat, processed meat, sugar, dairy products, coarse grains, and fruit and vegetables" (IFAD, 2010:121). Whilst the economics may seem clear enough, any increases in trade depend on small scale producers' ability to respond to changes in the production environment brought about by liberalisation episodes.

⁵ Leading to trade liberalisation featuring heavily on global economic summit agendas, in particular the G8 and G20 summits.

The ability of a livelihood to respond to changes in the production environment which result in livelihood threats is important in terms of policy, practice and from a research perspective, and a number of issues are germane.

Firstly, the ability to respond to change is a feature of livelihood resilience. This resilience enables producers to respond to a host of other shocks and stresses which go far beyond trade liberalisation and threats based on deterioration. David *et al.* (1999) explain the importance of the ability to adjust. Responsiveness is particularly important when one considers the vulnerability aspects of poverty. Policies that reduce a household's ability to adjust to, or cope with negative shocks, could have major implications for the translation of trade shocks into actual poverty. Moreover, fear of the consequences of not being able to cope with negative shocks might induce households to rule out activities that would raise their average income significantly but run greater risks of resulting in very low incomes. In a recent document, IFAD (2010:17) explains that, "Shocks are the major factor contributing to impoverishment or remaining in poverty. Poor rural people have less resilience than less-poor people because they have fewer assets to fall back on when shocks occur." Importantly both sustainable livelihood approaches and DRR models put livelihood strategies at the centre of how people cope with shocks and hazards. The understanding of resilience owes much to developments in DRR theory and practice. (Manyena, 2006) provides a comprehensive discussion of the origins and current uses of resilience. Resilience is said to be key in the attainment of sustainable rural livelihoods (Carney 1998, Ellis 2000, Scoones 1998) in terms of firstly reacting to shocks and secondly reaping the benefits of opportunities offered by changing production contexts. Secondly, it is important to understand why people respond the way they do to changes in their production environment in order to tailor interventions and policies and in order to facilitate positive change and to strengthen resilience. Thirdly, resilience over time demands a refocus on how livelihoods are considered. Livelihood analysis largely provides a snap shot of a livelihood at a given point in time but less attention is afforded to livelihood change which impacts on long term resilience.

These points all necessitate an understanding of the factors that contribute towards why people react to livelihood threats in the way that they do. The ethos of livelihood work is based on building on people's own perspectives and priorities, yet often how and why people make the livelihood decisions they do is glossed over. It is important to consider why people respond in the manner they do to livelihood change. Is it purely based on economic conditions and contextual factors or does the circumstances of the individual have a role to play? Given the importance of livelihoods as a component of development objectives, it is important to re-examine how we look at livelihoods and vulnerability. A large amount of programming depends on the response of individuals – in this case small scale agricultural producers – to changes in their production environment. Following from this, how people respond to change often also plays an important role in dictating the success or failure of a development project.

1.3 Research aims and research questions

Scoones (1998) offers useful areas for assessment in the analysis of livelihood strategies which offer crucial insights and valuable directions as regards to the unpacking of livelihood strategies related to the study area. In particular questions as regards to the trade-offs involved in the formulation of livelihood strategies. Is one type of livelihood resource an essential precursor for gaining access to others? Is there a clustering of particular combinations of livelihood resources associated with particular groups of people or particular livelihood strategies? In a particular portfolio of livelihood strategies, what are the trade-offs faced by different people with different access to different types of livelihood resource? And finally, and particularly important as regards this study: What new livelihood resources are being created through environmental, economic and social change? All these questions intersect with the concerns of this study.

Livelihood analysis focuses on the active involvement of people in responding to and implementing change. According to livelihood theory, rather than being victims, people play important roles in shaping and achieving their own livelihoods ends, part of which involves responding to change and reaping benefits from new opportunities. Therefore it is important to study people's behaviour in terms of the formulation of their own livelihood strategies.

This research aims to explore how global market integration impacts on the livelihoods of small scale agricultural producers in the Philippines and how the resulting threats and opportunities are responded to. In order to attempt to capture the essence of why small scale agricultural producers respond the way they do to changes in their production environment based on market integration, this research attempts to answer the following questions:

1. Does current livelihood and disaster theory adequately account for and explain the diverse livelihood options pursued by small scale agricultural producers facing threats based on deterioration?
2. Are current distinctions between different patterns of responses and the rationale of such responses appropriate?
3. Are current research methods adequate to the task of picking out individualized patterns and rationales of response?
4. What is the role of historical factors (institutional and personal) of past events-in moulding patterns of response?

1.4 Structure of the thesis

The pressure to implement livelihood projects at the field level regularly results in livelihood research being conducted rapidly. The resulting analysis due to time pressure is often completed in an ad hoc manner. Habitually, where livelihood research and analysis is carried out in detail it misses some of the bigger picture. It is easier to identify the specific and yet miss the general influences on people's livelihoods. "Yet, livelihood perspectives must look simultaneously at both structure and agency and the diverse micro- and macro-political processes that define opportunities and constraints."

(Scoones, 2009:16)

The ability to benefit from livelihood opportunities is key to moving small scale agricultural producers out of poverty under trade liberalisation. IFAD (2010) explain that the rural poor face numerous risks. These risks include long standing risks such as markets and ill health and newer risks such natural resource degradation and increased volatility of food prices. Under these conditions of risk the ability to reap opportunities which result from agricultural trade liberalisation is not always easily attainable.

The SLA is utilised as an organizing framework throughout this study in order to understand how livelihoods are constructed within these conditions of risk. This study is laid out loosely along the lines of an SLA framework (Figure 2.1) focusing on the vulnerability context first, followed by access to assets, policies institutions and processes, livelihood strategies and finally livelihood outcomes. Originally this presentation of this study focused on a division based on rationale of response by producers to changes in their production environment. However, the multi-disciplinary nature of this study and the numerous influences on rationale of response made such a division difficult. This study is therefore laid out using the SLA as an organising framework along geographical lines according to the two main study sites. The chapters are therefore laid out as follows:

Chapter One: Introducing Livelihood Threats and Responses in the Rural Philippines This chapter introduces this research, its objectives and expectations.

Chapter Two: Livelihoods Research, Livelihood Threats and Livelihood Response: where from, where to? This chapter provides the conceptual basis for this study. This chapter examines the emergence of livelihood thinking in research and development practice. The contribution of DRR theory to thinking on vulnerability and resilience is incorporated into the discussion. The idea that livelihood strategies are key to resilience and the ability to respond to changes in the production environment is introduced. Finally key challenges in current thinking and future directions are explored.

Chapter Three: Methodology details the research approach taken in this thesis, and the reasoning behind the choice of this particular approach. The two main study sites are introduced. The data collection tools used during this research, issues of positionality and constraints are presented and explained in light of the preceding discussion.

Chapter Four: The Philippine Vulnerability Context looks at the Philippines vulnerability context focusing on agriculture and the corn industry. Historical trade and agricultural policies are reviewed as are WTO lead agricultural trade liberalisation efforts.

Chapter Five: Mindanao and the Study Site Vulnerability Context concentrates on the Mindanao and study site context examining how the key policies discussed in chapter four impacts on producers at the regional and local level. The study site context of the two key case studies is further developed and examined in this section.

Chapter Six: Coping in Magpet focuses on the results of the case study in Magpet. Livelihood asset use and the livelihood strategies employed by respondents in Magpet in response to livelihood threats as a result of trade liberalisation are presented. The rationale behind non response as a livelihood strategy and issues which contribute to uncertainty are also examined. Exceptions to the rule in terms of the livelihood strategies

employed by producers are also introduced. The SLA framework is utilised as an organising tool in this chapter.

Chapter Seven: Adaptation in Malabog focuses on the results of the case study in Malabog. Diversification as a livelihood strategy by respondents in Malabog in response to livelihood threats as a result of trade liberalisation is examined as well as the rationale behind diversification as a livelihood strategy. As with the previous chapter the SLA framework is used as an organising tool.

Chapter Eight: Livelihood Pathways Over Time draws together and presents the key findings of this thesis presented in the previous two chapters, and frames them within a livelihood pathway context.

Chapter Nine: Unpicking Livelihood Threats and Responses in the Rural Philippines This chapter brings together the main conclusions of this study, drawing together key arguments and debates in order to re-examine the research questions posed at the outset. The implications of this research for policy and practice are considered. This chapter also identifies and acknowledges the limitations and the challenges of the research conducted. Further research in the area is proposed that may validate and enhance the work done here.

2 Chapter Two: Livelihoods Research, Livelihood Threats and Livelihood Response: where from, where to?

2.1 Introduction

This chapter provides the background and rationale for this study. Key terms and concepts in the area of livelihoods and disaster theory are defined. An overview of the development of livelihoods as a concept, livelihoods research and livelihoods in practice is presented which underpins relevant livelihood components. The origins of the SLA in tandem with changes in thinking on poverty and beneficiary participation provide the backdrop to the subsequent widespread use of the SLA.

Livelihood frameworks utilised by various development organisations are examined in order to provide a description of the key elements which comprise these frameworks and form the basis of livelihood analysis. The starting point is the vulnerability context within which people operate, followed by a perusal of the assets that people can draw upon to construct their livelihoods. Assets interact with policies, institutions and processes to shape the choice of livelihood strategies. These, in turn, shape the livelihood outcomes and their impacts, which feed back into the future asset base. Livelihood concepts which are particularly important to this study including vulnerability and resilience are dealt with in more detail. This leads into the introduction of subsequent sections which focus on livelihood pathways.

Livelihood research and analysis is considered along with the intersections and linkages between livelihood analysis and DRR. The vital contribution of DRR lies in the understanding it brings to vulnerability, enabling a consideration of how capacity contributes to vulnerability and how this capacity is then translated into the ability to adapt and/or act. The importance of the ability to adapt to livelihood threats brought about by change (in this case threats based on deterioration) is highlighted in terms of livelihood resilience. The notion of resilience and what makes people resilient is then

considered. This leads to wider issues of agency versus structure and their influence on livelihood resilience.

This discussion then allows for some understanding of the main issues surrounding the construction of livelihoods, permitting a consideration of the current challenges facing both (SLA and DRR) concepts in order to analyse and account for the decisions made by individuals when faced with livelihood threats. Finally, the chapter takes a look at lessons learnt and current concerns regarding 'people centred' livelihood and disaster threat theory to provide a deeper rationale and justification for this study.

2.2 The Sustainable Livelihood Approach: origins and directions

Sustainable livelihoods came to the forefront of development thinking and practice as part of a wider effort attempting to incorporate the priorities of 'project beneficiaries' into development design. The concept of development itself has complex origins. In Britain development theory was established between 1650 and 1776 with the publication of Adam Smith's *The Wealth of Nations*. Cowen and Shenton (1996) provide a comprehensive discussion on advances in development doctrine during this time period in particular noting the often complex advances of economic development as a state policy. Current thinking on development is captured by Gore (2000:789) who proposes "The essence of this practice (development) is the mobilisation and allocation of resources, and the design of institutions, to transform national economies and societies, in an orderly way, from a state and status of being less developed to one of being more developed."

The approaches used in the later part of the last century to achieve this elusive transformation have been subject to much review which correspondingly influenced practice. Hulme (1995) explains that in the 1970s, agricultural and rural development projects were believed to be 'on the cutting edge' in the improvement of rural livelihoods. However, evaluations of these projects revealed poor results. Weiss (1996) suggests that for a considerable time international development implementation agencies have been aware that many projects have not met initial expectations and that a significant proportion can be said to have 'failed' in some sense. In certain cases this failure of 'development' projects has resulted in increased poverty, so lending support to the view that development has made things worse, rather than better. The high incidence of project failure provided the foundation for an examination by donor institutions into the performance of development projects. Garforth (1982) discusses one prominent review, undertaken by the World Bank in 1975, where it was noted that much of the technology made available to small farmers was inappropriate. Oakley (1991) explains that development had become capital centred as opposed to people centred; it had by-passed or even marginalized people in its concern to build and construct specific projects. Smith (1988) also discusses this bypassing of people in projects and the lack of reference to people – and in particular farmers – in the productive system.

While the exact chronology of changes in development theory is disputed there is no doubt that the mid-1970s saw the start of a fundamental shift away from a modernisation and intervention paradigm of development towards a systematic search for alternatives. The belief that wherever practicable the ultimate beneficiaries of a development project should be given as much input into its design and operation as possible had, by the 1990s, gone “almost from heresy to orthodoxy among development professionals” (Gerson, 1993:1). In other words a move from exogenous to endogenous policy developments had taken place. In terms of the origin of concern for livelihoods, Fardon (1990) explains that cross disciplinary teams looking at rural development can be traced back about 50 years before the emergence of the influential Chambers and Conway sustainable livelihood paper published in 1992. He cites one such example as work in the late 1930s on rural livelihoods by the Rhodes-Livingstone Institute in what is today Zambia. Scoones, (2009) goes back even further, and discusses the centrality of livelihoods in early French *Genre de vie* geography.

The SLA has common origins and principles largely rooted in early work into participatory approaches and methodologies. Indeed much of the language currently used stems from participatory methodologies, which evolved due to an increasing recognition of the need to address issues relating to the by passing of beneficiaries in development endeavours. Boyd *et al.* (2000) explain that the livelihood approach to development addresses these issues as it places people at the centre of development and works to support people’s efforts to support their own livelihood goals. It places emphasis on converting the capital assets of the poor through improved livelihoods, thus contributing to the further expansion of their asset base (Ellis-Jones, 1999). The Brundtland Commission Report of 1987 offered the first appearance of sustainable development in a policy debate of what was conceptualized later as the SLA, “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (World Commission on Environment and Development, 1987:8)

This definition contains within it two key concepts: the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

The origin of sustainable livelihoods as a concept that pertains today is accredited to Robert Chambers of the Institute of Development Studies (IDS). Chambers and Conway (1992) provided a working definition of a sustainable livelihood as set out in section 1.2 of the introduction. Sustainable livelihoods approaches came to prominence through the practices of the UK (United Kingdom of Great Britain and Northern Ireland) Department for International Development (DFID), as a follow-up to the White Paper on International Development of 1997. The emergence of this approach necessitated a shift in thinking "from seeking improvements in forms of agricultural production to looking at the full diversity of strategies by which poor people in rural areas sustain a livelihood, and seeking ways to strengthen their options" (Norton and Foster, 2001:9). In the UK the election of the new Labour government in 1997 served as "a major impetus to the approach" (De Haan and Zoomers, 2005:30).

In tandem to these developments in the arena of livelihood thinking, the measurement and concept of poverty was undergoing a significant review which also furthered the development and utilisation of livelihood approaches. In particular, we can highlight developments leading to "the understanding that poverty is more than just insufficient income" (Whitehead, 2002:575). DFID (1999) explains that changes in how poverty was conceptualised reinforced the development of livelihood thinking. In the 1990s poverty – and the processes that lead to poverty – were conceived of as multi-dimensional (economic, ecological, social, cultural, political) and highly context-specific. The poor were no longer considered to be a uniform group, poverty assessments moved beyond the characterisation of poverty and towards the analysis of the processes that cause poverty at various levels. Accordingly development programming moved away from the Income Generating Project (IGP) approach to the more holistic livelihoods approach thus focusing on well-being rather than exclusively on income.

There is considerable overlap between the evolution of thinking on poverty, rights based or entitlement approaches and the livelihood approach. Notably, “Sustainable livelihood analysis offers one way to prioritise efforts to obtain rights for poor groups” (Conway *et al.*, 2002:3). Hussein (2002) in a multi-agency review of current practices in livelihood approaches, discusses that the widespread uptake of the SLA, and the integration of sustainable livelihood language into development theory and practice summarises much of what is now considered to be ‘best practice’ in development. Although the various sustainable livelihood approaches developed by development agencies may differ in appearance and components, the core principles have remained largely the same. In summary as outlined by DFID (2001) the SLA necessitates that development activities should encompass the following elements.

It should be:

- People-centred: beginning by understanding peoples’ priorities and livelihood strategies.
- Responsive and participatory: responding to the expressed priorities of poor people.
- Multi-level: ensuring micro-level realities inform macro-level institutions and processes.
- Conducted in partnership: working with public, private and civil society actors.
- Sustainable: environmentally, economically, institutionally, and socially.
- Dynamic: ensuring support is flexible and process-oriented, responding to changing livelihoods.

Certain agencies have also incorporated the following two elements into the SLA:

- Holistic: reflecting the integrated nature of people’s lives and diverse strategies.
- Building on strengths: while addressing vulnerabilities.

The SLA can facilitate analysis at the grass root level as a livelihood analysis tool whilst at the programme level its uses are also numerous. Its uses include but are not limited to programme design and identification, planning new projects, reviewing existing activities and monitoring and evaluation.

The SLA builds on existing Participatory Poverty Assessment (PPA) principles and is similar to IRD approaches utilized in the 1970s. Whilst participatory tools form an integral part of livelihood analysis, SL analysis can contribute significantly to problem trees, log frames and other project cycle management tools, thus contributing substantially to programmatic objectives.

In the early 1990s donor agencies witnessed sufficient merit from the SLA to begin implementing it on a wide range of projects. Table 2.1 provides an overview of the main events in the timeline of development of the SLA. Many development agencies developed their own SLA frameworks based on their own underlying principles or guiding values. These frameworks which share the common principles of the SLA enabled them to focus their livelihood analysis and subsequent work at the field level on areas of intervention that were strategically important to each particular agency. Differences also occur as regards the focus of frameworks; some agencies SLA focus on analysis whilst others focus on project implementation issues. Table 2.1 assists in demonstrating the wide coverage of the SLA in a relatively short period of time, how the SLA varied between agencies, and the common overlapping elements.

Table 2.1 Overview of selected key events in the evolution of the Sustainable Livelihoods Approach, 1987-2008

1987	The World Commission on Environment and Development publishes the 'Brundtland Commission report' which prioritises and defines the idea of sustainable development drawing on Robert Chambers work on Sustainable Livelihoods.
1988	International Institute for Environment and Development publishes 'The Greening of Aid: Sustainable Livelihoods in Practice'
1990	United Nations Development Programme (UNDP) publishes the first Human Development Report
1992	United Nations (UN) holds Conference on Environment and Development. IDS publishes 'Sustainable Rural Livelihoods' by Chambers and Conway
1995	Oxfam adopts the language and concepts of sustainable livelihoods and publishes a Handbook for Relief and Development (1995) that addresses the sustainability of livelihoods as a core theme.
1995	CARE USA publishes: Household Livelihood Security: A Unifying Conceptual Framework
1995	UNDP adopts Sustainable Livelihoods thinking as part of its overall mandate
1997	The new UK Labour Government presents its White Paper on International Development: Eliminating World Poverty to Parliament. This commits the government to refocusing on the elimination of poverty and supporting policies which 'create sustainable livelihoods for poor people'.
1998	IDS publishes 'Sustainable rural livelihoods: a framework for analysis' (Scoones, 1998) DFID's publishes the SLA framework.
1999	Publication of first DFID Sustainable Livelihoods Guidance sheets. Publication of Livelihoods Approaches Compared by Diana Carney <i>et al.</i>
2000	Livelihoods Connect On-line learning platform launched
2001	DFID workshop brings together current thinking of SL users.
2002	IFAD works with SL thinking and offers SL training to staff Publication of Sustainable Livelihoods Approaches: Progress and Possibilities for Change by Diana Carney (based in part on the 2001 workshop) Publication of Livelihoods Approaches Compared by Karim Hussein
2003	Publication of Sustainable Livelihoods: A Case Study of the Evolution of DFID Policy by William Solesbury
2005	IDS launch the Livelihoods Network bringing together academics, policy-makers and development practitioners to share learning, collaborate and advocate for livelihoods approaches.
2008	Publication of a review of DFID's experience with sustainable livelihoods by Jane Clark and Diana Carney

(Source: Adapted and updated from Solesbury, 2003)

2.3 Components and measurements of Sustainable Livelihood analysis

SL analysis is normally conducted utilising some, if not all of the elements of a SL framework, an analytical tool for improved understanding of livelihoods and poverty. In order to facilitate the practical application of the concept of livelihoods various livelihood frameworks were developed by both academia and developmental practitioners. These frameworks provide a useful tool in poverty reduction programmes and livelihood analysis studies, aiming to capture the all-encompassing holistic nature of livelihoods. Ellis (2000) explains that the framework takes the form of an 'assets-access-activities' framework that has its origins in diverse literatures about poverty, vulnerability, coping with crisis, and adaptation by individuals and households to changing circumstances and the shocks they confront.

The DFID SLA framework presented in Figure 2.1 illustrates the main factors and issues that affect people's livelihoods⁶. It describes the typical relationships between these factors and issues, while helping users to understand the way in which livelihoods are constructed and how they change over time. Finally it acts as something of a checklist in order that less obvious issues are not overlooked in our investigations. The DFID framework offers a useful starting point for any discussion on livelihood frameworks, as it was the first to be widely publicised and remains the most recognised and widely used.

⁶ DFID has compiled a series of SLA framework guidance sheets in an interactive learning guide which are currently hosted on the ELDIS (Institute of Development Studies) website much of the explanation on the components of a livelihood framework presented here draws heavily on this resource.

<https://cms.eldis.org/index.cfm?objectid=07E1005A-F839-A014-05BB5E06DF19DA36&flushcache=1&showdraft=1#Distance>

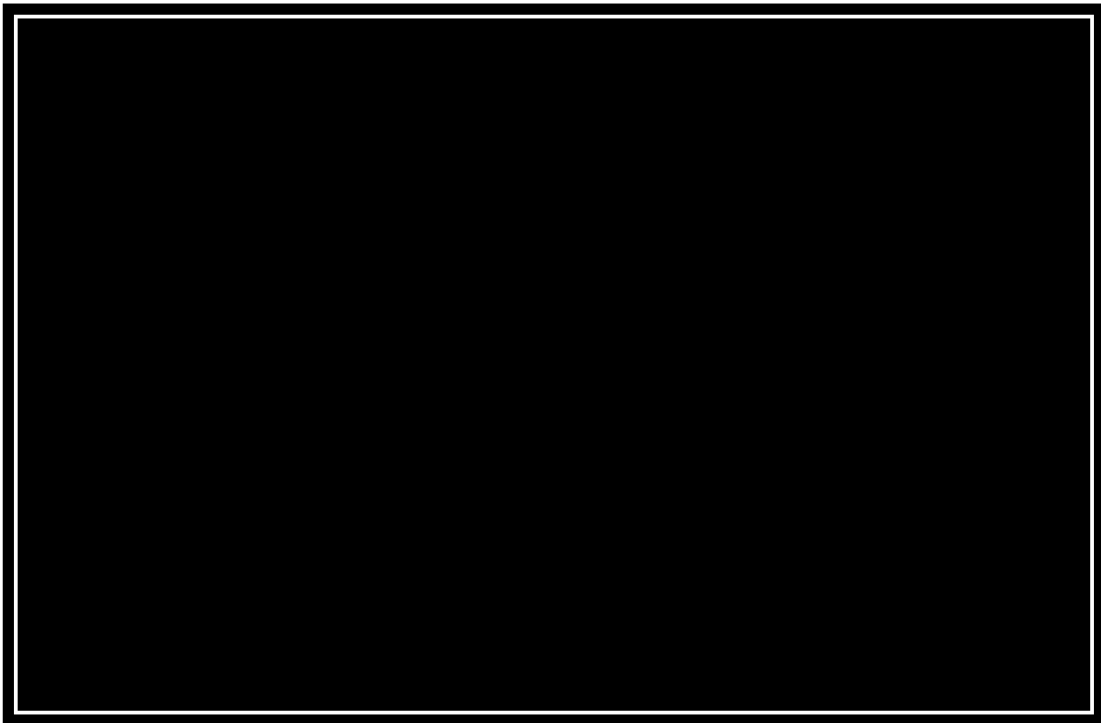


Figure 2.1 DFID Sustainable Livelihood Framework (Source: Adapted from DFID, 2001:17)

When examining a livelihood framework it is usual to begin with the vulnerability context or the external environment in which people exist. The vulnerability context is the part of the framework that provides those external factors that make poor people vulnerable. Vulnerability is multidimensional, and poor households face manifold risks, so variations in income and consumption can occur for a variety of reasons (World Bank, 2001). This part of the framework deals with the shocks, trends and seasonality issues that help to make or break livelihoods. The common link between these factors is that they are all somewhat outside people's control. For example, people have little or no influence over weather patterns, population trends or the advent of wars (whereas, in principle, they may be able to influence political and institutional factors). The main vulnerability factors fall into three groups, which are further examined in Table 2.2. The first group consists of trends, such as population or technology trends, which could have either a positive or a negative effect on livelihoods. Shocks, such as natural disasters and civil conflict, which almost always have a negative effect and lastly, seasonal shifts in things such as prices, health status or the production of goods.

These make poor people particularly vulnerable because they are less able than richer people to accommodate and plan for change.

Table 2.2 Vulnerability issues

Trends	Shocks	Seasonality
Population trends	Human health shocks	Of prices
Resource trends	Natural shocks	Of production
National / international economic trends	Economic shocks	Of health
Trends in governance (including politics)	Conflict	Of employment opportunities
Technological trends	Crop/livestock health shocks	

(Source: DFID, 2001:19)

Importantly, vulnerability which contributes to livelihood insecurity is a constant reality for many people. According to the SLA, this stems from a lack of access to resources that would otherwise protect them from negative trends, shocks and seasonality factors. Even when effects are positive, this same condition, lack of assets, prevents them from taking advantage of any new opportunities. The measurement of vulnerability is complex and the subject of much discourse which is perused in greater detail in section 2.5 which looks at vulnerability taking into account its multi-disciplinary and multi-dimensional nature.

The asset pentagon as depicted in Figure 2.2 forms the core of the livelihoods framework, 'within' the vulnerability context. DFID's SLA framework identifies five core asset categories, or types of capital, on which livelihoods are built. These capitals or assets are human, social, natural, physical and financial. People's choices of livelihood strategies are influenced to a large extent by the range of assets that they can access. Ellis (2000) discusses the importance of the links between assets and the options people possess in practice to pursue alternative activities that can generate the income level required for survival.

Lack of assets is both a cause and an outcome of poverty. Assets can interact with market and social opportunities to generate income and a better quality of life or wellbeing. Assets are central to coping with shocks and reducing vulnerability which is a constant feature of poverty. The benefits of one asset can depend on access to another. Assets empower the poor and assets help people manage risks (World Bank, 2001). A combination of assets is required in order to achieve positive livelihood outcomes. A single category of assets alone is insufficient to achieve this; however, all assets are usually not required in equal proportions. An important consideration when discussing assets is that a single asset can generate more than one benefit. For example, secure access to land (natural capital) may enable someone to gain better access to financial capital. It also suggests important inter-relationships between the various assets. The shape of the pentagon can be used to suggest variation in people's access to assets. The centre point of the pentagon, where the lines meet, represents zero access to assets while the perimeter represents maximum access to assets.

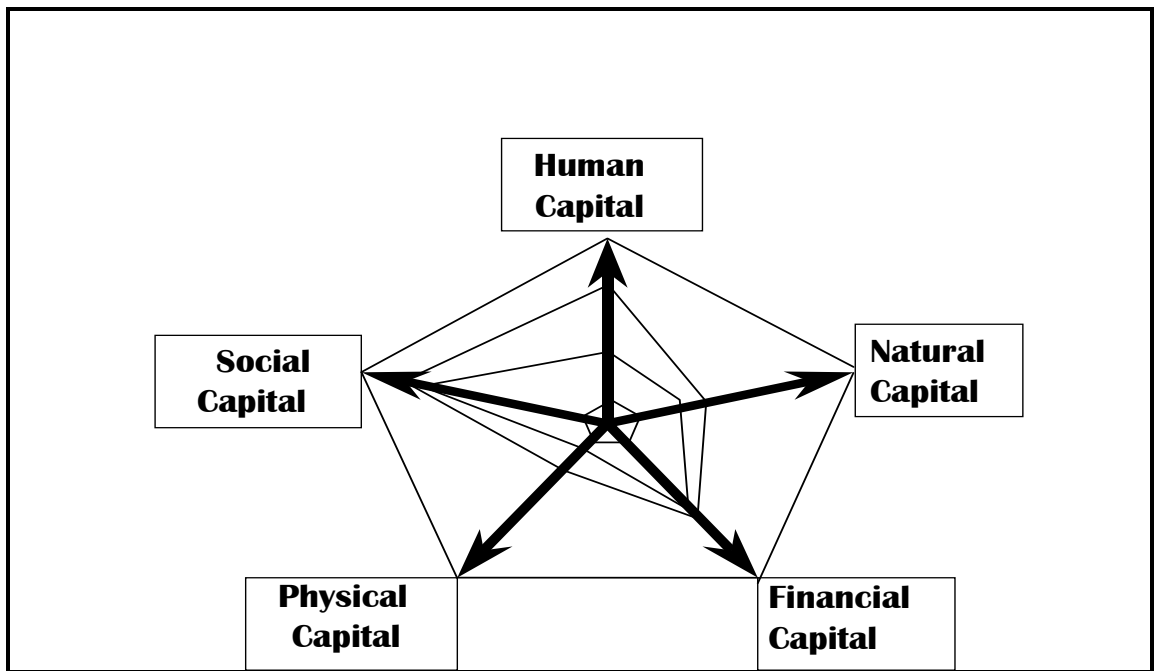


Figure 2.2 The Asset Pentagon (Source: Adapted from DFID, 2001:21)

Different asset pentagons can be drawn for various groups or individuals or for the same group or individual over time. It is important to consider that in addition to differences between groups, there may be important differences in access to assets between group members. In the household context women may have access to particular assets that are inaccessible to men, such as microfinance. Asset pentagons are a very useful tool during project identification as they can be compiled quickly and easily by beneficiaries. The SLA places considerable store on access to the asset base. The notion of moving a livelihood from a position of one that is less sustainable to more sustainable is based largely on increasing the asset base. Bebbington explains that assets go beyond been simply resources that people use in livelihood construction. Assets give people the “capability to be and to act” (Bebbington, 1999:2022).

Unlike most of the factors within the vulnerability context box (Table 2.2) people can ‘in theory’ influence the factors which fall into the PIPs (Policies and Institutions and Processes) box. The PIPs box was originally labelled ‘transforming structures and processes’ (it remains so in some versions of the framework) however, PIPs was considered a more fitting label in that it highlighted key issues.

Many of the factors within Policy, Institutions and Processes relate to the services and environment created by government. However, this category also includes local-level institutions that are largely unaffected by government and the activities of private sector organizations. Important categories in the PIPs box include local and central authority, public service delivery, legislation, governance, policy formulation and implementation, participation, institutions (regulations, interactions, laws and markets), organizations and cultural factors. Policy, Institutions and Processes operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public. They are particularly important as they govern access to various types of assets, to livelihood strategies and to decision making bodies and sources of influence. PIPs also govern the terms of exchange between different types of assets (markets) and incentives to undertake certain activities or invest in particular areas.

Pasteur (2001) explains that the sustainable livelihoods approach recognises that in order for micro level change in people's livelihoods to be sustainable, macro issues such as policy need to be addressed. He also considers how people influence policy, which in theory they can, but this is unlikely for large numbers of the world's poor and marginalized. The assessment of how people influence policy is quite challenging particularly in terms of attributing people's influence to specific and actual policy changes. Messer and Townsley, (2003) explain that many development efforts have failed or have proved to be unsustainable because they have not fully understood the PIPs box and the way that it influences the livelihoods of the poor. New institutions set up to support the poor have often proved inappropriate or have been undermined by existing institutions that were either not recognized by relevant stakeholders or poorly understood. To make markets work better for the poor, macro reforms must be complemented by micro reforms and improvements in poor people's access to markets and information—through investment in infrastructure and modern technologies—as well as sources of credit (World Bank, 2001).

The next part of the framework represents livelihood strategies. Livelihood strategies comprise the range and combination of activities and choices that people make and undertake in order to achieve their livelihood objectives. Livelihood changes over time are not only due to domestic cycling but also because of change in the wider socio-economic environment. Livelihood adaptation has been defined as the continuous process of “changes to livelihoods which either enhance existing security and wealth or try to reduce vulnerability and poverty” (Davies and Hossain, 1997:5).

Adaptation strategies may be negative or positive and are often termed as ‘coping strategies’. Coping activities have a range of severity and can be broadly classified as positive or non-harmful such as reducing the amount of meat in meals and negative or harmful such as the sale of children or prostitution. Positive strategies maintain basic needs and protect losses to assets. A strategy that does irreversible harm to people’s lives or that undermines livelihoods is adversely considered negative. Davies and Hossain (1997) explain that positive adaptation is by choice which can be reversed if fortunes change, and usually leads to increased security and sometimes wealth.

Coping strategies are normally considered as the responses to a crisis or disaster (Ellis 2000, IFRC 1996). Davies (1996) explains that adaptation represents coping strategies that have become permanently incorporated into the normal cycle of activities. Coping strategies are dynamic and are determined by the options available. They have been most studied in relation to slow onset disasters, such as famine. Less attention has been paid to changes brought about by trade liberalisation. Livelihood strategies form an important component of this research and need to be viewed from a broader perspective which will be introduced in section 2.6.

Livelihood outcomes are the achievements of livelihood strategies. These outcomes are the joint result of all the factors that comprise livelihoods. They enable an understanding of what motivates people to behave as they do and what their priorities are. In terms of this study, outcomes are important as they also provide information on how people are likely to respond to new opportunities. In general the SLA seeks to achieve outcomes, which result in a more sustainable use of the natural resource base, more income, increased well-being, reduced vulnerability and improved food security.

Outcomes are based on a host of non-tangible elements such as aspirations which in turn govern the strategies employed by people to achieve their given outcomes.

As regards the measurement of Sustainable livelihoods, various measurements exist as to what constitutes a sustainable livelihood although none are fully comprehensive. The measurement advocated by the IDS relies on the definition of sustainable livelihoods as submitted by Scoones (1998), and is the most widely accepted. Five key elements of the definition can be recognised. The first three, which focus on livelihoods, link concerns over work and employment with poverty reduction and in turn with broader issues of adequacy, security, well-being and capability. The last two elements add the sustainability dimension, looking at the resilience of livelihoods and the natural resource base on which, in part, they depend. Each of these elements relates to wider literature and schools of thought. Whilst some of these elements have established methods for measuring outcomes (such as poverty) other elements are difficult to measure.

Most rural livelihoods are reliant on the natural resource base to some extent, and measuring the sustainability of the resource base is difficult. One measurement of sustainable livelihoods is the creation of working days (Sen, 1975) this relates to the ability of a particular combination of livelihood strategies to create gainful employment for a certain portion of the year. Another much used measurement is that of poverty reduction with various measurements being used to develop an absolute 'poverty line'. Ravallion (1992) and Greeley (1994) discuss the strengths and weaknesses of the various measurements. The measurement which perhaps captures best the essence of livelihoods thinking and its evolution is that of well-being and capabilities. Sen (1984:323) ascertains that capabilities are "directly valuable in a way that the possession of primary goods cannot be, since they evidently are means to some more human ends". Chambers and Conway (1992) explain that in a context of change, capacities mean being adaptable, quick and well informed in order to exploit changing opportunities. This is an important contribution in terms of this study in that capacities should therefore play a key role in adapting to changes in the production environment which result from trade liberalisation.

According to Chambers (1997:1748) “Capabilities are means to livelihood and wellbeing. Capabilities refer to what people are capable of doing and being.”

The major components of a sustainable livelihood as represented through the DFID SL framework discussed here are the vulnerability context, assets, PIPs, and livelihood strategies and outcomes. A brief discussion of the difficulty of measuring sustainable livelihoods was also considered, however, it is important to move beyond concepts and measurement and focus on the SLA and its utilisation.

2.4 Livelihood research: a pillar of the Sustainable Livelihoods Approach

The ability to carry out meaningful livelihood research is a core pillar underpinning the entire SLA. Livelihood research informs livelihood analysis which in turn is translated into concrete intervention or policy objectives which according to Clark and Carney (2008:5) is where the SLA is most useful “as an analytical or heuristic tool”. Clark and Carney go on to propose that the SLA “provides a way to order information and understand not only the nature of poverty but also the links between different aspects of people’s livelihoods.” Livelihood research and analysis plays a key role in identifying appropriate livelihood interventions and the success of the subsequent livelihood project depends significantly on the output of these initial findings. Murray (2001) provides a comprehensive overview of the principles of livelihood research which can be summarized as research that has been carried out at the micro level with households and communities, looking at the combination of livelihoods employed the relationships between them and the changes that have taken place over time. However, for such research to be useful elements of the macro context must be incorporated and important trends identified. Ellis’s (2000:30) livelihood framework as presented in Figure 2.3– and which is utilized throughout this study – provides an analytical tool for improved understanding of livelihoods and poverty. This framework is adapted from the earlier work of Scoones (1998:8) and Carney (1998).

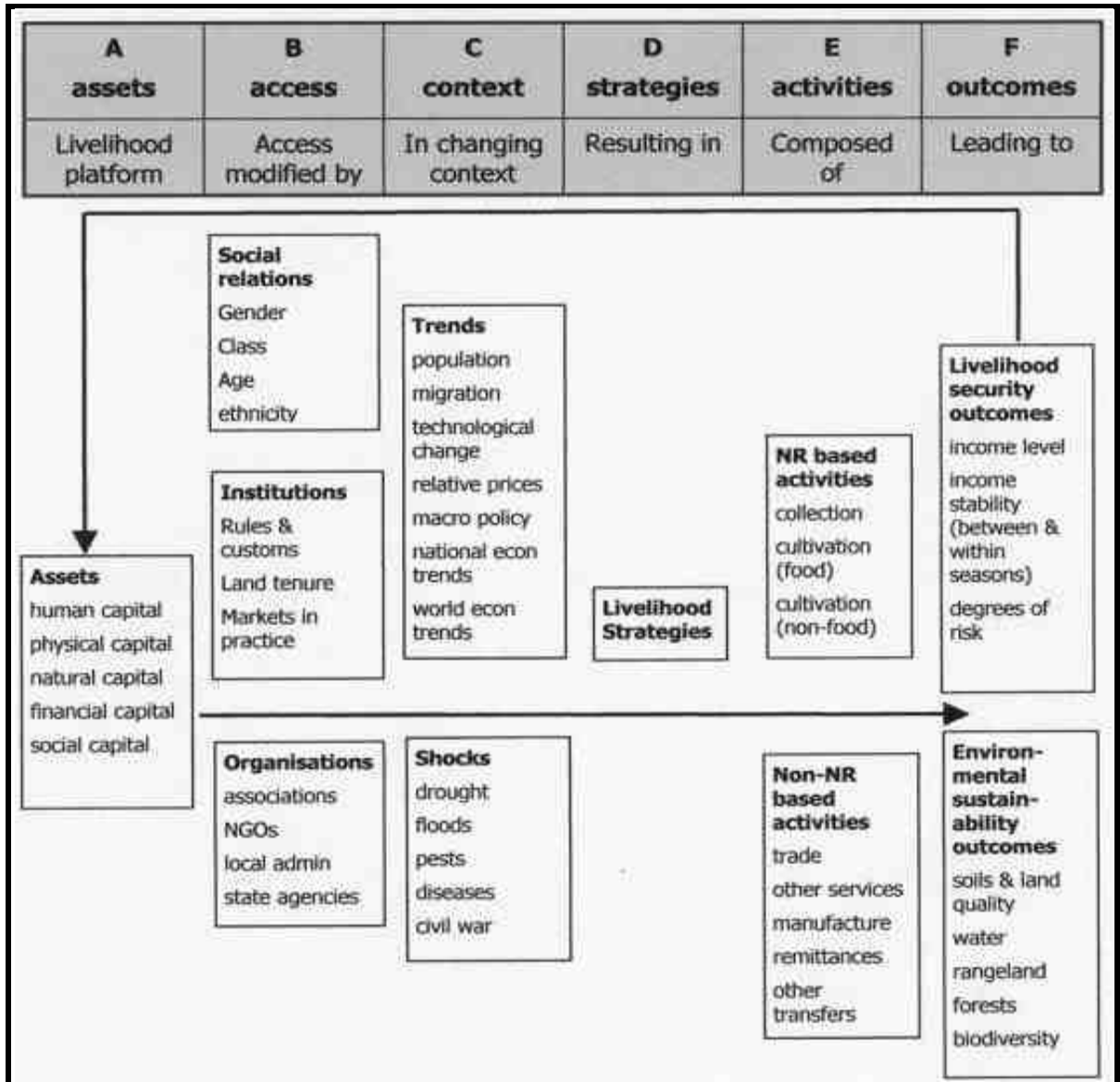


Figure 2.3 Ellis rural livelihood framework (A framework for micro policy analysis of rural livelihoods) (Source: Ellis, 2000:30)

Ellis's framework was deemed appropriate for this research due, firstly, to its focus on analysis as opposed to implementation. Many other frameworks focus on the asset base and how to expand the asset pentagon. Ellis's framework is tailor made for rural livelihoods research and analysis, which are the focus of this study.

Prowse (2010) discusses some of the differences between the DFID (2001) and Ellis (2000) frameworks. First, Ellis emphasizes the importance of socio-biographical characteristics – such as gender, class, age and ethnicity – to a greater extent. Second, he focuses on ‘markets in practice’, which is significant for this study in that the structure and social organization of markets must be researched. And third, Ellis (2000) differentiates between livelihood security and environmental sustainability (thus overcoming a key criticism of the SLA). Prowse (2010:222) summarizes that: “Overall, though, Ellis’s (2000) framework appears very suitable for reflexive livelihoods research” and therefore provides a valuable framework for this study as livelihood research and analysis is key to understanding how people create livelihoods and how they change over time.

Importantly, livelihood changes can take place for a variety of reasons, ranging from pressures originating in the vulnerability context, the PIPs context or changes in the asset base. Livelihood adaptation, vulnerability and resilience represent the ability of a livelihood to cope with and recover or ‘bounce back’ from stresses and shocks (in this case trade liberalisation) and is central to the definition of sustainable livelihoods. This resilience in the context of stresses and shocks is key to both livelihood adaptation and coping (Davies, 1996). “Those who are unable to cope (temporary adjustments in the face of change) or adapt (longer term shifts in livelihood strategies) are inevitably vulnerable and unlikely to achieve sustainable livelihoods.” (Scoones, 1998:6)

In the case of most new technology, Conway (1985) asserts that even when agricultural production is increased, this success may be short lived if attention is not quickly diverted to side effects which threaten other equally important development goals. Carswell (1997) emphasised that in the achievement of a sustainable livelihood the trade-offs between productivity, equity and sustainability are critical.

In order to form a comprehensive understanding of the complexity of livelihood strategies it is useful to review further the vulnerability context in which people live and make corresponding livelihood choices. The vulnerability context is composed of seasons, shocks and trends as presented in the SLA framework. These threats to people’s livelihoods (referred to as hazards in the disaster literature) together with the vulnerability of the given population combine to form a livelihood risk.

It is necessary to further review the concepts of both vulnerability and risk in order to provide a comprehensive understanding of livelihood threats and how people cope with threats to their livelihoods. The study of vulnerability has gained momentum in part from the study of hazards and disasters (Prowse, 2003). Progress in recent years in the documentation of vulnerability models has been assisted by various events notably the World Conference on Disaster Reduction held in Kobe, Japan in 2005 at which was adopted what is now termed the Hyogo framework for action 2005-2015 or the Hyogo Accord of 2005. This promotes a systematic approach to reducing vulnerabilities and risks to hazards by emphasising the need to reduce vulnerability and develop resilience. This has prompted research into what constitutes a disaster resilient community or society.

The Indian Ocean Tsunami on the 26th of December 2004 heightened the need for DRR programming. The relief funds, political support and raised awareness generated due to the tsunami provided the means to undertake research and implement development projects in this area. Disaster theory provides a more in depth focus on vulnerability issues which can aid our understanding of adaptation and resilience in the face of livelihood threats. Collins (2009a: 120) explains, "We can learn from human coping and resilience as a way of knowing how to strengthen capacity to deal with future threats."

The SLA framework provides a useful prerequisite to any examination of the livelihood strategies of small scale agricultural producers. In order to further an appreciation of the rationale governing livelihood strategies the components of this framework need to be viewed in conjunction with theories in relation to the threats and hazards facing individuals or groups. Key concepts and definitions pertaining to threats and hazards are explored in the following section. The concepts reviewed here are largely grounded in DRR theory but mirror closely elements of the vulnerability context presented in the livelihoods framework.

2.5 Disaster Risk Reduction theory and vulnerability

Thywissen (2006) notes that many of the terms surrounding disaster were developed simultaneously in multiple disciplines. Whilst these terms may have resonance in individual disciplines the overall effect has been what she describes as *Babylonian Confusion*. When combined with similar terms developed expressly for livelihoods analysis this confusion is heightened still further. What livelihood professionals term a livelihood threat is for all intents and purposes the same as a livelihood hazard. However, in livelihood 'speak' the term livelihood hazard is rarely utilised with the exception of when referring to natural hazards such as typhoons.

Aysan (1993) asserts that the current hazard trends highlight the fact that the distinction between events based in nature ('natural hazards') and others is, in most situations, not clear cut. The threats that we have to be prepared for are becoming increasingly complex and interrelated. The United Nations International Strategy for Disaster Reduction (UNISDR) (2009) has compiled a glossary of DRR terminology. Although others have compiled similar glossaries reflecting their disciplinary view points, the UNISDR approach is utilised here as it was compiled over the course of four years through a process of global consultation across many disciplines, thus providing an inter disciplinary view of DRR terminology. Selected key terminologies relevant to this study are presented in Box 2.1.

Box 2.1 DRR terminology

Capacity: The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.

Coping capacity: The ability of people, organizations and systems; using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Hazard: A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Vulnerability: The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Risk: The combination of the probability of an event and its negative consequences.

Risk is also expressed as hazard multiplied by vulnerability.

$RISK = HAZARD \times VULNERABILITY.$

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

(Source: UNISDR, 2009:4-30)

The concept of risk is particularly subject to varied disciplinary interpretation. Devereux (2001) highlights the difference between cyclical risks (such as seasonality), stochastic risks (such as flood-prone locations), and unpredictable downturns (such as a financial crises). Henninger (1998), meanwhile, outlines five sources of risk which influence vulnerability. These are: environmental risk, market risk, political risk, social risk and health risk. The nature of risk, how it is defined and how individuals choose to manage or cope with risk is not always linear or obvious.

This lack of clarity – in a sense researchers are not all speaking the same language – necessitates a further perusal of risk in subsequent chapters related to the subject of this study. As Henninger (1998) notes, these risks only form part of the equation as the consequence of risk depends on the response by individuals or households to that risk. Risk is not always negative, as the outcome of risk depends on how people, households or communities respond to risk. It can, for example, increase opportunities (Sinha and Lipton, 1999). The ability to respond to risk in a manner which enables producers to reap the opportunities offered by change is key to the resilience of a livelihood system. Since risk is taken as a function of hazard and vulnerability and hazards are, at least to some extent, known and constant, vulnerability is the main factor that distinguishes between those who suffer loss from risk and those who do not. People can contribute to the risks they face by making unwise choices (O' Brien *et al.*, 2006). Vulnerability can therefore be said to play a role in livelihood resilience and how people respond to livelihood threats. Given the importance of vulnerability as a contributor to the formation of livelihood strategies the explanation of vulnerability provided in the livelihood framework is augmented below.

2.5.1 The multiple faces of vulnerability

Birkmann, (2006:11) summarises the scale of the issues relating to the definition of vulnerability explaining that current literature “encompasses more than 25 different definitions, concepts and methods to systematise vulnerability”. The website of the Prevention web⁷ which shares information amongst the disaster risk community includes a large amount of manuals which increase regularly and different guidebooks on how to estimate vulnerability and risk. These manuals also include different definitions and various conceptual frameworks of vulnerability. Vulnerability is by its very nature cross disciplinary and numerous disciplines have contributed significantly to the understanding of vulnerability, albeit by examining the concept (and experience) of vulnerability through different lenses. Alwang *et al.* (2001) in a review of different disciplinary literatures on vulnerability highlight the point that each discipline reviewed tends to view vulnerability in a slightly different manner. The various uses of the word are not necessarily a matter of ambiguity or semantic drift, but disciplinary focus (Wisner, 1993). Different disciplines have been concerned with different types of risk such as economic or natural.

More widely, Davies (1996) summarizes livelihood vulnerability as a balance between the sensitivity and resilience of a livelihood system. Explaining that resilience, in this context is also an outcome. Manyena (2006) makes two important points as regards this. The relationship between vulnerability and resilience depends on which definition of vulnerability is been used and he also suggests that resilience is both a process and an outcome.

“Resilience is a broad conceptual umbrella, covering many concepts related to positive patterns of adaptation in the context of adversity” (Masten and Obradovic, 2006:14). Recent work on resilience has moved beyond looking at resilience as the ability to ‘bounce back’ (resilience as recovery) or return to the original state to looking at resilience as the ability to respond to a change adaptively (resilience as transformation) (Maguire and Cartwright, 2008). Resilience is very much part of the ability to adapt to

⁷ See <http://www.preventionweb.net>.

changes, “In many ways the ability to cope underlines what we mean by resilience in disaster management” (Collins, 2009a:103).

Livelihood adaptation and coping were introduced in section 2.3 with coping been short terms responses to shocks and adaptation longer terms changes which reduce the vulnerability of the livelihood system (Davies,1996). In terms of thinking on resilience it is important to revisit the use of these terms in this study. Adaptation and coping are not used to describe long and short terms strategies but rather the change within the livelihood system. Some coping strategies can become long term strategies over time but this does not necessarily translate into adaptation as a positive livelihood strategy. Oliver-Smith (1999) explains that by viewing disasters from the perspective of adaptation necessities an examination of the adaptive fitness of all societies. Whilst an in depth examination of current debates surrounding resilience and vulnerability is beyond the scope of this study, a brief examination of vulnerability is required in order to come to a view of what is meant by vulnerability and how it is measured.

Oliver -Smith (1999) explains that anthropologists have been involved in disaster research since the 1950s when it first gained recognition as a field of study. However, as discussed by Twigg (2001) during the 1970s and especially the 1980s the relationship between human actions and the effects of disasters – in other words, the socio economic dimensions of vulnerability – were increasingly well documented. Oliver -Smith (1996) discusses that in anthropology three general perspectives on disasters and hazards have emerged, namely a behavioural response approach, a social change approach and a political/environmental approach.

Aysan (1993) argues that the assessment of vulnerability had been a key development in the 1980s. Much progress had been achieved especially in mapping and measuring vulnerability. Oliver- Smith (1996) also highlights the 1980s as key in terms of when anthropologists and social geographers began to move away from thinking on disasters as a result of geo physical extremes to view disasters from the perspective of social order and thus disaster research as the social creation of vulnerability. In other words thinking on vulnerability moved away from considering vulnerability as exposure to a hazard and focused on vulnerability in terms of the resilience and capacity to adapt to

the hazard. However, vulnerability is a concept that combines exposure to a threat with susceptibility or sensitivity to its adverse consequence (Devereux, 2001).

Vulnerability to a hazard can be reduced by physically reducing exposure to the hazard, such as reducing exposure to Tsunami by moving inland. Black *et al.* (2011) write of migration as adaptation but question the contribution of migration to vulnerability and resilience. “A better understanding is required of the extent to which migration influences vulnerability and resilience in the face of environmental change.”(Black, *et al.*, 2011:449)

During the 1980s, the study of famine and food security emerged as a major area of empirical research and conceptual debate. Several frameworks evolved to better incorporate issues of food security, coping and vulnerability, environmental sustainability and adaptation, and livelihood diversification (Start and Johnson, 2004). The structuralist paradigm asserts that physical hazards are distinct from the disasters that they cause, the required linkage being a vulnerable population (Wisner, 1993). The older paradigm termed the ‘behavioural paradigm’ (Bankoff 2001) suggests that technology, prediction, bureaucratic organisation and modernisation can help to mitigate disasters. The structuralist point of view forms the basis for much DRR development work which seeks to address the underlying causes of vulnerability and thus disasters. Slogans such as that used by *Duryog Nivaran* (South Asian Network for Disaster Risk Reduction) ‘HAZARD IS NATURAL DISASTER IS NOT’ are frequently used to convey this message.

This dual aspect of vulnerability is highlighted by Ellis (2000) who summarises the external threats to livelihood security due to risk factors such as climate, markets or sudden disaster, and internal coping capabilities determined by assets, food stores, and support from kin or community.

The essence of this complex dual interaction and cross-over is well explained by the comprehensive if lengthy definition proposed by UNISDR (2002:420):

“Vulnerability to disasters is a function of human action and behaviour. It describes the degree to which a socio-economic system or physical assets are either susceptible or resilient to the impact of natural hazards. It is determined by a combination of several factors, including awareness of hazards, the condition of human settlements and infrastructure, public policy and administration, the wealth of a given society and organized abilities in all fields of disaster and risk management. The specific dimensions of social, economic and political vulnerability are also related to inequalities, often related to gender relations, economic patterns, and ethnical or racial divisions.”

Aysan (1993) purposes eight types of vulnerability, which offer a helpful categorisation and are presented in Table 2.3.

Table 2.3 Categories of vulnerability

Vulnerability Category	Explanation/example
Materials/economic vulnerability	Lack of access to resources
Social vulnerability	Disintegration of social patterns
Organizational vulnerability	Lack of strong national and local institutional structures
Educational vulnerability	Lack of access to information and knowledge
Attitudinal and motivational vulnerability	Lack of public awareness
Political vulnerability	Limited access to political power and representation
Cultural vulnerability	Certain beliefs and customs
Physical vulnerability	Weak buildings of weak individuals

(Source: adapted from Aysan, 1993)

These categories are not unlike an inverse of the asset pentagon in the livelihoods framework and are further substantiated by Cardona (2004) who broadly categorises the origins of vulnerability as physical fragility or exposure, socio-economic fragility and lack of resilience. Social vulnerability is a multifaceted group of contextual characteristics the importance of which may be highly localised. Cannon *et al.* (2003) explain that social vulnerability includes a person's initial well-being, livelihood and resilience self-protection, social protection, social and political networks, and institutions. The definition of vulnerability proposed by Twigg (2004:13) perhaps best captures the essence of the discussion above. Vulnerability is: "The extent to which a person, group or socio-economic structure is likely to be affected by a hazard (related to their capacity to anticipate it, cope with it, resist it and recover from its impact)."

2.5.2 Capacity as a component of vulnerability

Taking into consideration the characteristics of vulnerability as put forward by Aysan (1993), Cardona (2004) and Cannon *et al.* (2003) it is not difficult to appreciate that capacities can be seen as the opposite of vulnerabilities and that “using capacities to combat vulnerabilities is often the most effective way to provide disaster relief” (Maresko 2004:102). Although capacity is treated as an integral component of vulnerability it is often measured separately. In general terms it is taken that the higher the capacity the lower the vulnerability of the effected population. However, this is hazard contingent and depends on the scale and frequency of the occurrence of hazards. As highlighted by Cannon *et al.* (2003:7), one reason why capacities are often separated from vulnerability is that “capacities are regarded as dependent on groups or some form of social organisation, while vulnerabilities are socially-determined by the characteristic of individuals or households”. As capacities in the general sense are the ‘part’ of vulnerability which contribute towards resilience, capacity enhancement is important in terms of creating resilience to shocks, seasons and trends. Existing capacities also play a vital role upon which to base development interventions. Capacities like vulnerabilities can be broken down into groups or categories namely physical and material, social and organisational, and skills and attitudes. Much like the asset categories of the livelihood framework, physical and material capacities comprise of assets such as cash, land, tools, food, jobs, energy sources or access to credit and borrowing capacity. Social and organisational capacities would include, for example, social networks and support. Those people with skills, knowledge and education have greater choices which may influence the capacity of people to adapt to threats which forms a major component of this study and thus will be examined in greater detail in subsequent chapters in relation to the study area.

Numerous methods have been developed to measure and assess vulnerability and capacity by both academics and field workers many of which are outlined in Kuban and Mac Kenze-Carey (2001) and Prowse (2003). A detailed assessment of these models is beyond the scope of this study. However, an examination of the most relevant models is beneficial in forming an understanding of how vulnerability is measured, its progression and how it transpires at the household level.

The Capacities and Vulnerability Analysis (CVA) (Anderson and Woodrow,1998) has contributed significantly towards an understanding of the relationship between capacity and vulnerability, many of the ‘toolkits’ currently utilised by development specialists build upon this model , in recent years Vulnerability Capacity Assessment (VCA) and other forms of this model are prevalent in field manuals. For the purpose of this study, the CVA framework of the IFRC (Table 2.4) (IFRC, 1996), is utilised. It is one of the rare frameworks that uses the word ‘threat’ to describe a hazard (in more recent versions the word hazard is used) and so fits in well as an explanation of the different types of threats which is useful for this study. This is largely derived from Anderson and Woodrow’s CVA where threats are divided into three categories, related to: nature violence and deterioration as introduced in section 1.2. IFRC (1996:62) explain that threats based on deterioration are “the so-called silent threats, happening all the time; many countries (including developed ones) experience these deteriorations”. Threats resulting from trade liberalisation are considered to fall into this category.

Cannon *et al.* (2003), Twigg (2001 and 2004), and IFRC (1996) all provide similar explanations of the framework which is based on the dual concepts of vulnerabilities and capacities. Every society has its own capacities (strengths) and vulnerabilities (weaknesses). Based on Anderson’s framework “When a crisis⁸ turns into a disaster, it is a sign that the society’s vulnerabilities have overwhelmed its capacities to deal with the crisis” (Maresko, 2004:104). The basis of the CVA framework is a simple matrix for viewing people’s vulnerabilities and capacities in three broad, interrelated areas: physical/material, social/organisational and motivational/attitudinal.

⁸ Hazard and crisis are often used interchangeably.

Table 2.4 CVA matrix

	Vulnerabilities	Capacities
<p>Physical/material</p> <p>What productive resources, skills and hazards exist?</p> <p>e.g land, climate, environment, health, skills and labour, infrastructure, housing, finance and technologies</p>		
<p>Social/organisational</p> <p>What are the relations and organisation among people?</p> <p>e.g how a society is organised, its internal conflicts and how it manages them</p>		
<p>Motivational/attitudinal</p> <p>How does the community view its ability to create change?</p> <p>e.g how people in society view themselves and their ability to affect their environment</p>		

(Source: Adapted from Anderson and Woodrow 1998:12)

Normally the two columns can be filled in as part of a workshop with the vulnerabilities and capacities been identified through a series of Participatory Research Approach (PRA) tools such as resource maps activities with beneficiaries. Each of the three categories comprises a wide range of features which closely mirror Aysan's (1993) categories of vulnerabilities previously presented in Table 2.3. Five other factors can be added to the CVA matrix to make it reflect complex reality. These are: disaggregation by gender, disaggregation by other differences (e.g. economic status), changes over time, interaction between the categories, and different scales or levels of application (e.g. village or national levels).

In general, this model is utilised by identifying threats, identifying vulnerabilities and assessing people's capacities to prevent or cope with threats. In terms of the overall process of development which was discussed briefly in section 2.2 Anderson and Woodrow discuss in the context of the CVA that "Development is the process by which vulnerabilities are reduced and capacities increased" (Anderson and Woodrow, 1998:12). Collins, (2009a) discusses that it is important to shift our emphasis to existing resilience, and suggests that perhaps an RCA (Resilience Capacity Analysis) may be more useful than a VCA.

The second notable model as regards vulnerability is the Pressure and Release (PAR) model by Blaikie *et al.* (1994) which is depicted in Figure 2.4. This is important as it is based on the notion that an adequate explanation of a disaster requires a tracing of its progression. This progression connects the impact of a hazard on people through a series of levels of social factors that generate vulnerability. The three layers of this model are underlying or root causes, dynamic pressures and unsafe conditions (IFRC 1996, Twigg 2001).

In terms of livelihoods, root causes reflect the distribution of power: resources and the control over them. Root causes in relation to livelihoods include reduced access to the asset base, and forces which undermine peoples' ability to be resilient to hazards. Root causes are channelled by dynamic pressures such as a lack of appropriate skills into particular unsafe conditions. Unsafe conditions are the specific forms in which the vulnerability of a population is expressed in time and space in conjunction with a hazard. Unsafe conditions can only be explained by an analysis of the dynamic processes and root causes that generate the unsafe conditions which subject livelihoods to risk in the first place.

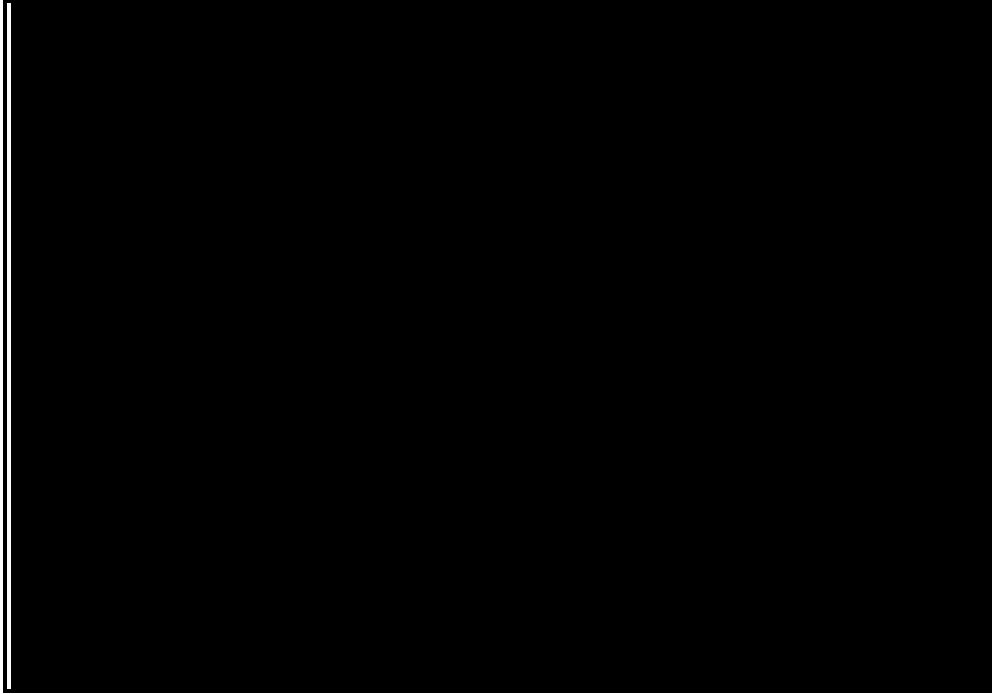


Figure 2.4 Pressure and Release Model (Source: Adopted from Wisner *et al.*, 2004:51)

Keeping the focus on livelihoods, Blaikie *et al.*'s (1994) access model which is presented in Figure 2.5 sees livelihood strategies as the key to understanding the way people cope with hazards. Access involves the ability of an individual, family, group, class or community to use resources to secure a livelihood. Their access to resources is always based on social and economic relations (including the social relations of production, gender, ethnicity, status and age.) It varies greatly between individuals and groups, and affects their relative resilience to disasters. Those with better access to information, cash, means of production, equipment and social networks are less vulnerable and are generally able to recover more quickly (they are, therefore, also more resilient). This model closely mirrors the SLA with its emphasis on access to assets.

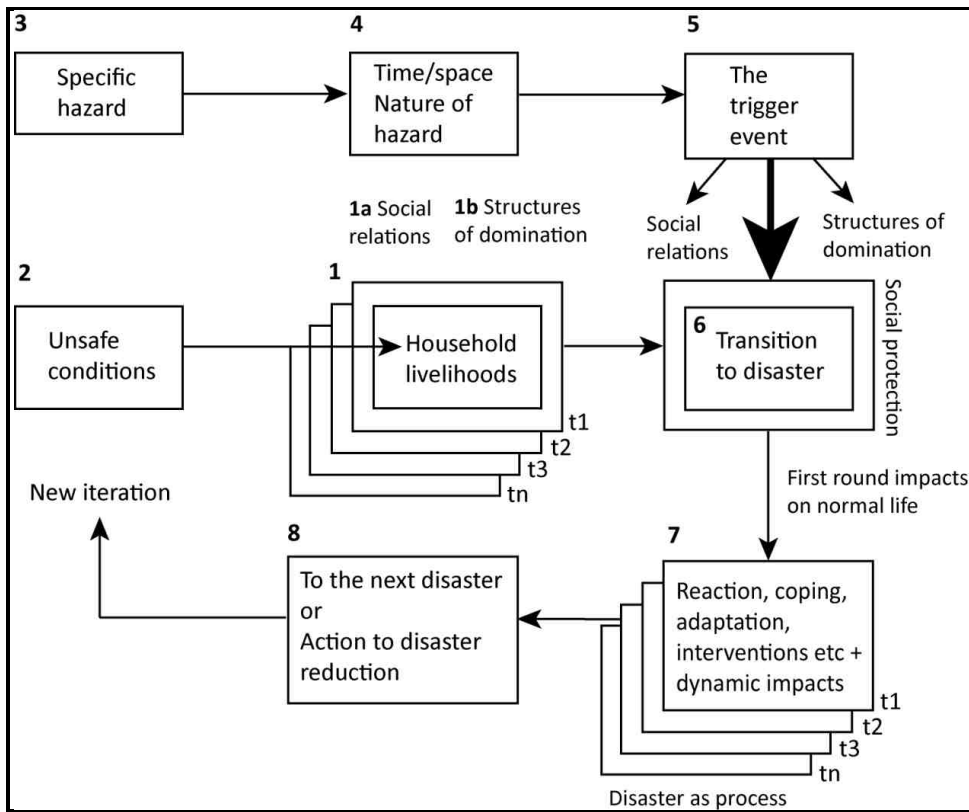


Figure 2.5 The access model in outline (Source: Wisner et al., 2004:89)

Blaikie *et al.*'s model links back to the earlier discussion in section 2.5 as regards the importance of capacity to contribute to resilience. Capacity is therefore important in order to reduce losses from risk and respond to new opportunities in a way that benefits the livelihood system.

Importantly, as Wisner *et al.* (2004:96) explain:

“It is worth emphasising that the access model is essentially dynamic, and iterates through time to provide a precise understanding of how people are impacted by a hazard event and their trajectories through that event.”

This is important, as lack of dynamism is a key criticism levelled against the SLA, a point revisited below. The access model focuses on ‘normal life’ and highlights the importance of everyday or normal times in creating resilience through, for example, livelihood strategies to disasters. However, although livelihood choices can contribute towards resilience they can also lead to poverty. As discussed by Krishna (2010b), disasters can help to explain differences in poverty between countries “but they shed little light on why some individuals were able to escape poverty while others in their neighbourhoods remained or became poor” (Krishna, 2010b: 14). The access model can also be extended to understand transition to disaster. However, livelihood strategies can be influenced by economic reforms as well as the more ‘traditional’ hazards and threats. This is illustrated by an example discussed by Rigg (2007) who looked at economic liberalisation reforms in Mongolia resulting in thousands of households retreating to rural areas to secure their subsistence. However, within such a livelihood response different personal circumstances such as age, gender, skills, initiative etc. “will have a role to play in determining what livelihood decisions and strategies emerge from the maelstrom of reform” (Rigg, 2007: 92). People make choices influenced by their own personal circumstances as regards what livelihood courses to follow.

The vulnerability and capacities of people is highly relevant in any examination of livelihood strategies, in particular how individuals or groups respond to livelihood threats. Importantly, both DRR theory and the SLA focus on livelihood strategies as a key to resilience. This necessitates an examination of livelihood strategies beyond that presented in the livelihoods framework in order to capture the complex components involved in the construction of livelihood strategies. The central importance attached to livelihoods strategies in terms of resilience and the ability to adapt or cope is key in terms of livelihood change, risk and vulnerability. The ability to respond to changes in the production environment is a focus of this study as discussed in the following section.

2.6 Livelihood strategies, portfolios and pathways in the wider vulnerability context

From the above discussion, it is important to highlight that the ability to react to a livelihood threat is a form of livelihood resilience which relies heavily on livelihood strategies and comprises capacity. Capacity as discussed above is a component of vulnerability. The understanding of vulnerability draws heavily on DRR concepts and literature which augment the concepts of vulnerability presented in the SLA.

Much has been written as regards the role of capacity in minimizing the ability of a natural hazard to become a disaster. Less attention has been afforded to the role of capacity as regards policy changes which form livelihood threats, in this case trade liberalisation.

Strategies used by people facing a threat through deterioration to reduce negative impacts on their lives and livelihoods can be complex and will vary with the severity and duration of the threat. As previously discussed livelihood strategies are normally classified as coping or adaptation. The various dimensions and their sub components that comprise what is neatly presented as a given livelihood 'strategy' necessitate further inquiry.

The choice and flexibility of livelihood strategies depend upon factors such as the vulnerability context, the assets people have, the entitlements or the resources over which an individual can establish ownership or access. These are in turn influenced to a large extent by the enabling environment or PIPs box as represented in the livelihood framework. Long's (1997) discussion of livelihoods reinforces this position whereby livelihoods are about people trying to make a living and balancing various factors. These factors include consumption and economic needs as well as coping with uncertainties and responding to new opportunities, and choosing between options in the light of perceived trade-offs. One of the goals of the SLA is to help people to increase their asset base in order that they can alter their livelihood strategies. Narayan *et al.* (2000:53) comment that, "There is increasing evidence that diverse livelihoods are widespread and enduring, even in relatively undiversified economies."

The more flexibility that people have in their livelihood strategies, the greater their ability to withstand - or adapt to - threats, in times of crisis. They are also better placed to achieve their livelihood aspirations. Proponents of DRR theory put forward that:

“Coping is the manner in which people act within the limits of existing resources and range of expectations to achieve various ends. In general this involves no more than ‘managing resources’, but usually it means how it is done in unusual, abnormal and adverse situations.” (Wisner *et al.*, 2004:123)

The idea of a livelihood pathway provides a valuable contribution when considering livelihood strategies in terms of risk and livelihood threats. De Bruijn & Van Dijk (2003) explain that livelihood pathways are changes in livelihood strategies either through strategic decision making or as a result of a livelihood threat or other factor. Pathways incorporate a high degree of coordination amongst actors with historical knowledge and experiences being utilised in the decision making process. Livelihood adaptation and the processes which it entails are therefore integral components which combine to form a livelihood pathway. Multiple livelihood strategies may constitute some combination of both risk and coping elements which may in turn be influenced by different decision making rationales, in particular those driven by necessity or choice. Scoones (1998) explains that this combination of activities pursued can be seen as a ‘livelihood portfolio’. Some such portfolios may be highly specialized with a concentration on one or a limited range of activities; others may be quite diverse. Different livelihood pathways are evident over different time-scales. The degree of specializations or diversification may relate to the resource endowments available and the level of risk associated with alternative options. According to De Bruijn & Van Dijk (2003; 1-2):“ A pathway is different from a strategy, because a pathway need not be a device to attain a pre-set goal which is set after a process of conscious and rational weighing of the actor’s preferences.”

Major advances in the bringing together of livelihood and risk reduction theory have taking place over recent years. The SLA incorporates many elements of DRR thinking, but DRR theory makes these components explicit and an integral part of DRR work. Since the fieldwork on which this study is based was conducted, numerous developments have occurred in the area of linking disaster risk, vulnerability and livelihoods. These will be examined in the final chapter of the study. At this juncture it is useful to consider the contributions of DRR approaches to our understanding of vulnerability and livelihood change as well as noting that there are many live issues surrounding the use of both the SLA and DRR models.

2.7 Issues and challenges of current approaches

The advent of the SLA, its subsequent packaging as a framework and its widespread uptake have left it open to much criticism. Some of the criticism levied against the SLA includes, its complexity, over emphasis on micro elements, the time and resources involved, the difficulty in sharing such a complex tool with partners and challenges in the assessment of qualitative results (Farrington *et al.*, 1999). Sustainable livelihood approaches have provided a platform from which to look at holistic poverty related issues. These approaches assist project and programme identification as “they encourage holistic analysis”, and “identify complementary actions” (Ashley and Carney, 1999:42) and can “track changes over time” (Clark and Carney, 2008:5). The SLA does provide a useful framework for understanding the nature of poverty and how interventions can be better tailored to enhance livelihoods (Farrington *et al.*, 1999). The main general strength of the SLA is that it has “encouraged, for some, a somewhat deeper and critical reflection” (Scoones and Wolmer, 2003:5).

The holistic and broad nature of the SLA – which in large part has been the source of its success – has also been the subject of much criticism. As Norton and Foster (2001:14) further explain, “the holistic, multi-dimensional nature of the framework – with its emphasis on the ‘complex world’ – can be unhelpful for the prioritisation of action”. The holistic nature of livelihoods analysis has subjected it to a level of multidisciplinary scrutiny and criticism which is rare, with each discipline focusing on the lack of depth or inclusion of their particular subject area. Carney (2002) emphasises that sustainable livelihood thinking has been criticised for underplaying the importance of one or more critical factors including vulnerability and markets. Furthermore “the qualifier ‘sustainable’ begs many questions which are not resolved even by positive ‘livelihood outcomes’ of the kind indicated in the livelihoods framework. ‘Sustainable’ for whom? By what criteria? In the short term or the long term?” (Murray, 2001:7).

Prowse (2010) summarizes the main literature and criticisms levelled against the SLA framework. The main criticisms include an oversimplified model of the household, an underemphasised vulnerability context, difficulty in understanding and unpacking the PIPs box, and that the term 'sustainable' is ambiguous. Numerous authors have criticized the notion of assets and their relationships (Whitehead 2002, Van Dijk 2011), what the assets in the asset pentagon represent (Murray, 2001), and the failure to distinguish between personal and common assets (Hussein, 2002). The absence of power, rights issues and politics and their under representation has also received numerous criticisms (De Haan and Zoomers 2005, Hussein 2002, Scoones and Wolmer 2003, Rigg 2007). Another source of criticism is the failure to link livelihoods and governance (Scoones 2009), while the relations between institutions within the PIPs box and the role of informal institutions is unclear (Hussein 2002, Whitehead 2002).

The utilization of the SLA at the field level has received both positive and negative receptions. Positive in that it allows a holistic approach and is a good model for viewing livelihoods in all their aspects, and in setting risk reduction and hazard vulnerability in the wider vulnerability context (Twigg, 2001). Negative in so far as the whole notion of livelihoods was difficult to comprehend for many cultures outside the Anglophone world. There is no translation for livelihood in many languages both in developed and developing countries. In my experience this results in at least one day being spent at the commencement of SLA workshops defining and agreeing terms in order to ensure that all workshop participants share a common understanding of livelihood terms. The same can be said (if not more so) as regards the language surrounding DRR. Collins (2009b:49) explains that "the language of vulnerability, risk and resilience, common in the world of disaster management and some parts of academia, is not easily understood by anyone outside a rather small 'disaster community', let alone people who may have received little education". The difficulties in practical application of the frameworks are discussed by Prowse (2010) with the problem of translation and explanation of many components of the framework also being mentioned by Ashley and Carney (1999).

Another issue as regards the use of livelihood analysis is that development project funding mechanisms are often divided by sector and development phase, while livelihoods by connotation cross all stages and sectors of the relief-rehabilitation-development continuum. Scoones (2009:11) explains that “Livelihoods approaches were often dismissed as too complex, and so not compatible with real-world challenges and decision making processes.”

The analysis of the outputs of livelihood research tools is quite complex. This is a difficult area to enhance existing capacity in as it relies on a large amount of inherent knowledge. The difficulty largely lies in turning large amounts of raw data into useful information that can feed into planning (Cannon *et al.*, 2003). Large amounts of data can prove quite a hindrance as it is difficult to ‘weed’ out relevant information particularly at the project level by non-specialists. More specifically, the PIPs box is difficult to understand and analyse (Ashley and Carney, 1999).

2.7.1 Livelihood research: moving forward

Sustainable livelihood approaches, in their attempt to incorporate the aspirations and desires of people in development projects, focus to a large extent on local orientated perspectives and the people themselves. This focus however has led to some areas of debate. One is that the focus on individuals has underrepresented issues of structure. Much of the criticisms levelled against livelihood approaches forms part of the wider structure verses agency debate an overview of which is provided by Rigg (2007:24):

“Agency orientated perspectives emphasis the degree which individuals have control over their own lives while structurally-oriented viewpoints, by contrast, emphasise the extent to which people are constrained in their actions and face a very narrow range of choices determined by structural factors that relate, for example, to class, geography, gender, social hierarchy and ethnicity.”

This is related to the discussion above as regards criticisms of the underrepresentation of the PIPs box and how the PIPs impose themselves on livelihoods. In contemporary livelihood studies a livelihood system interacts with both the assets and opportunities available as well as with a host of external influences, economic, social, political and ecological that can be positive or negative (Hoon *et al.*, 1997).

If we consider livelihoods within this broad debate this forms a useful springboard to bring together the main criticism discussed to date. The first is to what extent capacity, in this case capacity to respond to trade policy changes, is influenced by outside structural forces. As Whitehead (2002:576) discusses “there is a good deal of potential latitude in how such agency is conceptualised”. The conceptualisation of agency in terms of the role of vulnerability leads us to reconsider the relationship between capacity and vulnerability. How we consider vulnerability over time and space and its changing role within capacities combines elements of DRR and livelihood theories. The underlying factors affecting livelihood choice such as social aspirations or the non-material foundations of work and living all play a role in capacity. However, as Prowse (2010:220) suggests, the “Sustainable livelihood approach has an overly optimistic assumption that individuals and households are able to strategize as opposed to cope”.

De Haan and Zoomers (2005:44) discuss the relationship between access and decision making, “which involves both strategic and unintentional behaviour and structural factors”. This idea of threat management as a component of human capital is further alluded to by Moser (1998) from data of four case studies on the urban poor in the developing world. Research results from all four communities illustrated how portfolio management affects vulnerability. Corbett (1988) further examines the notion of risk management in relation to food security, observing that many of the African case studies confirm that risks to food security are frequently anticipated at a household level and that strategies are carefully planned to cope with them. Rather than being random, therefore, the actions that households take to cope with the threat of famine can be seen as part of an overall strategy designed to enable the household to cope with what is often a sustained period of economic and social disruption and accentuated poverty.

This combines elements of agency, in particular capacity and human capital which are governed and influenced by structural factors. In terms of agricultural research which this study considers, Adato and Menzien Dick (2002) identify from their agricultural research in multiple countries that the livelihoods approach identified aspects of people’s lives that are not captured in the livelihood framework but are important in explaining people’s decisions and choices, and consequent livelihood outcomes. Adato and Menzien Dick (2002:26) write:

“One aspect is the notion of ‘culture.’ How things have been done in the past, the relationship of certain crops or practices to ancestors, or their importance in festivals can influence whether people adopt a new crop or related farming practice, or whether they value the traits of that new crop.”

In terms of culture and the role it plays, Bankoff (2001:30) explains that: “In particular the relationship between a society’s vulnerability and the adaptation of its culture in terms of local knowledge and coping practices has not been adequately analysed”. This is further expanded on by Murray (2001) who asserts that the reasons for poverty should be understood through detailed analysis of social relations in a particular historical context.

This leads to questions, which concern structure, in particular, disengagement of livelihoods approaches as regards issues of globalisation which is important to this study, or “the failure to address wider, global processes and their impingement on livelihood concerns at the local level” (Scoones, 2009:17). O’ Laughlin (2004) explains that livelihood frameworks work best for local interventions and that they do not contribute well to higher level aid programme design and macroeconomic policy formulation.

As will be illustrated in the following chapters, livelihood approaches are particularly useful in analysing existing livelihood systems but less good at analysing changes in the system and the rationale behind changes within larger and more complex settings. In practice, the SLA is therefore essentially concerned with the dynamic and, at times, iterative nature of livelihood strategies, “simple ‘snapshots’ of activities can be illuminating, but only against this more complex reality” (Farrington *et al.*, 1999:4). In contrast, Scoones and Wolmer (2003:11) claim that, “Simple models imposed on complex settings, as we, along with many others before us, have found, just do not work.” Livelihood strategies and pathways are therefore complex and in order to fully appreciate them they need to be unpacked in order to reveal the rationale behind livelihood strategies.

The over simplification of people’s lives is a major shortfall of both livelihood and disaster approaches. Issues of measurement also remain as to what constitutes a sustainable livelihood, what are the indicators for a reduction in vulnerability and units of measurement. The complexities of how in reality a household operates need to be understood in order to assess not only the assets people use but who decides how they choose to use them and in which combinations. Twigg (2001:16) discusses the underlying principle of the asset pentagon in that greater access to assets reduces vulnerability. He maintains that: “This is usually true but not always true. It depends on the type of assets and their vulnerability.” The role of assets and their use in reactions to a threat or a hazard either as risk management or coping mechanisms can either increase or reduce vulnerability.

“The assets, activities and outcomes associated with constructing viable and robust livelihoods implicitly contain within them risk management behaviours and relative success at achieving a robust livelihood gives the individual or household a greater capability to deal with risk both before and after the advent of a risky event, or shock.” (Ellis,2003:4)

The construction of livelihood strategies offers important insights into threat mitigation and coping. As highlighted by Twigg (2001:6), the Access model put forward by Blaikie *et al.* “places livelihood strategies at the centre of coping strategies for all kinds of disaster.” Therefore the importance of livelihood strategies goes beyond a livelihood strategy as a reaction to a specific livelihood threat. Livelihood strategies contribute towards the robustness or resilience in DRR terminology of the entire livelihood system. Therefore strategies need to be examined both dynamically and over different geographical contexts.

2.8 Conclusion

This chapter has introduced the core concepts and literatures which are key to informing this study. At the outset of the chapter, a perusal of the origins and widespread adoption of sustainable livelihood approaches then lead to an examination of livelihood frameworks, research and analysis. Key concepts pertinent to the study were discussed including vulnerability, taking into account contributions made by DRR thinking. The importance of vulnerability in terms of the formulation of livelihood strategies was reviewed. The important role of capacity and resilience as part of the ability to respond to livelihood threats was highlighted as a key consideration of this study. Issues with current approaches to livelihood analysis were examined and challenges discussed. Livelihood research has furthered knowledge as regards how poor people maintain a living but it lacks depth as regards the various components of a livelihood. Livelihood strategies can vary from case to case according to seasonality, the division of labour and the availability of assets (De Haan and Zoomers, 2003).

Importantly this chapter lays the foundation from which to consider the importance of livelihood adaptation and resilience in the pursuit of livelihood outcomes. The relationship between vulnerability, capacity and resilience offers important insights into what makes a livelihood resilient. This chapter highlighted that livelihood strategies are key to resilience. This is underpinned by the complex interactions and linkages between livelihoods components represented in the SLA framework. The impact of these components on the ability of small scale agricultural producers to respond to threats and reap any potential opportunities offered by change is another key consideration of this study. The next chapter details the methodology employed during the course of this study to collect the data needed to ascertain patterns of response by small scale farmers impacted by livelihood threats based on deterioration.

3 Chapter Three: Methodology

3.1 Introduction

The purpose of this chapter is to provide an explanation and justification for the strategic aspects of methodological design and the choice of data collection tools utilised during this study in order to address the research questions posed in chapter one. The progression of the research aim and objectives over the research period is also discussed in order to illustrate the reflective process employed along with the rationale and justification for utilising a case study approach. A grounded theory approach was utilised with the research being inductive and exploratory rather than deductive. This approach enables theory to be derived from the observations made (Charmez and Henwood, 2008).

The chapter will set out how the data required were collected and why particular data collection methods were employed. During the main field study period between 2002 and 2005 an on-going and protracted crisis in Mindanao – the southern island of the Philippines where the research was undertaken – influenced significantly the progress of the field work, the case selection as well as the methods eventually utilised to collect the necessary data. This chapter attempts to explain and account for the decisions leading to the final choices taken in all aspects of data collection over this time period. The choice of Magpet and Malabog as the main research sites (see section 3.5.4) was influenced to some extent by security considerations. They also, however, offered the greatest opportunity to carry out in-depth research in order to answer the research questions posed in chapter one.

The household was chosen as the most appropriate unit of analysis for the study. Whilst the shortcomings of household models are recognised (see section 3.4.1), the household remains the most accurate reflection of Philippine social realities. In the Philippines people do reside and make livelihood decisions in ‘households’ even if the decision making process within the household is not always straightforward. Surveys, interviews, PRA activities, case studies and life stories were the key data collection tools used during the course of the fieldwork, as expanded on later in the chapter. These tools generated a large amount of raw data for analysis.

Data analysis was conducted using various methods including open coding. My own positionality did impact on the types of data that were collected in particular as regards my status as an 'outsider'. Finally the challenges of cross cultural research, ethical considerations, constraints and limitations faced during the course of the study are elaborated upon in the chapter, as well as the measures taken to address them.

3.2 Justification of research approach

A grounded theory approach was used throughout the research. Bailey *et al.* (1999: 173) provide a useful overview of the grounded theory approach:

“In grounded theory, research design and analysis are cyclical. Through research activities (such as participant and non-participant observation, and unstructured interviewing), reading the technical literature (academic books and papers) and the non-technical literature (archive material and diaries), and the recording of field notes, the researcher develops tentative explanations or propositions. These are then ‘tested’ and revised to guide a fresh collection of data, to review the original data and literature, to appraise new literature and to form new explanations.”

The broad research approach followed was therefore iterative in nature, including both the field work itself and later data analysis. By grouping outputs from the case studies into categories and by utilizing open coding as discussed by Corbin and Strauss (1990), I was able to group or form categories in this case patterns of response to trade liberalisation. This enabled me to highlight both regularities in response and exceptions to the rule while identifying areas for further study. Bailey *et al.* (1999:176) write, with reference to grounded theory, that “throughout the research process, the researcher is challenged to break through assumptions and make free associations that are necessary for generating the asking of questions and the making of comparisons.” This identification of patterns of response focused the questions and design of the subsequent PRA workshops. According to Hartley (2004:220), data collection and analysis are “developed together in an iterative process,” which – when used appropriately – can be a strength as it allows for theory development which is grounded in empirical evidence. A careful description of the data and the development of categories in which to place behaviours or processes are important steps in the process of data analysis.

Data collection tools following initial surveys were ethnographic in nature. Cook and Crang (1995:8) write that such an approach permits us to understand how people actually “live out their lives”. The aim of the ethnographic elements of this research was to obtain ‘thick description’ about the issues identified from previous research tools and, in particular, the producer surveys.

The basic purpose of this approach being to understand 'the world' as it was experienced and understood by the subjects of the research and their everyday lives. As outlined by Fetterman (1998), ethnographic research begins with the selection of a problem or topic of interest. The research problem that the ethnographer chooses guides the entire research behaviour. This research was ethnographic in that it met the following criteria, as discussed by Atkinson and Hammersley (1994:248): "the exploration of a social phenomenon; 'unstructured' data; small number of cases; [and] analysis that involves the interpretation of meanings of human action". The research employed an inductive approach in that theory was developed from observations looking at many variables and issues and focusing on 'why' questions.

Chapter two examined the notion of livelihoods and its relevance for this research. Livelihoods analysis enables an examination of livelihood outcomes. It also provides information on the contextual and historical factors which provide a backdrop against which production and investment decisions by small scale agricultural producers occur. The rural livelihood framework was presented in chapter two, section 2.3. The rationale for utilising this framework over others was also provided and is based on its focus on analysis and outcomes rather than implementation issues. .

The criticisms levied against the livelihoods approach as presented in section 2.7, and which are to an extent echoed in this study, raise some methodological challenges, namely the difficulty of utilizing the livelihoods approach in order to query elements of this approach. This needs some explanation.

Although the livelihoods framework is utilized throughout this study it is used as an organizational tool in order to group findings rather than a standalone approach to research. It is deemed appropriate in terms of providing an entry point to form an understanding of how individuals and households make a living. In this sense, the SLA framework is being used in the manner that Scoones (1998) outlines: to enable an examination of the particular contextual settings and asset combinations that permit a particular combination of livelihood strategies to be pursued and with what outcomes.

Therefore the justification for using this approach is twofold. Firstly livelihoods research is cross disciplinary in nature thus providing an over-arching framework to

address the research questions posed in section 1.3 and which bridge several disciplines. Secondly, whilst many of the PRA methods utilized in this study are suitable to populate the various boxes of the livelihood framework, these are not deemed to be sufficient. Thus participatory workshops (see section 3.5.6) and life stories (section 3.5.7) are used to provide greater depth of data than would be necessary for a 'simple' livelihoods approach⁹. These additional data collection tools were utilized to provide thicker ethnographic data to address some of the perceived shortcomings of the SLA framework. This suite of research methods allows for data triangulation which goes some way towards addressing the identified shortfalls of the livelihoods approach. In summary, the SLA framework was utilised in order to 'guide' the collection and analysis of the research results. This framework also served as a broad parameter in terms of organising the findings but was importantly supplemented by other methods.

9

Many of the tools used in livelihood research are participatory in nature which come with their own host of criticisms which are addressed in section 3.5.6

3.3 Security Considerations

At the outset it needs to be explained that the ability to conduct primary research – and what form that field research took – was influenced to a large extent by the prevailing security situation in Mindanao during the study period 2002-2005. The choice of data collection methods employed was influenced by the unstable security conditions in the research sites during the research period. In particular it was deemed more appropriate to utilise a workshop approach rather than a household survey approach where possible during that time. During the study period the UK Foreign and Commonwealth Office advised against all travel to central, southern and western Mindanao. Caution therefore had to be exercised, research had to be postponed on numerous occasions and I was evacuated for security reasons on two occasions. On numerous occasions and sometimes over the course of many months I was unable to travel into Cotabato, where the research was centred, due to the high risk of kidnapping. The real security risk was not just to me but also to the enumerators and my colleagues from the Alternate Forum for Research in Mindanao (AFRIM). As a foreigner I drew unnecessary attention to the research team at the various military checkpoints.

These security considerations impacted on the ability to conduct primary research in the manner envisaged and numerous compromises had to be made and second-best options embraced. Workshop approaches were adopted on numerous occasions in order to proceed on schedule with the research. In particular, the security context negatively affected the ability to carry out life histories in the manner originally envisaged.

Enumerators were unable to travel to Magpet because of the prevailing security situation and therefore life stories were collected through a workshop approach held in Kidapawan city in Cotabato, a second best option dictated by conditions.

3.4 Rationale for case strategies and selection

A case study approach was utilised in order to address the research questions posed. This section explains the rationale behind that choice over others available. The rationale behind using households as the core unit of analysis and individual case selection is also provided. Yin (1993: 20) asserts that “for case studies, five components of a research design are especially important, namely, a study’s questions, its propositions if any, its units of analysis, the logic linking the data to the propositions, and the criteria for interpreting the findings.” The research aims and objectives evolved over time and were influenced by a host of factors. Adams and Meagaw (1997:226) draw the conclusion that, “There is no blueprint for fieldwork; the journey's route is never fixed. Rather the research process is continually re-fashioned in response to events and experiences unfolding on the ground.” This section attempts to explain the progression of the research process and the factors which influenced the evolution of research aims and objectives. As will become clear, the research evolved over a long period of engagement with groups and individuals in the Philippines, and the methodologies adopted and research framework arrived at was an outcome of this engagement.

Initially the study set out to look at the broad area of the impact of trade liberalisation on farmers in the Philippines, in particular in Mindanao. Upon my arrival in the Philippines in 2002, I commenced my volunteer placement in conjunction with Voluntary Services Overseas (VSO) UK, as the Senior Researcher based in AFRIM a local research and advocacy NGO which received funding from a number of European and North American International Non-Governmental Organisations (INGO). It is due to the permission, flexibility and encouragement of my line manager at AFRIM that this study eventually focused on Mindanao.

Following a review of the appropriate secondary sources, I conducted key informant surveys in order to ascertain which specific commodities or types of producers the study could focus upon. The preliminary research, which consisted of exploratory research and a review of relevant literature, acquainted me with the topic and led to the defining of preliminary research questions.

The advantages of this method in terms of cost and time saving are well documented (Kinneer & Taylor, 1996; Stewart & Kamins, 1993; Parsons & Knight, 1996).

During this time AFRIM was the project holder of the Focus on the Global South (Focus) Stop the New Round research and advocacy campaign preceding the WTO talks held in Cancun in 2003. Focus is a NGO, working in Thailand, the Philippines and India. Focus was established in Bangkok in 1995 and is affiliated with the Chulalongkorn University Social Research Institute, led by the high profile activist, Walden Bello. As such my role was largely concerned with providing up to date research as regards the impacts of trade liberalisation on farmers in Mindanao in order to inform advocacy activities, publish results in relevant advocacy journals, as well as participate in round table discussions and various meetings with policy makers and civil society at the Mindanao level. Following the initial exploratory research, the study focused on corn (maize) farmers in Mindanao, the specific reasons for which are detailed in subsequent sections.

Weiers (1998) suggests that researchers should first, formulate the problem; second, determine the information requirements; and third, select the methods most likely to satisfy these information requirements, within the time and cost constraints imposed by the study. A case study approach was chosen over other research strategies for two principle reasons. Firstly as it was deemed the most appropriate method to address the specific research questions identified. In this case the research questions posed were largely 'how' and 'why' questions for which, according to Yin (1999:21), a case study "is most likely to be appropriate". Hartley (2004) further discusses that because the case study strategy is ideally suited to exploration of issues in depth and following leads into new areas of theory, the theoretical framework identified at the beginning may not survive to the end.

The second reason for the choice of a case study strategy stems from the fact that in order to answer the research questions a variety of research data collection tools would be necessary.

A case study was, therefore, considered the most appropriate research strategy because it relies on multiple sources of evidence with a mix of methods enabling “the different techniques and their results to be compared against each other, allowing judgements to be made as to which method (or combination of methods) is the most appropriate for any particular purpose” (McGregor,2006:201). Because multiple sources of evidence are used, the investigator can address a broader range of historical, attitudinal, and observational issues than would be possible using survey-based research (Yin, 1989). The cases selected for this study were based on the information requirements formulated as a result of the preliminary research. Hartley (2004: 323) states that case study research “consists of a detailed investigation, often with data collected over a period of time, of phenomena, within their context” with the aim being “to provide an analysis of the context and processes which illuminate the theoretical issues being studied”.

Access to case study sites and participants was thus an important consideration in case selection. This access was dictated not only by security considerations and practical issues such as logistics but also by the willingness of those involved in both Magpet and Malabog to grant us this access to their lives. Stake (1995:16) explains that “in [a] qualitative case study, we seek greater understanding of the case. We want to appreciate the uniqueness and complexity of its embeddedness and interaction with its contexts”.

The case of Magpet (section 3.5.4) was unique from among 16 producer case studies conducted throughout the Philippines (section 3.5.5) from the perspective of supply response. The case of Malabog (Figure 3.2) presented an opportunity to look at a similar group of producers who from a geographical perspective were responding to trade liberalisation and similar livelihood threats in a different manner. In terms of geographical focus the area of Magpet, Cotabato was initially chosen for the corn study. The rationale for this specific choice was linked, in part, to security considerations. A large quantity of the corn cultivated in Mindanao comes from Cotabato, but research over much of the area faced (and continues to face) significant security risks. Magpet was itself a curfew area and regularly ‘no-go’ area during the months of the fieldwork.

That said, it was accessible as it is close enough to Davao city to allow researchers to vacate the area during hours of darkness. It is a 'typical' corn producing community, which was thus considered able to provide insights into the wider corn producing areas of Cotabato.

The rationale behind the choice of Malabog was that it offered an alternative pattern of producer supply response under apparently similar conditions to those of the Magpet case. Gerring (2007:102) states that "All things being equal, one is concerned not only with cases where something happened, but also with cases where something did not. It is the rareness of the value that makes a case valuable, in this context, not its positive or negative value." It was this that drew my attention to Malabog as a potentially valuable counterpoint to Magpet.

It is important to acknowledge that no relationship existed between AFRIM and either of these areas prior to this study. Cotabato Agribusiness Development on Technology Centre (CADTEC), the producer cooperative in Magpet, and the Malabog Integrated Enterprise Development Co-operative (MIEDECO) in Malabog therefore facilitated all practical and logistical arrangements in conjunction with AFRIM staff. Stake (1995) recommends that cases are selected that offer the opportunity to maximize what can be learned within given time constraints. Furthermore, and as discussed by Hartley (2004:324), a "case study is not a method but a research strategy" "and cannot be defined through its research methods, but rather in terms of its theoretical orientation and interest in individual cases". Individual cases, in terms of livelihood responses, were important in case selection. Both of the field sites offered specific insights into the research questions. Both Magpet and Malabog provided contexts where how and why particular events occurred could be explored and elucidated. These cases enabled an explanation "a potential cause path, whereby a case study seems to be making an inroad into the attribution problem" (Yin, 2003: 69).

Yin (1994:9) discusses that, “as a research endeavour, case studies have been viewed as a less desirable form of inquiry than either experiments or surveys”. He suggests that this may be due to concerns over the lack of rigor of case study research. One major criticism levied against case studies is that they provide a poor basis for generalization (Stake ,1995:8) explains that the “real business of case study is particularization, not generalization”. Cases are chosen and we endeavour to know them well; not how they differ from others but what they actually are: “There is emphasis on uniqueness, and that implies knowledge of others that the case is different from, but the first emphasis is on understanding the case itself”. However, as Van Donge (2006:184) has pointed out case studies, “study particular situations in depth and makes no claims to be statistically representative. It is wrong, however, to conclude that case studies have no wider significance”. In order to address some of the criticisms levied against the case study approach as a research strategy, multiple sources of evidence were utilised, collected in a logical fashion allowing data to be cross checked through a process of triangulation which is discussed below in the context of reliability and validity in section 3.8.

3.4.1 The household as a unit of analysis

The units of analysis are important as they need to be able to provide the information required to address the research questions. In this instance, the unit of analysis is the household, while the ultimate aim is to ascertain individual household patterns of response. The peasant farm household was deemed an appropriate unit of analysis for the purpose of this study primarily because of the nature of this inquiry and the appropriateness of looking at the household as a production unit in order to address the research questions posed. Ellis (1988) explains the peasant farm household is a production unit in that households use land as their means of livelihood, using mainly family labour in farm production and partially engaging in a larger economic system. Tellis (1997:2) explains that in a case study the unit of analysis is critical and that it is typically “a system of action rather than an individual or group of individuals”.

The household as a unit of measurement for livelihood research has been the subject of much discussion, in particular from a gender perspective. As Rigg (2007:45) suggests, “in treating the household as a single, welfare maximising decision making unit, scholars have traditionally glossed over the frictions, contradictions and inequalities that are inherent in the operation of the household”. Hart (1997:14) captures the essence of much of this debate in that “individuals should be characterised by their own preferences, rather than aggregated within the ad hoc fiction of the unitary model”.

Folbre (1985:5) explains further that:

“Those economists who do analyse the household often treat it as though it were an undifferentiated unit, referring to the 'household's interests' or the 'household's decisions'. Treating the household an individual by another name, they overlook the importance of conflict and inequality between household members.”

Although households can be seen by an outsider to act as one unit in production or investment related decisions, how these decisions are arrived at are complex and particular to each household. Far from being a natural unit, Hart states, “the household is a complex, culturally varied and dynamic set of institutional arrangements” (Hart, 1995:40).

The role of each individual within a household in decisions and activities as discussed by Saito and Spurling (1992) requires analysing information about their respective and individual activities, resources and constraints. Spring (1988) further highlights that those involved in farm system research must consider gender issues and intra-household dynamics at all stages of their work. In the pre-diagnostic stage, they must consider primary and secondary sources that detail the sexual division of labour and the changing roles of various household members. Whilst many development specialists pay attention to gender related issues and 'mainstreaming of gender approaches' has become normal, this awareness, as Moser (1989) explains, has not necessarily been translated into planning practice.

Ellis (2000) and Valentine (1999) discuss the many criticisms levied at household models but, as Rigg (2001 :85) suggests, "the criticisms levelled on the 'household' is not sufficient reason to reject the household as a useful unit of analysis as most Southeast Asians consider themselves to be members of households". For the purpose of this study, a definition of household, which allows for its shortcomings is utilised. Building on the work of Ellis (2000:27), this research uses "an extended definition of the resident household that acknowledges spatially diverse contributions to household welfare is adopted as the basic social unit of livelihood analysis".

In both study sites, producers do live and make decisions within a household context, even if control of resources and decision making within this unit is unclear and complex. A study utilising individuals as the unit of analysis would fail to capture many important and often hidden activities that contribute towards livelihood strategies. Furthermore, during the collection of initial baseline data through surveys it was not possible to identify in advance the person most appropriate within the household to participate in the survey. Taking all of these considerations into account, the household as a unit of analysis was deemed appropriate for this study.

3.5 **Methods**

This section sets out the data collection tools utilised during the course of the research. Data collection tools were chosen based on reliability and validity while taking into account various constraints, such as time and cost constraints as well as the security considerations discussed above. Table 3.1 details the data collection tools utilised during this research and their sequencing in order to address the wider research objectives. This was a circular – or iterative – rather than a linear process of learning and response so the data collection itself contributed towards the further development and refinement of the research questions. In order to demonstrate this linkage Table 3.2 maps the specific research methods utilised to address each of the research questions. This table demonstrates how data is informing research findings and linking back to the research questions.

Table 3.1 Sequence of research and data collection tools

Research Stage and Date	Methods	Data and Information collected
Exploratory 2002	Literature review Secondary data review including previous studies, unpublished documents, publications, CD-ROMs, internet searches, abstract databases and standard textbooks.	Secondary data and information on trade liberalisation in the Philippines and its impact on various groups
Exploratory October 2002	Exploratory key informant Interviews (10).	Information on areas of focus geographically and from a commodity prospective
Exploratory November - December 2002	3 focus group discussions with banana Agrarian Reform Beneficiaries (ARB) (30)	Qualitative information on the perceived impacts of trade liberalisation on ARB
Exploratory January 2003	Corn Industry Key Informant email Survey (38)	Qualitative information on the impact of trade liberalisation on various agricultural industries. Identification of key informants for semi structured interviews.
Exploratory February/March 2003	Corn industry Key Informant semi structured interviews (20)	Qualitative information, largely related to the potential impacts of trade liberalisation on the corn industry and different producer groups.

Core research March 2003	Producer Survey (site 1) Magpet	Household Survey (31) Baseline data on household size, education levels, livelihoods, land ownership, land use, household services and assets. Household economic data Income and production diversification patterns
Core research June 2003	Producer Survey (site 2), Malabog	Household Survey (60) Baseline data on household size, education levels, livelihoods, land ownership, land use, household services and assets. Household economic data Income and production diversification patterns.
Core and Exploratory Jan 2003-Jan 2004	20 Case studies	Qualitative information in the form of a case study on the effects of trade liberalisation on small scale farmers in the Philippines (in conjunction with various NGOs and POs).
Core March 2004	Participatory workshops : Magpet (site 1) (14) and Malabog (site 2) (14), PRA Workshop	Resource Maps Historical trend data, Seasonal calendars Market chain Detailed household economic data- Decision making Livelihood outcomes

		<p>Social assets</p> <p>Institutions</p> <p>Detailed data on income and production diversification</p>
<p>Core</p> <p>October 2004</p>	<p>SL Analysis of five areas in Mindanao. Five participatory workshops with community leaders (DFID-style)</p>	<p>Analysis of 5 areas in Mindanao through SLA workshop</p>
<p>Core</p> <p>November 2004</p>	<p>Income and expenditure workshop(site 1)Magpet</p>	<p>Income and expenditure pie charts</p> <p>PRA farm budgets</p> <p>Diversifiers (this is the first time they were interviewed as they were included specifically because they diversified).</p> <p>Non-diversifiers (11), diversifiers (6)</p>
<p>Core</p> <p>November 2004</p>	<p>Life story Workshop, (site 1)Magpet</p>	<p>Life stories 11 diversifiers and 6 non diversifiers prompted by facilitators questions</p> <p>Family tree</p>

Table 3.2 Research methods utilised in order to address specific research questions

Research question	Research method	Field action
1. Does current livelihood and disaster theory adequately account for and explain the diverse livelihood options pursued by small scale agricultural producers facing threats based on deterioration?	Secondary literature review	-
	Exploratory key informant Interviews	Key informants with a knowledge of agriculture and trade liberalisation (10)
	Key Informant email Survey	Key informants in the corn industry (38)
	Key Informant semi structured interviews	Key informants in the corn industry (20)
	Producer Survey	Site 1: Magpet (31) Site 2: Malabog (60)
	Workshop	Income and expenditure workshop, Site 1: Magpet (17)
	SL Analysis	Five participatory workshops with community leaders in five areas of Mindanao (DFID-style)
	Life story workshop	Site 1: Magpet (17)

2. Are current distinctions between different patterns of responses and the rationale of such responses appropriate?	Case Studies	20 case studies conducted throughout the Philippines
	Workshops	Participatory workshops Magpet (site 1) (14) and Malabog (site 2) (14),PRA
	Life story workshop	Site 1: Magpet (17)
3 Are current research methods adequate to the task of picking out individualized patterns and rationales of response?	Workshops	Participatory workshops Magpet (site 1) (14) and Malabog (site 2) (14),PRA
	Life story workshop	Site 1: Magpet (17)
4. What is the role of historical factors – (institutional and personal) of past events-in moulding patterns of response?	Workshops	Participatory workshops Magpet (site 1) (14) and Malabog (site 2) (14),PRA
	Life story workshop	Site 1: Magpet (17)

3.5.1 Exploratory key informant interviews (non-commodity specific)

I conducted ten key informant interviews in October 2002 in order to inform areas of focus including commodities for further detailed primary research. These key informants were drawn largely from academia, civil society and large agricultural producers associations and were chosen based on their area of expertise for inclusion in this series of interviews. They were also based on recommendations by my line manager as regards people who would speak freely and not reiterate government policy. Key informants were drawn from the University of the Philippines (UP) Davao, Mindanao (1); University of Ateneo, Manila(1); National Cereals, Hog, Rice, and Sugar producer associations (5); Banana ARB association (1); International NGO agricultural advisor for the Philippines (1); and a Mindanao based local NGO trade policy advisor (1).

Local research colleagues advised me to conduct these interviews in English without enumerators as my status as a foreigner with a senior position within a local NGO would enhance attendance. They proved correct on all accounts, although all key informants spoke an excellent level of English there are still numerous issues as regards conducting intercultural research which are further discussed in section 3.7 below. These interviews were all tape recorded with written notes made during the interview. The key points from these interviews were utilised in the formulation of the identification of the geographical research areas and commodities.

3.5.2 Banana Agrarian Reform Beneficiaries focus groups

Three Focus Group Discussions each with 10 participants were conducted with Banana ARB. As discussed by Hopkins (2007), much of the current literature around focus groups tends to focus on the size of the group. However, he contends that a range of other issues are also important including the location, the age of the participants and the sensitivity of the topic being discussed. The topic of trade liberalisation in the context of banana producer ARB, who are obliged to enter a 'contractual' arrangement with international fruit companies, is a highly sensitive topic. A focus group was at the outset, however, the only available option as participants were uncomfortable speaking to us individually for fear of reprisals from the fruit companies. Focus groups provided, perhaps surprisingly, a degree of reassurance to the participants that they would not be singled out for reprisals. Participants also felt that having others around them who shared their views to be a source of comfort.

Findings indicated that ARB are removed from the market – at least in direct terms – due to contracting arrangements with the international fruit companies. Other issues such as land tenure arrangements are closely linked to the local political situation and the historical evolution of land ownership in the area. It was decided not to include Banana producers in further parts of this study due to issues regarding access to information from international fruit companies and difficulties in interviewing respondents without the consent of these companies. Nonetheless, the study was concluded and the summary results published by AFRIM. These data do not feed directly into this study, although the wider point about the local power of the international agro-food industry is germane.

3.5.3 Corn Industry key informant semi structured survey

Following the analysis of exploratory key informant interviews the corn industry was chosen for further research. In January 2003 I firstly conducted a key informant email survey with experts on the corn industry; the email survey questionnaire and a list of participants by affiliation are presented in Appendix 1. The survey was emailed to 40 experts who were selected based on their 'perceived' knowledge of the corn industry and trade liberalisation, returning 38 responses. The large number of responses was due to the excellent networks maintained by my line manager, the executive director of AFRIM. The rationale behind conducting an email survey prior to the key informant interviews was to identify the main areas for discussion during the face to face interviews. This approach proved useful and enabled me to keep 'face time' with often busy and important people to a minimum.

Following the identification of key areas for discussion from the email survey, I conducted 20 key informant semi structured interviews over the course of three weeks. As with the previous key informant surveys the interviews were conducted in English. The 20 participants were selected from the 38 responders to the key informant email survey based on their knowledge of the subject matter (which was 'tested' as part of the email survey), their availability for interview and time and cost constraints. In order to reduce the number of flights required to conduct interviews, interviews outside Mindanao were largely confined to areas of Luzon in and around Manila. Twelve interviews were conducted in Mindanao and eight in and around Manila. Normally interviews were conducted at the participant's office although some were conducted elsewhere over coffee or a meal, with one been conducted in a car while the participant was travelling to a meeting! In most cases the interview took at least an hour and often two. However, that was more due to Filipino hospitality than the length of the discussion as regards trade liberalisation. The semi-structured questionnaire utilised during these interviews, a list of participants by affiliation and location are presented in Appendix 2. The results of this round of interviews enabled the formulation of further research questions and areas for additional investigation.

3.5.4 Producer Survey

Following the key informant interviews discussed above, two household surveys were conducted in Magpet and Malabog in 2003. Detailed Maps of both areas are presented in Figure 3.1 and Figure 3.2. These surveys were conducted in order to collect socio economic data, ascertain income and expenditure data, provide baseline data and ascertain if there were any significant changes in cropping patterns over the previous ten years (1992-2002). The questionnaire itself was translated from English into Visayan and again back into English to ensure that the translation captured the meaning of the questions correctly. Translation was conducted by an AFRIM staff translator. AFRIM have an abundance of experience with the translation of research data as they habitually collect all their research in a local dialect but translate their results for publication purposes into English. Explanatory text was also provided in order to aid the translation process.

The producer survey conducted in Magpet is presented in Appendix 3. This survey was first tested among colleagues. This was followed by a second test, during a training workshop, with 20 local farmers. Finally, the questionnaire was pilot tested in the field with ten respondents. Enumerators also received training in order to ensure standardisation in terms of how the interview was introduced, its flow and dealing with any potential problems. Data were collected using a semi-structured questionnaire format. This was a mixed method questionnaire gathering both quantitative and qualitative data with an assortment of open and closed questions. A number of factors influenced the sample size deemed appropriate. These included the variability of local farm conditions, the degree of precision required, available time and research resources, type of data handling facility, and the details and complexity of the questionnaire itself. Norman *et al.* (1995) propose a sample size of 30-50 farms in order to achieve a reasonable reflection of farming circumstances. A purposive sampling strategy was utilised in both Malabog and Magpet which involved the enumerators and I in conjunction with community representatives judging which households should be included in the sample according to known characteristics, in this case 'farmers'. This selection was based on the research questions of this study in order to select respondents that could offer

information of interest to the study and allow analysis related to the issues being studied. Mayoux (2006:120) explains that “Purposive sampling enables close focus on cases and issues of interest.” The aim was not a sample that was statistically valid but “related to the scope, nature and intent of research” (McGuirk and O’ Neil, 2010:205). One of the issues with conducting this type of face-to-face survey is that it is costly and time consuming while at the same time having the potential for interviewer-induced bias (Mclafferty, 2010). However, in the case of Magpet and Malabog the lack of a postal service meant that data collection methods other than a postal survey would need to be utilised.

In the course of the survey, it was necessary for the interviews to be carried out by research assistants from AFRIM or contracted to AFRIM in order to reduce the incidence of interviewer and respondent bias. This type of bias includes suspicion of foreigners and measuring responses against one’s own cultural criteria. Bell (1999: 14) notes that “surveys can provide answers to the questions, What? Where? When? How? but it is not easy to find out Why? Casual relationships can rarely if ever be proved by a survey method”. ‘Why’ questions were illuminated using PRA research tools and life stories, as outlined below. But while survey questionnaires may not be particularly appropriate for exploratory research they did provide valuable baseline data.

During the Magpet survey three enumerators were used in order to collect these data over a two week period. Enumerators normally worked alone but for more remote homesteads teams of two were utilised. Respondents were interviewed at their home alone or with members of their family and each interview took about one hour to complete; this normally included some general discussion as well as regards farming conditions. 55 per cent of respondents were members of CADTEC which is based in Kidapawan City. The survey focused on income and expenditure profiles and changes of these profiles over a period of 10 years. The head of the household was interviewed, which in most cases was a male, who was a husband and a father, though in many cases the wife of the head of the household also contributed to the discussions. Recognising that accounts, within the household, may vary between respondents as to who makes the decisions regarding household resources, the survey attempted to address this by asking

the question *“Who makes decisions as regards resource use in the absence of the household head ?”*.

Table 3.3 presents a general overview of the household producer survey respondent profile in the municipality of Magpet, Cotabato. A structured questionnaire was conducted with 31 households in March 2003 over the course of three weeks. Magpet remains primarily an agricultural area, out of the total land area of 75,536 hectares, 19,865 hectares or 26 per cent are planted with commodity crops. Around 50 per cent of the land areas are forests and unclassified public lands. The main ethnic groups within the municipality are Cebuano’s, Ilonggo’s (from the northern Philippines which is explained in section 5.2.2) Manobo’s and Ilocano’s. Magpet consists of 32 barangays of which only barangay Poblacion is considered an urban barangay. A barangay is the smallest administrative division in the Philippines and is equivalent to a village or a ward. The total population of the municipality is recorded at 45,726 with 9,214 households. Barangays Temporan, Balite, Bagsak and Mahongkay, were chosen for this study in the municipality of Magpet, Cotabato province.

Table 3.3 Respondent profile of Household Producer Survey in Magpet

Average age of respondent m/f	41 10 females (32%) and 21(68%) males
Average household size	5
Education level	Primary 56% Secondary 39% Third level 6%
Land Tenure	Landowner -13% Tennant -21% ISF - 66% (The Integrated Social Forestry programme of the Department of Environment and Natural Resources. Farmers are given the right to develop the land as a source of agricultural income for 25 years this arrangement is renewable for another 25 years.)
Main source of Income	Farming-80% Livestock-10% Others -10% (examples cited include laundry, remittances and frying bananas)
Actual household income 2002	\$ ¹⁰ 835
Average farm size	2.5 hectares
Availability of Savings	No savings - 54.8% Small livestock - 45.2%

(Source: Magpet producer survey, March 2003)

¹⁰ All dollar currency are United States dollars.

The second producer survey was conducted in Malabog in June 2003 (see Figure 3.2). Barangay Malabog is situated in Paquibato district, Davao del sur, Mindanao. Malabog is typical of many communities in Mindanao. It is an upland community that hosts a mixed indigenous and settler population. It has a total land area of approximately 20,000 hectares, 75 per cent of which is rolling and 25 per cent is flat land. It is an agricultural barangay with 38 settlements, mostly located in very rural areas. In 2000, it had an estimated population of 10,897 -- with 5,481 males and 5,416 females. With 1,547 households, it has the highest population in the district with a high population growth rate estimated at between 2 and 3 per cent per annum. Settler groups include Mandaya, Cebuano, Ilonggo and indigenous groups comprise Matigsalogs, Bagobos and Diangans.

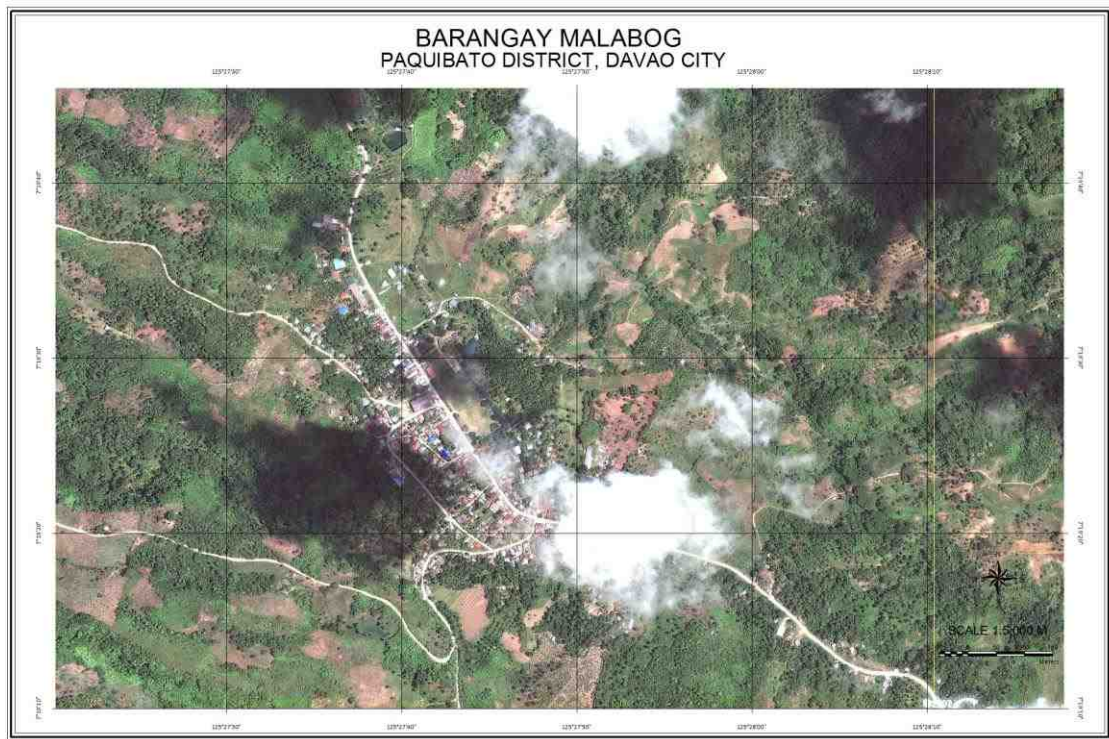


Figure 3.2 Map of Malabog, Davao City (aerial view) (Source: The Department of Environment and Natural Resources Davao City, 2011)

The producer survey in Malabog was conducted using a different questionnaire than the questionnaire utilised during the Magpet survey, this questionnaire is presented in Appendix 4. Although the questionnaire in Malabog followed a similar pattern to that conducted in Magpet the actual questionnaire was different as this survey was conducted through Catholic Relief Services (CRS), a large US-based INGO. Originally the survey was conducted to feed into a larger study which is discussed in section 3.5.5. Although I was involved with this questionnaire design I did not know at that time that this case would form part of the study here. It was decided not to do another survey utilising the same questionnaire as used in Magpet as the data collected was largely similar and therefore it would be overburdening respondents. Table 3.4 presents a general overview of the household producer survey respondent profile in Malabog, Davao City. Sixty respondents were chosen for this study using purposive sampling in order to select respondents which could offer information relevant to the research questions. This survey was completed

over the course of four weeks. The respondents were spread over three major agro-economic zones, and 20 respondents were interviewed from each zone.

Again there was a good mix of male and female head of the household respondents. The zones were Malabog Sentro to represent those living in the centre of the study site; San Miguel to represent those living on the outskirts but near the centre; and Mahayahay and Polocon to represent those living far from the village centre and at higher elevation (teams of two researchers including local farmers were used here for security reasons). In each zone, about half of the respondents were members of MIEDECO, and the remaining half were non-members.

Table 3.4 Respondent profile of Household Producer Survey in Malabog

Average age of respondent m/f	45 34 (57%) were male and 26 (43%) female.
Education level	Primary 50% Secondary 45% Third level 5%
Average household size	7
Land Tenure	49 respondents (82%) claim to own the land they farm (only 19 have proof of stewardship or ownership). The other 30 'landowners' stated that they are farming public lands with no other claimants. 18% tenant farmers.
Main source of Income	67% farming 10% raising livestock 23% others seasonal farm labour (<i>hurnal</i>), household wage earners support and remittances.
Actual household income (2002)	\$969
Average Farm size	1.9 hectares
Availability of Savings	No savings -70% Small Livestock-30%

(Source: Malabog producer survey, June 2003).

Three enumerators who knew the locality in this case were utilized to conduct the research. The questionnaire again took about an hour but the distances between houses in Malabog were up to a few kilometres apart across rough hilly terrain. Normally respondents were interviewed at home alone or with their families but in seven cases due to poor weather conditions and the very remote nature of their homesteads respondents came down to neighbouring houses to be interviewed. This may of course have influenced their responses as regards income depending on their level of comfort in discussing this issue in front of their neighbours.

3.5.5 20 Case Studies across the Philippines

In tandem with on-going survey research in Magpet, during this time I also became involved with a nationwide initiative to ascertain the impacts of trade liberalisation on resource poor farmers in the Philippines involving 20 international and local NGOs. This work was undertaken between January 2003 and January 2004 and looked at 20 case studies from across the country. I had no control over the sampling used for all but four of the cases but did advise on research methodology's and the data collection tools employed (to varying degrees depending on the NGO involved). This study was led by a consortium that provided funding and technical inputs. My role as the AFRIM representative on the consortium steering committee was largely to oversee technical aspects of the research process and to provide technical input as regards trade liberalisation. I also played a support role to the project chairman in order to ensure the project kept to schedule. Through my involvement with this project, AFRIM also submitted initial results from Magpet as a case study.

I became involved in the Malabog case during this time, largely due to geographical reasons (our offices were close to each other in Davao), offering advice on research aspects of the cases submitted by CRS, one of which was the Malabog case and another case in Mindanao. However, it was not until later when the results were compiled from all the cases that the significance of the Malabog case to this study would become evident. Following the completion of the project the results were compiled using a 'write-shop' approach and published. The write-shop involved all of the organisations who submitted cases and in some cases the participants of the research (see Figure 3.3). These 20 cases were conducted by either local or international NGOs a full list of which is presented in Appendix 5. Sixteen of these studies (including the cases conducted in Magpet and Malabog) provided useful insights from a producer perspective and have, therefore, been drawn on for the purposes of this study. An overview of the wider case study research process leading to the publication of write shop results is presented in Appendix 6.

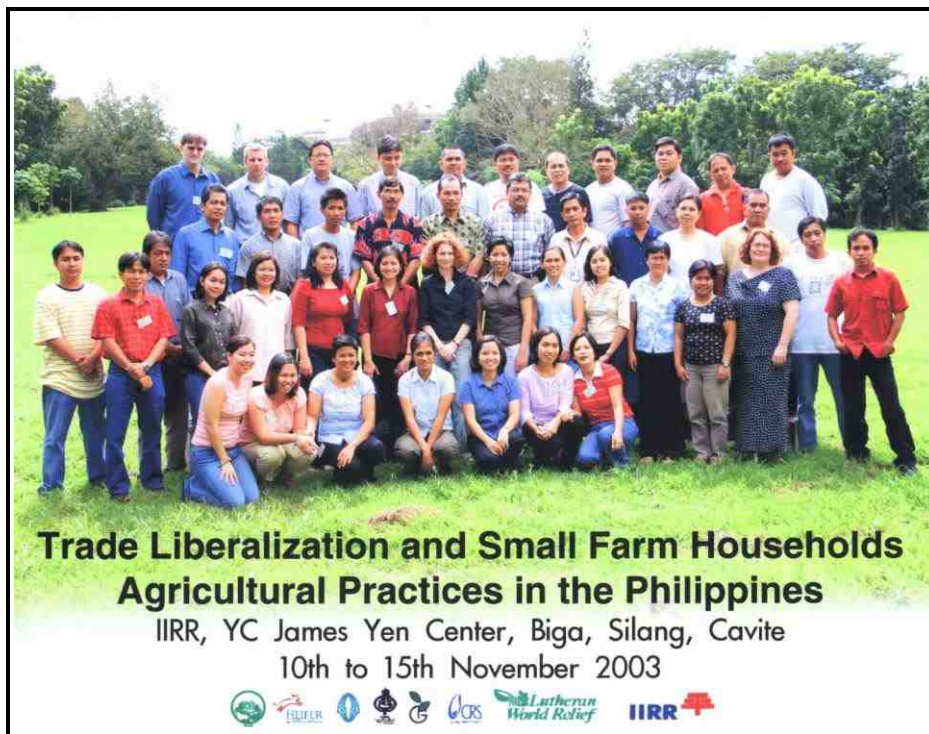


Figure 3.3 Write shop participants, 2003

3.5.6 PRA workshops

The emergence of the findings from producer surveys and the case studies in particular as regards supply response in Malabog and Magpet prompted a shift in the research focus towards a fuller examination of the adaptive and coping elements of livelihood strategies. PRA workshops were utilised to this end. These PRA workshops were richer in detail than would normally be undertaken as part of a SL analysis. They enabled the analysis to take into account factors that might influence patterns of vulnerability among the poor, the assets and resources that can help poor households to survive and thrive, and the policies and institutions that impact on their livelihoods. It also led to a fuller consideration of how the poor respond to livelihood threats.

Participatory workshops were conducted in both Malabog and Magpet in March 2004 each workshop had 14 participants. Although we did originally try to get more people to attend this proved difficult due to family and farm or employment commitments. The 14 participants who attended both workshops were identified from previous survey research. These workshops lasted two days, with participants accommodated in the workshop venue. Participants' transport, food and accommodation costs were met by the project. AFRIM research guidelines do not allow the payment of participants but focuses on the principle that it should not cost participants anything to participate. With that in mind, participants were compensated for the cost of farm labour or child care in order to ensure that they were free to attend. The aim of these workshops was to ascertain what factors hindered supply response in particular diversification strategies in Magpet and what factors encouraged diversification in Malabog. PRA activities included resource mapping, historical trend data, participatory market chain analysis, preference rankings, seasonal calendars, timelines and decision trees as well as detailed data on income and production diversification. Men and women were divided up for certain activities in particular seasonal calendars in order to get an overview of all the activities carried out by the household at different times of the year.

A summary of the workshop design, facilitators guide and an example of selected outputs conducted is provided in Appendix 7. Local facilitators and documenters were used to conduct these workshops with the facilitators being chosen based on local recommendations.

The Magpet case study changed cropping patterns the least in response to livelihood threats when viewed in conjunction with the other 15 case studies conducted throughout the Philippines. In all other cases, producers were responding in some shape or form and in hugely varying degrees to negative livelihood threats. This led me to question whether or not the constraints faced by producers in Magpet were 'typical'. In light of this, five SL analysis workshops were conducted with community leaders from five areas in Mindanao. The aim of this SL analysis workshop was to ascertain if producers in Magpet were facing typical constraints in adjusting supply response or if they were experiencing particular negative threats. These workshops were conducted over three days in October 2004 in Davao city. The five areas were chosen from within AFRIM's existing partners. Existing partners were chosen largely for practical reasons and provided wide enough coverage of producer conditions in Mindanao to enable the results to be compared to those of Magpet. Aspects of these workshops were also utilized at a later stage and fed into subsequent livelihood project design in the five areas.

These workshops also provided an overview of general livelihood threats felt at the Mindanao level. Within the time and cost constraints this was considered an appropriate tool in order to ascertain livelihood threats in other areas of Mindanao. Participants were accommodated at the workshop venue, and as with previous workshops expenses were covered as well as other costs where appropriate. These workshops were conducted by two AFRIM staff, an interpreter and I (see Figure 3.4). Two documenters were also utilised. Appendix 8 presents the workshop flow including the various PRA activities utilised to populate each box in the SL framework and summarised workshop outputs.



Figure 3.4 AFRIM staff with SLA workshop participants, 2004

A second set of PRA workshops was then conducted which aimed to examine if households within Magpet with similar responses (in this case no response) are arriving at that decision for different sets of reasons. In other words, were there households which had diversified and represent exceptions to the rule? And why are they exceptions? These workshops were conducted in November 2004 over a four day period. Again participants were accommodated at the venue with similar arrangements as the previous workshops. The workshop was split into two parts; part one for non-diversifiers and part two for diversifiers.

There were two components to the workshops. The first focused on PRA farm budgets and pie charts (for diversifiers only) and the second on family trees and life story research, as discussed in greater detail below. Workshops were again conducted by local facilitators; the workshop facilitator's guide is presented in Appendix 9. Eleven non diversifiers (we aimed to get 14 originally) and six diversifiers attended the workshops.

A wide array of literature (see for example, Guijt and Shah 1998, Cooke and Kothari 2001 and Pretty 1995) centres on the numerous shortcomings of participatory research. In order to increase the reliability and validity of this research some of the major criticisms as regards the participatory research process were addressed as a component of the participatory workshop design. The use of experienced community development facilitators enabled many of the issues below to be addressed without alerting the participants to the fact that they were attempting to address a particular issue. At the outset, however, it is useful to acknowledge that this research was not participatory in the true sense of the word. A 'top down' approach was utilised in terms of research aims and objectives. Although participants did have opportunities through recap and feedback workshops to offer insights, their influence over research design was limited. Dudley (1993) discusses the work of numerous authors who have observed that it is a myth to assume that everybody wants to actively participate. In many circumstances, the very ideas of community participation and democracy can be externally imposed concepts based on western ideology rather than local practice. The romantic view of participation focuses on the personal fulfilment which it can bring, but true participation is about power, and the exercise of power in politics. Sanderson and Kindon (2004; 125) note that, "the participation of people within participatory development processes does not necessarily translate into the participation of their knowledge within participatory development discourse". Picciotto (1992), on the other hand, points out that where people are concerned, ethical concerns are fundamental and intervene through corporate, cultural and religious norms. At least one critic, Pretty (1995), contends that participatory methods constitute inquiry that is undisciplined and sloppy. The main shortfall of participatory research is that it takes place in a group so therefore issues of confidentiality often arise as well as modifying behaviour or thoughts for the benefits of others. In an attempt to address some of these issues, the main issues which effect group decision making were summarised and are presented in Table 3.5.

Table 3.5 The problems associated with the group decision making process

Problem	Symptom
Power and Status differentials	Elite status holders exercise power and dominate the group process
Group Conformity	Results in individuals suppressing their views in favour of group norms.
Groupthink	Partial and biased information search

(Source: Adapted from Olson, 1971 and Drummond, 1996)

Taking these issues into consideration, some practical methods to alleviate each were sought. Theory would suggest that participatory methods involve public social events which construct local knowledge in ways that are strongly influenced by existing social relationships, in particular, by relations of gender, power and by the PRA facilitators themselves (Leurs, 1998). The outcome of a workshop undertaken at the IDS in 1989 (IDS Workshop, 1989) highlighted several issues which provided useful direction for the design of the participatory workshops in the Philippines, in particular relating to the setting up and functioning of effective groups. Practical considerations such as deciding on the appropriate size, membership and selection procedure were incorporated into workshop design. As regards workshop content and facilitation, equality of composition and of dialogue were deemed important in order to promote constructive activities in which all group members could feel free to participate and to avoid exclusion and jealousy of other community members. In order to address this particular issue the importance of using seasoned community development facilitators needs to be highlighted. These recommendations were incorporated into the workshop, as presented in table Table 3.6.

Table 3.6 Intra-group issues paramount to the decision making process

Intra-group Issues	Element of Workshop design which addressed issue
Avoid extreme status differences	Participants were chosen from as much as possible similar social groups.
Small group size	Group of 15
Establish subgroups	Participants were split into subgroups for certain exercises.
Solicit member's private views	Participants conducted certain exercises individually.
Observe behaviour within and outside the groups	Documenters and facilitators shared lodging with the participants over the course of the workshop.
Establish parallel groups	Parallel groups were established in order to increase the vigour of research results.
Involve outside experts in technical issues	One documenter had technical expertise in the area and thus arbitrated arguments.
Can incentives be incorporated in order to ensure participation by the non-elite?	Participants were provided free board and lodging during the course of the workshop as well as travel expenses. They were also given a per diem to cover the opportunity cost of their participation (where appropriate).

In terms of the research process the main effect of incorporating these elements into workshop design was to lengthen each workshop considerably. Alongside this, the research schedule was disrupted due to security concerns which resulted in workshops being scheduled around relatively busy times on the farm. Although the initial timetable aimed to avoid this scenario, the result was that farmers were compensated for the cost of a labourer to cover his (or her) time away from the farm to participate in workshops. This was not based on a reimbursement basis, as 'receipts' are easily falsified and those who did genuinely need to pay labourers would not have such a large amount of cash readily available. The facilitators did not have any particular issues in conducting workshops in this manner and had many 'tools' to enable the division of groups. It is reasonably easy to divide up a group through a 'game' when you know in advance who you want out or in of that particular exercise or discussion! The utilisation of seasoned community development and PRA facilitators aided this process greatly.

3.5.7 Life story workshops

The final component of the research consisted of the collection of life story data in Magpet, Cotabato but not in Malabog. Life story data was not collected in Malabog as the research process was very behind schedule as a result of security issues. It was considered more important at this stage of the research process to focus on Magpet who were the exceptions to the rule from the 16 case studies conducted throughout the Philippines.

The main data gathering technique utilised in the final data collection phase to fulfil the objectives of the research was a narrative approach, in particular, the life story approach. The pluriactivity of natural resource users' livelihoods strategies created some important methodological challenges. The nature of these challenges is discussed by Paerregaard (1998) who explains that, methodologically, the challenge consists of how to follow the poor in their search for new sources of income and new livelihoods rather than staying put in the village or community and studying poverty as a particular rural affliction that can only be measured and understood in terms of the place-based, local economy. The life story approach was deemed appropriate for a context where there is an increasing spatial separation of residency from livelihoods. Life stories move geographically and occupationally in tandem with the course of the respondents' life. The facilitators guide is presented in Appendix 9 again, due to time, cost and security constraints this was conducted in an unconventional manner incorporating a participatory workshop approach. This research aimed to provide thicker detail as to why producers in Magpet did not diversify agricultural production in the face of negative changes in their production environment. The processes which enabled producers to arrive at their livelihood strategies in Malabog was more 'straight-forward' than the rationale behind non diversification in Magpet. Therefore data was collected in order to attempt to provide insights into the rationale behind non diversification. Life story research also explored the rationale behind the six identified exceptions to the rule in Magpet who did diversify production.

The rationale for using this approach lies in part with how and why livelihood strategies are constructed. Livelihood strategies are by definition, diverse. As Eder (1993:649) who undertook a longitudinal study in Palawan (an island of the Philippines) between 1971 and 1988 highlights (and White 1989 also observes), “the local dynamics of agrarian change and differentiation are immensely variable, often reflecting unique combinations of complex and even conflicting processes”.

Payne and Lipton (1994) assert that assessing resilience and the ability to positively adapt or successfully cope requires an analysis of a range of factors, including an evaluation of historical responses to various shocks and stresses. Different types of shock or stress, in turn, may result in different responses, including avoidance, repartitioning, and resistance or tolerance mechanisms. Historical responses are important in this context as rural households derive their livelihoods from different sources; liberalisation measures are expected to affect them in a variety of ways.

The African Centre for the Constructive Resolution of Disputes (2000), drawing on work conducted in Mali, explains the usefulness of life stories in capturing these complex elements of livelihoods. Work in Mali highlighted the usefulness of oral testimony for gaining an insight into people’s personal experiences and perceptions. Oral testimony is useful in uncovering elements of people’s lives that can remain hidden cutting across barriers such as wealth, gender, class, and ethnicity. By informing our understanding of people’s perceptions oral testimony can help us to understand their situation and their actions better. This is further substantiated by Arifin and Dale (2005) who note that increasingly, work undertaken in the social sciences has recognized story telling as a major information source. Personal narratives may be highly effective in bringing the hidden into view. Likewise, Francis (1992:92) discusses the utilization of the life story approach in her work in Kenya, highlighting its usefulness in order to “get behind the bare outlines of reported behaviour to the underlying beliefs, strategies and constraints which had shaped that behaviour”. But she also warns, that: “the researcher needs to have a thorough understanding of the macro-developments which provide the context of constraints and opportunities within which people have acted” (Francis 1992: 93). The previous stages of the research were useful in this regard as they provided the pre-requisite knowledge

necessary to utilize the life story approach. Incorporated in this life story approach are elements of a family story. The rationale for this is to understand the transmission or non-transmission of economic position and livelihood strategies across and between generations. The life story sampling protocol differed from that utilised during the producers survey described above. Arifin and Dale (2005) assert that in undertaking life stories the classical requirements of sampling do not apply. Plummer (1996) suggests two approaches. One is encountering participants largely by chance, in the sense that they are not selected but emerge ad hoc from some wider exploration. The other is purposive selection based on formal criteria, of high relevance for the purpose at hand. The former is deemed by Plummer (1996) to be the more common. In this instance, however, the selection of participants built on previously collected baseline and livelihood analysis data, leading to purposive sampling. A purposive sample was utilized at this stage, as it was readily apparent that the information required could be supplied by a relatively small number of specific sample units.

The requirements of life story participants was that they were in a position to answer questions pertinent to the specific research objectives and questions that had been formulated as a result of analysis of the previous PRA workshops, case studies and surveys. In particular, emphasis was placed on obtaining participants from the same and different lineages, permitting comparison across and between households in terms of their social differentiation and livelihood strategies. An in depth participatory budget was also incorporated with previous livelihood analysis tools which analysed farmers' existing activities, resource-use and production. The method was deemed appropriate at this stage of the research process in order that the resource implications of a change to an enterprise could be explored, as well as making comparisons between different enterprises using the same units or tools of measurement. Information reaped from this tool has important implications in terms of the underlying strategies and the planning of new enterprises.

3.6 Data analysis

Whilst data analysis largely reflected the grounded theory approach, the data were analysed against the guiding background of an SLA framework as depicted in Figure 2.1. The framework did not influence the analysis but served as a useful checklist or reminder of broad areas that needed to be considered. As explained by Scoones (1998:9), “Identifying what livelihood resources (or combinations of ‘capitals’) are required for different livelihood strategy combinations is a key step in the process of analysis”.

Producer survey data were analysed using Statistical Package for the Social Sciences (SPSS) although this was not a statistically significant sample (see Appendix 10 for an example). Case summaries and descriptive statistics were utilised including cross tabulations in order to ascertain trends between farm household variables and responses. Responses were coded post collection and assigned binary values in SPSS. Questions were not pre-coded as it was not possible to account for every possible answer and could possibly inhibit respondents’ range of responses. Open ended questions were coded by research assistants and the coded data was inputted into SPSS. As these responses needed to be grouped prior to coding, cross checking of grouping was carried out to minimise bias. Grouping is sensitive to individual interpretation. Stake (1995:12) explains that, “ultimately the interpretations of the researcher are likely to be emphasised more than the interpretations of those people studied, but the qualitative case researcher tries to preserve the multiple realities, the different and even contradictory views of what is happening”. In order to ensure consistency in interpretation one research assistant inputted all the data into SPSS that was open to interpretation.

A process of open coding was utilised to group and analyse outputs from key informant surveys, case studies, PRA and life story data. As explained by Cope (2010a:441), “First coding helps the researcher identify categories and patterns”. Similar events or explanations for events were given the same codes. Crang (2005:224) explains that this type of coding is, “not there to be rigidly reproduced, nor to be counted, but as an aid to the researcher in making sense of the material. They are not an end in themselves. Codes provide a means of conceptually organising your materials but are not an explanatory framework in themselves”.

Open coding proved useful in terms of organising findings into categories for example, one category was coded as, 'displaced group who diversified cropping patterns' (people who had been displaced over the previous ten years due to conflict and had diversified cropping patterns). This allowed an examination of patterns of similar characteristics between individual members of this group and those who were not displaced.

The responses from the PRA workshops were further analysed in order to identify and then focus on areas for further research. The final part of this research consisted of ethnographic research utilising the life story approach and further PRA activities with producers in Magpet in order to develop an understanding of the factors that lie behind people's choice of livelihood strategy and ultimately livelihood outcomes. Importantly this research was a result of the analysis of previous research outputs. Life story and PRA activities conducted at this stage focused on 'unpacking' and working backwards from the given livelihood outcomes (identified through previous research) to examine how this process shaped the entire pattern of livelihoods over time. Coding greatly aided this process and helped to organise findings into areas that were important and needed further investigation. Coding was useful in order to organise and make sense of masses of raw narrative data collected from the life story research. Underlying themes were first identified and coded and then grouped together, such as conflict, remittances and access to social capital. Cope (2010b:281) explains that, "the purpose of coding is partly data reduction, partly organization and partly a substantive process of data exploration, analysis and theory-building".

The outputs of life stories were again categorised and analysed in conjunction with previous participant responses. Sections of individual narratives were grouped according to theme. These themes largely fall into conditions, interactions amongst actors, strategies and tactics (or consequences) (Cope, 2010b). The similarities in responses were then examined. Consolidated actions were then analysed against household producer survey results for the same participants and livelihood response patterns. This analysis enabled a 'bigger picture' to be constructed, which allowed possible casual relationships to be examined in greater detail.

Another component of the analysis of life stories is what the respondent chooses to tell us, in terms of what events they deem important enough to include in their narrative. Crang (2005:230) explains that the level of detail “tell us something about the importance assigned to each element and thus perhaps the perspective of the teller of the story”. During the analysis of the life story research broad themes were identified then these were further categorised into sub-themes and codes. An example of broad themes would be those who considered themselves better off now than they were ten years ago. The sub themes for this example would include reasons why they were better off, such as employment, other income sources and reduced prevalence of conflict.

Finally, when all the research results from each tool had been coded flipcharts were utilised and relevant information was included under each theme in order to have a view of the bigger picture. Originally flipcharts were compiled by household as opposed to themes, however, due to the large number of variables at the household level, trends and patterns were easier to ascertain by analysing them from the theme level. Following this initial organisation of data and analysis of initial results some of these findings were published by AFRIM in their research publications *BAANTAW* and *Mindanao Focus Journal*.¹¹ For the purpose of this study the results were analysed from a wider perspective in order to address the research questions posed.

This analysis took place over many years thus enabling a full consideration of the results and their linkages and connections. Although this was beneficial in this case it also posed many challenges in particular as regards distance in time and space from the research sites. This thesis was long in the making due to personal and work circumstances that did have negative impacts on the length of time it took to complete this thesis. However the analysis of research results and the ‘final product’ benefited from a host of professional experiences which I was involved with during this time scale.

¹¹ Agricultural commodity trade liberalisation and corn production in Mindanao
Volume: 16 / Number: 10-11 / Year: 2003. Supply Response to Agricultural Trade Liberalisation in Mindanao Year: 2005.

My experience in the area of DRR, livelihood programming and early livelihood recovery in the humanitarian context shaped how I viewed the outputs of this research. This enabled me in my analysis to consider the data collected utilising a greater arsenal of experiences, concepts and techniques.

3.7 Research constraints, ethical considerations and positionality when working in another culture

During the research process, my position as an outsider, lead to a host of positive and negative experiences. I was acutely aware of my outsider status in Mindanao as a white, curly-haired, red head. The last of these alone was enough to ensure I stood out from the crowd! My outsider status however, went beyond these characteristics and has many layers with my positionality changing, depending on which group of people I was dealing with. Smith (2010:166) discusses that many researchers provide detailed discussions on questions of positionality in cross cultural research: “this means [being] aware of how aspects of our own identities are significant, or might change as we travel (spatially or culturally) to different contexts”. Skelton (2001) explains the importance of our positionality and what this might mean in relation to the ways in which we do our research, and how the people we work with perceive us.

My positionality did influence what type of data was collected especially since a grounded theory approach and an inductive process were utilised with elements of research depending on the analysis of preceding components of the research process. Interpretation of findings ultimately steered the direction of the next phase of the research. Twyman *et al.* (1999: 323) contend that, “accounts and interviews must be interpreted in relation to the contexts in which they occur”. She concludes that “If interpretation is four-fifths of the 'truth', perhaps autobiography, positionality and reflexivity in the contextualization process go some way to making up the final fifth”. My position within a local research NGO in Mindanao provided me with a unique position from which to conduct this research. I had all the advantages of being attached to an NGO in terms of resources, existing networks, logistical and administrative support, research assistants and interpreters but escaped many of the pitfalls associated with being formally affiliated with an NGO for research purposes (see Batterbury 1997).

Although I was an outsider I was very often included in events for locals and not considered to have a hidden agenda or a particular vision of social change as i was attached to a local NGO.

As a VSO volunteer, I had a reasonable appreciation of local culture and so at events attended by the larger international development community, I was often treated as an honorary insider by my colleagues. My outsider position gave me access to elites but also to very high levels of government and academia. However, there is no doubt as discussed in 3.5.3 that key informants behaved in a certain manner because they were interviewed by me. At the other end of the spectrum my colleagues who were conducting research with producers in Magpet and Malabog complained that my very presence resulted in people exaggerating their levels of poverty in the hope of receiving funds. Overall my positionality did influence the type of data I had access to, in particular as regards key informants but it also may have influenced their responses. Local researchers were utilised in producer survey research in order to overcome the issues of outsiders conducting research and working through translators.

All of the enumerators involved in the core components of this study in Magpet and Malabog, with the exception of the Malabog survey, were employed as staff by AFRIM or on a contract basis. They all had either completed or were in the process of completing postgraduate research. Many AFRIM staff studied at postgraduate level in the UK having been awarded Ford Foundation scholarships. Although they were all experienced researchers, training was still needed as regards the survey tools used. A large part of this training was learning by doing and therefore it was incorporated into the field test. As regards the PRA facilitators – again these were professional PRA facilitators – normally I emailed them the facilitator guide for review and then we had a half day or one day meeting where we went through the whole workshop and addressed any issues or questions raised. A member of AFRIM staff would attend these participatory workshops and, security permitting, I would try to sit in as much as possible or join them for the opening prayers and introductions and the closing remarks. However, I did not always attend primarily because I was advised that my very presence in unstructured data collection exercises could influence the response. McDowell (1992: 409) explains that, “we must recognise and take account of our own position, as well as that of our research participants, and write this into our research practice”. Importantly we need to consider how our own presence can influence the research.

Whenever possible work was translated from Visayan into English by the first translator and back again into Visayan by another translator to ensure the meaning was correctly captured. In the instance of focus group discussions and life stories this is not a perfect approach. Twyman *et al.* (1999) discuss the idea of mapping one idea across cultures and the problems that can arise from this. However, depending on the context of the question and the relationship between the researcher and the researched it was important to be able to verify responses as far as possible. In Mindanao, particularly in Christian communities, God will often be thanked for livelihood successes. Attendance at mass features heavily on the weekly calendar, even when research was being conducted by a secular NGO, such as AFRIM. This is the view that participants would like outsiders to have of them and how they live their lives as god fearing Catholics.

Upon my arrival in the Philippines I studied the vernacular language of Mindanao – Visayan (a dialect of Cebuano) – for 25 hours a week for five weeks. Towards the end of the research period my knowledge of Visayan was sufficient enough to follow a meeting or a discussion with a participant. I could ask basic questions but it was never at a level sufficient to facilitate a meeting or read narrative data. My colleagues all had a high fluency level in English which reduced the necessity for me to master Visayan. Although my knowledge of Visayan was imperfect, it did enable me to have a sense of what was been said or felt around me. Watson, (2004, :24) discusses issues and opportunities as regards language learning in order to conduct field research concluding that language learning, “is very demanding of that most precious resource, time, but the return, in terms of culturally sensitive, theoretically informed research, may be worth the investment”.

However, there were some negative aspects of my having some language capability. Researchers complained that often people were so astounded that I could speak Visayan and not Pilipino that they became wary; however for others it was a source of pride that I never bothered to learn Pilipino but took the time to learn Visayan. Overall my appalling pronunciation and attempts to speak I think were positive and acted as an icebreaker.

AFRIM is a research NGO and as such is well versed in the area of research ethics. AFRIM staff are regularly sent to receive training on issues such as research with humans. During my time working with AFRIM compulsory training was held on research with children, 'Do no harm' and research and data protection issues. These were all funded by various INGO funding partners. A large amount of AFRIM research work on natural resource extraction issues, the conflict in Mindanao and governance was – and is – of a highly sensitive nature. AFRIM as a matter of policy protects the name and location of participants in sensitive studies. All of my research was conducted under these guidelines. In terms of research ethics Hay (2002) discussed prompts for contemplation and action which serve as useful practical considerations for researchers focusing on consent, confidentiality, harm, cultural awareness and dissemination of results and feedback to participants. These principles were adhered to as far as possible but issues did arise which led to ethical concerns.

During my 'in-country' cultural training which took place upon my arrival in the Philippines the trainer stressed time and time again that all professional relationships in the Philippines are based upon personal relationships, which I understood but did not at first fully comprehend. When I was first told to include the cost of a karaoke machine under the heading of a 'solidarity evening' in a research budget I complained to my kind colleague who suggested the Karaoke machine that this was not an appropriate use of funds. However, I came to realise that these 'ice breakers' proved to be important and played a useful role in the overall research process. Participants often spoke freely and provided valuable insights with a beer in hand and a karaoke machine blaring in the background.

Ethics did influence how the research was conducted and with whom. Communities were chosen that had no previous relationship with AFRIM in order to decrease expectations of projects. An important issue as regards this lack of relationship was that from the outset it was understood by all parties that this partnership was for research purposes only and therefore did not lead to raised expectations by the participants as regards a project following on from the research.

Scott *et al.* (2006:32) explain some of the issues as regards raised expectations when conducting participatory research “participatory research can imply a significant and on-going time commitment from community residents and, in the process, can raise expectations about some investment that will follow from the research”. The fact that no previous beneficiary relationship existed with AFRIM reduced expectations greatly. Following the research process one respondent group did in fact become project beneficiaries of an AFRIM partner organisation in an area unrelated to trade liberalisation. This was due to the fact that a working relationship existed as a result of, carrying out this research. The research itself, however, was not held hostage to raised expectations. However, when participants in Magpet and Malabog agreed to be part of the research process they were aware that AFRIM was an NGO. They knew that AFRIM regularly funded projects in Mindanao so I doubt if it was truly voluntary consent with no link to the possibility of a future ‘return’.

Other issues involved specifics of actual research, for example, during mapping exercises there was often heated debate as regards boundaries, which I now know was due to the on-going peace process and boundary determination, but unfortunately I was not aware of that at that time. Questions of household income were always ranked except during individual household surveys. The main ethical issues I personally faced were as regards issues of security, namely the security of participants and researchers. Workshops were deemed a safer option than household collection of in depth data.

AFRIM research policy advocates that people should have a stake and make a contribution to their own development and advocacy issues which affect them. This is the primary reason why participants are not ‘paid’ to participate in research events. For AFRIM, research participants are treated as partners with the aim, objectives and use of any information collected being clearly communicated at the outset of any study. Results are always presented back to the relevant groups for comment and feedback. In the case of this study, during the first round of PRA workshops participants were informed of the aims of the overall study but were not told the ‘whole truth’. Adams and Meagaw (1997) discuss issues as regards disclosing research intentions including enabling subjects to contribute to how the research is conducted and results used.

The rationale behind this controversial decision not to fully disclose research intentions in Magpet and Malabog was due to preconceptions as regards trade liberalisation. In the Philippines at that time, one of the political parties and much of civil society was conducting a negative publicity campaign as regards trade liberalisation. This resulted in many people particularly in Mindanao forming the view that all livelihood threats they faced were a result of liberalisation. The main issue I experienced was that key informants who were questioned presumed that I only wanted to know about the negative aspects of trade liberalisation in the run up to the WTO Cancun round negotiations (at least those who were not civil servants).

Whilst numerous feedback meetings took place, the relevance of the feedback largely depended on the group of participants. In the case of key informants, they were invited to attend numerous conferences, policy forums and round table discussions which this research fed into. In the case of Malabog and Magpet participants, the results of the household survey and PRA workshops (excluding the life stories) were presented back to them for input. Although they said it was interesting to see these aggregated results I do not envisage that they will be very useful to them on an individual basis. The executives of the main cooperatives in each area did attend a round table discussion in Davao where they were asked to share their experiences. My Philippine colleagues strongly supported this idea but I had reservations about using participants as a 'show piece' to further a policy point. However, my reservations appear to be unfounded as they seemed to enjoy the captive audience.

3.8 Reliability and validity

Case studies allow for a triangulated research strategy. Yin (1994) discusses a major strength of case study data collection as being the opportunity to use many different sources of evidence. These multiple sources of evidence can then be converged to provide comprehensive results and perspectives: “The most important advantage of doing so is the development of converging lines of inquiry by a process of triangulation” (Yin 1994:92). Further to this, Yin (1994: 92) notes that “potential problems of construct validity can be addressed through triangulation as the multiple sources of evidence essentially provide multiple measures of the same phenomenon”. During the course of this research the various data collection tools used helped to verify research outputs by different means of inquiry. The same questions were explored from several angles and in different manners through surveys, workshops and narrative accounts. Patton (1987) explains triangulation as the process of building checks and balances into a design through multiple data collection strategies. The triangle is the strongest of all geometric shapes, and triangulated evaluation designs are aimed at increasing the strength and rigor of an evaluation.

Secondary data were valuable at the initial stages of the research in providing and guiding the rationale of the study. However, when collecting data from international sources, “the problem is likely to be that you will not have the same information regarding the format and structure of the data source as you would have for a source in your own country” (Parsons and Knight, 1996:69). In order to overcome this problem, publications from internationally recognized sources such as the World Bank were utilised wherever possible. Based as I was in the Philippines and other Asian countries with little or no access to English language academic journals or books, living in the developing world with a limited internet connection it was often difficult to access relevant secondary literature. However, the increasingly wide availability of journals electronically improved considerably during the time frame of this study.

3.9 Conclusion

This chapter has outlined the research methods utilised in order to address the research questions posed in chapter one. The chapter commenced by an explanation of the overall research approach. The choice of data collection tools was accounted for by drawing on the relevant academic literature but also by explaining how choices are made within the 'reality' of the field both by necessity, and as was the case in Malabog by 'chance'. Issues as regards positionality and ethics, which were magnified due to the cross cultural nature of this research, and their impact on data collection, were also examined. The utilisation of a grounded theory approach led to the focus of research changing overtime; this, combined with a mixture of data collection tools lead to a lengthy and dense process of data analysis.

These methods were largely influenced by the prevailing security situation in Mindanao during the study period, in particular as regards the practical aspects of conducting research. This security situation dictated to a large extent my contribution to actual data collection at the field level. Although the research strategy was identified and designed by me as where all research tools and workshop designs, I was not involved in a large amount of data collection at the field level. I was, however, well informed as regards progress and problems and in constant communication with those conducting research at the field level.

In terms of hiring workshop facilitators I was involved in the recruitment and interview process with at least one colleague from AFRIM. This was important as I lacked experience in conducting cross cultural interviews. During interviews my input was largely confined to technical questions. I did, however, compile the consultants terms of reference and contracts. The involvement of AFRIM colleagues at all stages in this research did strengthen the entire research process. The numerous skills and techniques that I learnt from my AFRIM colleagues during this process in terms of conducting field based research have aided greatly my professional capacity in all aspects of my work and in particular at the field level.

As regards analysis of the data collected, I did not input all the data personally. I organised the initial collected data with a large amount of support from AFRIM colleagues (in particular when organising the outputs of PRA workshops). All analysis of the collected data was conducted by me over the course of many years after my departure from the Philippines. Chapter's five to eight set out the results that emerged from the methods mentioned above.

4 Chapter Four: The Philippine Vulnerability Context

4.1 Introduction

This chapter sets out the background of the Philippines during the study period 2002-2005 in order to present the pertinent underlying issues which form the context during this time frame. This chapter firstly presents an overview of the broad Philippine threat context. This builds upon the concept of livelihood threats introduced in chapter two and the associated issues of vulnerability, capacity and resilience. The Philippines is prone to natural disasters, complex emergencies and market threats which are useful to review in order to appreciate the multiple threats that people face. These threats highlight the importance of the ability of small scale agricultural producers to adapt to change and, therefore, their underlying livelihood resilience. A detailed examination of relevant threats is presented in the later core results chapters.

In order to outline the threat context, a brief background of the Philippines is presented focusing on areas relevant to this study, namely agriculture and development indicators. This is followed by an overview of the natural hazards and disaster events which the Philippines is prone to and has experience of. For the purpose of this study, livelihood threats are, as discussed in chapter two, broadly defined as external threats to livelihood security due to risk factors such as climate, markets or sudden disaster (Ellis, 2000).

This overview provides important considerations in forming an understanding of the context in which small scale producers seek to eke out a livelihood. O'Brien *et al.* (2009:30) discuss the importance of contextual vulnerability from work in South Africa, which highlights how “intersections and interactions among different stressors may influence the effectiveness of different types of interventions aimed at reducing vulnerability”. The interaction of multiple stressors is important in terms of the underlying production context. In order to provide a comprehensive overview of all the potential stressors the notion of trade liberalisation is also examined.

Trade liberalisation episodes prior to URAA WTO lead liberalisation and WTO lead trade liberalisation in the Philippines are perused with a focus on agricultural trade. This examination looks at liberalisation episodes in conjunction with the accompanying agricultural and trade policy reforms. Historical trade orientations and accompanying policies are presented as well as those which affected agricultural development during the study period as they played a key role for both agriculture, in general, and the current status of the corn industry. The impact of trade liberalisation on the corn industry at the national level is investigated as are some of the broader level national effects of trade liberalisation and their impacts on livelihoods.

4.2 The Philippine Context

The Republic of the Philippines (see Figure 1.1) is located in Southeast Asia in the western Pacific Ocean, an archipelago comprising of 7,100 islands with a total land area of almost 300,000 square kilometres. The Philippines is ranked 104 in the UNDP Human development index 2009 (UNDP, 2009:160). However, human development indicators for the Philippines can be misleading as large disparities exist within and between regions. In particular indicators for the Island of Mindanao which is the focus of this study lag behind the rest of the country largely due to on-going political conflicts which will be discussed further in chapter five. As regards rural versus urban poverty IFAD (2008) estimates that about half of the Philippines' 88 million people live in rural areas. Poverty is most severe and most widespread in rural areas and almost 80 per cent of the country's poor people live there. Although economic growth has averaged 4.5 per cent per annum in recent years, poverty has increased in some regions due to a high population growth rate, lagging economic growth rates, and the inequitable distribution of income between regions which is illustrated in Table 4.1.¹² In terms of a regional comparison regions IX onwards which are bolded in Table 4.1 are the regions of Mindanao. Region XI Davao (Malabog Case study) and Region XII SOCCSKSARGEN (Magpet Case study) are the two main regions involved in this study (See Figure 5.1). Regional boundaries changed during the course of this study and these should be viewed as illustrative only.

¹² This table is useful for comparison purposes only as both the regional boundaries and the official poverty estimation methodology have changed in the Philippines over the time scale presented in this table

Table 4.1 Poverty incidence per cent by population of the regions of the Philippines

Poverty incidence per cent by population of the regions of the Philippines	2000	2003	2006
Philippines	33	30	32.9
NCR - National Capital Region	7.8	6.9	10.4
CAR - Cordillera Administrative Region	37.7	32.2	34.5
Region I - Ilocos	35.3	30.2	32.7
Region II - Cagayan Valley	30.4	24.5	25.5
Region III - Central Luzon	21.4	17.5	20.7
Region IVA - CALABARZON	19.1	18.4	20.9
Region IVB - MIMAROPA	45.3	48.1	52.7
Region V - Bicol	52.6	48.5	51.1
Region VI - Western Visayans	44.5	39.2	38.6
Region VII - Central Visayans	36.2	28.3	35.4
Region VIII - Eastern Visayans	45.1	43	48.5
Region IX - Zamboanga Peninsula	44.8	49.2	45.3
Region X - Northern Mindanao	43.8	44	43.1
Region XI - Davao	33.3	34.7	36.6
Region XII - SOCCSKSARGEN	46.8	38.4	40.8
Region XIII - Caraga	60	52.8	61.8
ARMM - Autonomous Region in Muslim Mindanao	51.2	54	52.6

(Source: Philippines institute of Development Studies, 2011)

Another factor to take into account when considering Table 4.1 is that a high population growth rate of 2.04 per cent annually (World Bank, 2012) during the period 2001-2005 means that the number of people living in poverty has increased significantly during this time scale.

The Philippines is considered one of the most disaster prone countries in the world and “suffers more natural hazards (e.g., earthquakes, volcanic eruptions, typhoons, floods, droughts, and landslides) than any other country, with an average of eight disasters per year” (Bankoff, 2003a:31). In 2009, the Philippines, China and the United States were the countries that were the most frequently affected by natural disasters. As in previous years, these countries, together with India and Indonesia, occupied the top global ranking of disaster occurrence (Vos *et al.*, 2010).

Table 4.2 summarises natural disaster events in the Philippines from 1910 until 2009 illustrating the wide array of hazards that exist and to which people are vulnerable. Diley *et al.* (2005:4) classify the Philippines as amongst the countries most exposed to multiple (natural) hazards. Moreover, as discussed by Bankoff (2003b:226): “human-related activities such as deforestation, overgrazing and urbanisation aggravate environmental conditions, making communities more vulnerable”.

Table 4.2 Natural disasters in the Philippines from 1900 to 2010

Event classification	Event	Number of Events	Number of People Killed	Total Affected	Damage (000 \$)
Drought	Drought	8	8	6553207	64453
Earthquake	Earthquake	22	9580	2223269	519575
	Tsunami	1	32	-	-
Epidemic	Unspecified	1	1	664	-
	Bacterial	3	43	327	-
	Parasitic	1	50	666	-
	Viral	8	366	13073	-
Flood	Unspecified	33	1440	7680373	351857
	Flash flood	25	995	3465556	782907
	General flood	31	419	3295908	92918
	Storm surge	11	149	125931	2617
Insect infestation	Unspecified	2	-	200	925
Mass movement dry	Landslide	2	311	-	-
	Rockfall	1	50	-	-
Mass movement wet	Avalanche	1	6	1200	-
	Landslide	23	2042	311669	33203
	Subsidence	1	287	2838	-
Storm	Unspecified	27	902	5388887	122666
	Local storm	4	9	24704	5
	Tropical cyclone	252	36271	101942526	6291972
Volcano	Volcanic eruption	22	2996	1686815	231961
Wildfire	Forest fire	1	2	300	-

(Source: The Centre for Research on the Epidemiology of Disasters, 2010).

It is useful to recognise that liberalisation as a threat event – which is discussed in greater detail below – occurs against the backdrop of on-going natural and human induced hazards. These hazards constitute threats to livelihoods and further heighten the vulnerability context. Natural based threats provide the contextual background of the conditions under which people seek to build their livelihood. These threats, moreover, impact disproportionately on poor households due to their increased physical and socio-economical vulnerability. As discussed by Luna (2001:216) “The country’s natural vulnerability is compounded by its socioeconomic conditions”. This vulnerability is heightened due to a lack of coping mechanisms and a depleted asset base on which to draw in times of hardship or threat events, issues which will be discussed in detail in chapters six and seven. Taken together, these threats, both natural and human induced, compose the wider vulnerability context. This underlying context heightens the need for resilient livelihood systems. The impacts of climate change further heighten these existing hazards and underlying vulnerability. For instance, a shift in seasons is having adverse consequences on cropping patterns; climatic variations and proximity to hazards is resulting in a shift in rainfall patterns and an increase in the areas experiencing typhoons (the typhoon belt). These changes are leading to increased flooding and landslides. Small scale agricultural producers in the Philippines attempt to construct their livelihoods in this context. The agricultural industry in the Philippines operates against this backdrop. The agricultural industry in particular is important for this study and will now be examined in order to provide a fuller picture of the vulnerability context.

4.2.1 Philippine agriculture and the corn industry

In the Philippines:

“Rice and coconut production continue to dominate the agricultural sector. Other main agricultural products include sugar cane, rice, coconuts, bananas, maize, vegetables, pineapples and other tropical fruits. About 35.7 per cent of the workforce engages in agriculture. The share of agriculture in total GDP has declined as the sector contributed only about 14.3 per cent of the total GDP in 2005.” (FAO, 2007: 5)

Agriculture is the primary and often only source of income for poor rural people, most of whom depend on subsistence farming and fishing for their livelihoods. Reyes and Tabuga (2011) explain that since agriculture is the main source of income for rural dwellers that poor performance in the agricultural sector has a negative impact on rural poverty. Discussing preliminary findings based on regional level poverty indicators from 2003 to 2009 they estimate that, “poverty incidence among agricultural households is thrice that for non-agricultural households” (Reyes and Tabuga, 2011:6).

Philippine trade policy provides some explanation for this situation as highlighted by Garcia (1996). Whilst agriculture remains a significant sector of the Philippine economy and is particularly important if we focus on employment rather than output, policies and strategies pertaining to its development, have been consistently biased in favour of the industrial sector. This bias is demonstrated in Table 4.3 which highlights that despite the relative abundance of the country’s farm-based resources, the agricultural sector has failed to become an engine for economic development. Past trade and exchange rate policies in the Philippines have distorted production incentives to the benefit of urban-based, import substituting industries at the expense of both agricultural and non-agricultural export producers, as well as small scale rural enterprises (Bautista and Thomas, 1997). The country’s total land area is 30 million hectares more than half of which is situated on sloping land susceptible to erosion and soil degradation. Land suitable for agriculture is placed at between 10 and 11 million hectares. Of this, just six million hectares is flat, alluvial land best suited for farming. But not only is this primary land insufficiently irrigated, it is also increasingly encroached on by industry and human settlements (Congressional Commission on Agricultural Modernization, 2001).

Historically, Philippine agriculture has suffered low levels of support. This situation has led to poor production figures, a rural infrastructure that is generally poorly developed, near to non-existent post-harvest facilities, and poor irrigation facilities. Coxhead (2000:112) explains that “Philippine grain yields are low by Asian standards, and with relatively low spending on agricultural infrastructure and technology, yields have not risen as rapidly as in comparable countries.”

The slower growth of agriculture in the Philippines than in other developing Asian countries and the stagnation of agricultural exports suggest that the country has been losing its comparative advantage¹³ in the sector. David (2003) asserts that measures of revealed comparative advantage have decreased sharply both for agriculture as a whole and for all major agricultural exports. An analysis undertaken by local consultants revealed that except for a very few products, Philippine agricultural products in general are not competitive. Foreign governments were subsidising their farmers while there was no subsidy to speak of for Philippine farmers. In fact farmers had to deal with high interest rates, high costs of fertilisers and other inputs, high costs of transportation and poor infrastructure (Li.Reyes, 1998). Nonetheless, agriculture continues to be a major source of income and employment; according to David (2003:175), “when all economic activities related to agro-processing and the supply of non-farm agricultural inputs are included, the agricultural sector, broadly defined, accounts for about two-thirds of the labour force”. McGregor (2008) explains that as a country develops its economy it decreases its reliance on primary industries such as agriculture. Table 4.3 depicts agriculture as a percentage share of GDP for selected Asian countries and as averaged for developing countries as a whole. In the Philippines, agriculture has a higher percentage share of GDP than that of developing countries as a whole; however, it is lower than many of its South East Asian neighbours, indicating that agricultural plays a larger role in the Philippine economy than in developing countries on average.

¹³ The ability of a country to produce a particular good or service at a lower marginal and opportunity cost than another country.

Table 4.3 Agriculture as a per cent of GDP 1998-2004, for selected Asian and all developing countries

	1998	1999	2000	2001	2002	2003	2004
Developing Countries	12.4	11.9	10.9	10.8	10.9	10.8	10.5
Cambodia	44.5	40.9	35.9	34.4	31.2	32	29.5
China	17.3	16.2	14.8	14.1	13.5	12.6	13.1
Indonesia	18.1	19.6	15.6	16	16.1	15.2	14.3
Lao People's Dem Rep	53.3	53.7	52.5	51.2	50.4	48.2	46.7
Malaysia	13.3	10.8	8.8	8.2	9.2	9.6	9.3
Philippines	16.9	17.1	15.8	15.1	15.1	14.6	15.1

(Source: World Bank, 2008)

The status of the Philippine agricultural industry in general is not promising. This study largely focuses on small scale producers in the corn production areas of Mindanao. An overview of the corn industry in the Philippines is presented here in order to understand the specific farming context germane to this study. Corn (*Zea mays L.*) is considered as the second most important crop after rice in the Philippines; corn is consumed by around 20 per cent of Filipinos (mostly in Cagayan Valley, the Visayans, and Mindanao, which are the major corn producing areas) as a staple in the form of milled white corn grits. Two types of corn are grown, white corn and yellow corn. Philippine corn yields are low, Philippine average yield for corn in 2003 being just 1.91 MT/ha (Metric ton per hectare). Corn yield in 2003 for Cambodia was 3.75 MT/ha, Thailand 3.85 MT/ha and Indonesia 3.24 MT/ha (FAO-STAT, 2011a).

This demonstrates the relatively low yields in the Philippines when compared to other neighbouring countries with similar geo physical characteristics. The dominant use of corn, mostly yellow corn, is as a feed ingredient, which comprises 70 per cent of production (Dy, 2000; Mendoza and Rosegrant, 1995:13). Dy (2000) estimates that the demand for feed will grow at 5-6 per cent annually due to increasing demand from the poultry and livestock industries. Corn is also an important raw material in the manufacture of corn starch, corn syrup, corn oil, snack foods, gluten, and glucose and caramel products. The Philippine Department of Agriculture (2002c) estimates that some 600,000 farm households depend on corn as a major source of livelihood.

These farms are small and geographically dispersed. Corn production is concentrated in five regions of the country. Four of these are in Mindanao, and account for more than 60 per cent of total national production. Cagayan Valley in Luzon is the only other major regional source, which contributed 22 per cent of total production in 1999 (Dy, 2000). Coxhead and Jayasuirya (2003) explain that corn is grown widely in the uplands and the structure of corn production is itself contrary to economies of scale, with small farmers numbering about 1.9 million each working an average farm size of 1.7 hectares.

The nature of the industry also raises serious concerns in terms of environmental sustainability. Nelson *et al.* (1998) assert that continuous open-field maize farming in the Philippine uplands is unlikely to be sustainable in the long term. Intense rainfall can cause high rates of erosion when surface cover is low, even on moderate slope gradients. Although nutrient decline is important, an overriding concern is the possibility of losing all arable soil from intensively cultivated maize fields after around 30 years of cropping. These problems are further compounded by the deterioration of the fertility of the corn lands due to the loss of watershed areas (Lim, 1996), potentially further accentuated by the effects of climate change.

The nature and structure of the corn industry in the Philippines at first glance is inefficient and has not benefitted from economies of scale. It is important to consider the corn situation in terms of global competitiveness prior to examining WTO lead trade liberalisation of the corn industry. An understanding of the corn industry from a global perspective firstly necessitates an overview of historical developments in agricultural trade policies in the Philippines and, in particular, the liberalisation episodes that have punctuated this history.

4.3 The rationale for trade liberalisation in the Philippines

In order to provide an overview of Philippines trade policies prior to 'fully fledged' WTO trade liberalisation it is important, first, to consider how liberalisation episodes can be considered to impact on livelihoods. In the 1990s many factors on the global stage provided an impetus to the Philippines entering the WTO. In order to understand the rationale behind the Philippines entering the WTO we first need to consider the backdrop provided by momentums on the global stage as regards market integration. Global shifts towards freer and greater economic interdependence now called globalisation are made obvious and spurred by the debut of the WTO (Miranda, 1999). Mittelman (2001) explains that globalisation is an increase in interconnections and accelerated global trade flows. Globalisation has been spurred by several factors including the sweeping economic reforms in many non-market economies from Eastern Europe to the Indo-Chinese states of Laos and Vietnam. Deregulation has also been carried out in many trading countries to stimulate efficiency improvements through price reforms and privatisation.

Within the sphere of globalisation the idea that trade protection hurts the economy of the country that imposes it, lead to the creation of the WTO which is the only international organization dealing with the global rules of trade between nations. It was established with the specific purpose of overseeing the liberalisation of world trade, on the assumption that freer trade is better for all countries and people (Melamed, 1999). Nordhaus (1998) provides an informative explanation of some of the principles underlying the WTO. Firstly countries should work to lower trade barriers such as tariffs¹⁴; secondly all trade barriers should be applied on a non-discriminatory basis across nations. When a country increases its tariffs above agreed upon levels, it must compensate its trading partners for the economic injury; provision is also made for the settlement of trade conflicts by consultation and arbitration.

¹⁴ A tax on imports or exports.

The entire process of globalisation including trade liberalisation and the WTO has been subject to much discourse. Those opposing neoliberal¹⁵ globalisation in its various guises are manifold and have received immense focus from both academia and the mass media. As outlined by Parnwell and Rigg (2001:205) "It takes a singularly disengaged person not to realise that there is widespread dissatisfaction with the process and products of globalisation." Trade liberalisation as part of this process of globalisation poses numerous threats to small scale agricultural producers particularly in the developing world. In the Philippines, as in many other developing countries, agricultural production is inefficient due to economies of scale when compared to large producers in the developed world. Governments in the developing world lack the means to develop agricultural industries and also to subsidise them at similar levels of support received by farmers in the United States and the European Union.

Khorr (2000) explains some of the reasons for the negative perception of and attitude towards globalisation. Among the important factors is the lack of tangible benefits to most developing countries from opening their economies. The economic losses and social dislocation that are being caused to many developing countries by rapid financial and trade liberalisation; the growing inequalities of wealth and opportunities arising from globalisation; and the perception that environmental, social and cultural problems have been made worse by the workings of the global free market economy. The phrase globalisation itself conjures images of protest, is frequently miscast and as discussed by Rodrik (2002) we should not reject globalisation we should correct its agenda.

¹⁵ Neoliberalism is a variation of the classical liberalism of the 19th century when the colonial powers used the ideology of competition and "free trade" in the functioning of their empires. The strategy of neoliberal economics includes privatization, trade, and free capital mobility.

The existence of substantiated discontent and opposition to globalisation has not restrained the process of trade liberalisation, globalisation by connotation compel the process of trade liberalisation, this notion was emphasised by Bergsten, (1999:3) who asserted that "the rapid increase of global interdependence had induced virtually all countries, whatever their prior policies or philosophies, to liberalize their trade regimes". Whilst the benefits of trade liberalisation to developing countries may be well published in particular in terms of the economic gains from opening up their economies, many of these perceived gains do not trickle down to small scale agricultural producers in particular where their agricultural production is not efficient to begin with. The problem as discussed by Stiglitz, (2003:59) is that in theory trade liberalisation forces a more efficient use of resources however "moving resources from low-productivity uses to zero productivity does not enrich a country".

In the case of the Philippines the following arguments were put forward for its entry into the WTO. David (1994) explains that the Uruguay Round General Agreement on Tariffs and Trade (UR-GATT) would benefit the Philippines in general and agriculture in particular through expanded markets, a reduction in the degree of overvaluation of the peso thus increasing the relative prices of tradable goods, increased consumer welfare and a more efficient allocation of resources. All of these reasons were used as arguments for the dismantling of Non-tariff Barrier¹⁶ (NTBs). In the case of agriculture The World Bank (2000), equally, cites four major reasons for moving forward with tariff reforms in agriculture. First, current tariffs stifled the development of downstream activities. Protecting sugar meant high input prices for the outputs of the food and beverage industry, such as processed fruits. Similarly, protecting corn resulted in high feed prices for the hog and poultry industry, areas where the country had great export potential. Second, current protection diverted agricultural production away from exports. Third, Philippine rice prices were higher compared to some Asian countries.

¹⁶ Non-tariff barriers refer to all barriers to trade that are not tariffs for example, technical barriers to trade.

This situation eroded the competitiveness of labour vis-à-vis other Asian countries. And finally, the imposition fell disproportionately on the poor, who devoted a larger proportion of their income to food expenditure. Aside from the inefficiencies caused by distorted relative prices, the use of NTBs instead of tariffs introduces unnecessary and costly uncertainties about import policies, particularly on corn; provides economic rents to those that have been granted and those granting import allocations rather than tariff revenues for the government; and increases the transaction costs of policy implementation.

4.4 Philippines historical agricultural trade policies

In the Philippines, WTO-led trade liberalisation was preceded by numerous other trade policies both protectionist and free trade orientated. In tandem with these policy orientations, numerous statutory instruments were utilised in order to modernise the agricultural sector resulting in the status of the agricultural industry today. If we consider that Philippine agriculture is largely inefficient partly as a result of numerous policy failures, this in turn influences how – and why – trade liberalisation manifests itself as a livelihood threat. This section provides an overview of the trade policies most pertinent to the agricultural sector. A review of historical agricultural trade policies provides some explanation for current livelihood threats experienced at the household level.

It was against this backdrop of moves towards economic globalisation that after heated debate, the Philippine Senate ratified the UR-GATT in December 1994. Beginning in 1995, the country proceeded to undertake its obligations as a member of the UR-GATT and later of the WTO, which included the liberalisation of its once protected agricultural products. Quantitative restrictions on protected crops (except for rice) were replaced with tariffs, which would be progressively reduced over a period of 10 years. Apart from the GATT-WTO, the Philippine government was also moving up its trade and investments via other regional agreements. The country is committed to, among others, the Association of South East Asian Nations Free Trade Area and the Asian-Pacific Economic Cooperation, two regional trade blocs that have their own trade liberalisation agendas and schedules (Aquino, 1998). These reforms were taking place against the milieu provided by the domestic stage. In particular these reforms would be superimposed on the already fragile agricultural and corn industry.

The Philippines was transformed into a net agricultural importing country during the 1990s. This trade scenario is the opposite of other neighbouring countries, such as Indonesia, Malaysia and Thailand that have consistently posted an increasing agricultural surplus since the 1970s. More particularly, the Philippines was transformed from a net food exporting country to a net food importer as of 1995, with an average net food trade deficit of \$222 million (Borras, 2000).

An 'open' agricultural economy is not new for Philippine agriculture with Guzman (1999), for instance, explaining that historically the Philippines has always been compelled to produce for export. This export orientation of Philippine agriculture became most visible to the outside world at the height of the Spanish regime when agro-industries were encouraged and developed to supply the needs of the colonizer Spain and other European consumers for tobacco, sugar and abaca (Department of Agriculture, 2002a). This position of the Philippines as a major exporter of agricultural commodities gradually diminished over the course of the 20th century. By the end of the century, agricultural exports accounted for less than 6 per cent of the country's foreign earnings (FAO, 2007). At the same time, agricultural imports have grown, at an annual rate of 8.6 per cent from 1995 to 2005. Wheat is the main agricultural import, followed by soybeans (including the cake of soya beans) and rice. Coconut oil and bananas are the country's two major agricultural exports. The country also exports processed agricultural products such as desiccated coconut, cigarettes and canned pineapples.

Agricultural development policies failed (Corpuz 1997, Hossain, 1996) in the past because both trade and economic policies created an unfavourable policy climate for agricultural development. Garcia (1996) writing of the Philippines observed that the agricultural development strategy was based on an industry-led theory of development giving priority to industrialization hoping that the other economic sectors would benefit from the 'trickle down' effects. These policies which were 'unfavourable' to agriculture are outlined in Table 4.4.

Table 4.4 Philippine agricultural trade policies 1940-2000s

Year	Policy/Aim	Impact
1900-1940	Trade Facilitation	<p>In the period 1900-1940 the insular government supported trade and export agriculture solicitously and almost totally neglected non-export agriculture (Corpuz, 1997).</p> <p>From the colonial years until the 1990s, agriculture was sheltered from foreign imports through a combination of import license quotas and outright import bans.</p>
1949	Import Controls	<p>Import controls had initially been imposed by the government as one of numerous ad hoc measures in 1949 as a remedy to an external payments crisis. De Dios (2000) explains that as industrialization based on import substitution met with initial success, an ideology soon began to develop around the existence, expansion and elaboration of import controls. Although agriculture was not the object of protectionist policies after World War II, policy favoured industry over agriculture. This was especially prevalent during the era of Import Substitution Industrialization (ISI) which sacrificed agriculture in order to allow the development of industry. Hossain (1996) asserts that industrialization has been biased strongly towards urban centres through policy-induced import substitution.</p> <p>The Congressional Commission on Agricultural Modernization (2001) cites the two arguments used in the justification of this policy as, firstly, policy makers' perceived agriculture as synonymous with backwardness and industry with progress and second, since agriculture was the biggest sector and the major source of surplus, by necessity the funds for the ambitious industrialization programme would have to come from it. Consequently, industry was given priority in the allocation of foreign exchange, although it was agricultural exports that generated this exchange.</p>

1962	Trade Liberalisation -	The 1962 trade liberalisation included the removal of licensing requirements for practically all imports, the simultaneous raising of tariff rates (from between 0 & 400%) accompanied by a currency devaluation that realigned exchange rates with prevailing black market rates and temporary export taxes.
1970	Trade Liberalisation -essentially export promotion in character	Alburo (1991) explains that as a compromise to freer trade, incentives were given to exporters in terms of imported inputs. In addition, the Philippine Peso (PHP) ¹⁷ was devalued consistent with an outside orientation but retained restrictions for balance of payments and other reasons. Liberalisation was essentially export promotion. Industry bias persisted in the form of high tariffs on industrial imports and an overvalued currency that stunted agriculture.
1980	Trade liberalisation	Cororaton (1997) explains that the government embarked on a five-year (1981-1985) tariff reduction programme that resulted in a general decline in the average nominal tariff level. However, due to the balance of payments crisis in the 1980s, the tariff reduction programme was aborted. The economy subsequently collapsed in 1984-1985 with real GDP contracting by -6.0% during 1983-1984 and by -4.3% in 1984-1985 (Medalla <i>et al.</i> , 1996). The same programme, however, was later continued by the Aquino government between 1986 until 1991.
1991	EO470 (Executive Order) 470	EO (Executive Order)470 was a comprehensive programme. It reduced the average tariff levels and simplified the multi-tiered tariff structure to a structure with only four tariff levels. In particular, the final rates clustered around 3%, 10%, 20%, and 30%, as compared to the previous structure where the rates ranged from 10% to 50%. (Cororaton,1997) Overall, the tariff reduction programme of the early 1980s and EO 470 brought down the number of regulated items from 1,924 in 1986 to just 183 in 1997.

¹⁷ During the study period 2002-2005 the Philippine national currency, the Philippine Peso's (PHP) exchange rate was approximately 55 Philippine pesos to the United States Dollar.

1995	Philippines accedes to the WTO-Trade liberalisation policies are continued	The Philippines committed to eliminate all its quantitative import restrictions on agricultural products, except rice. The Philippine Congress passed Republic Act 8178 on 29 March 1996 to implement its WTO international treaty obligation. Accordingly, EO 313 was issued which specified the tariff equivalent rates to replace agricultural Quantitative Restrictions ¹⁸ (QR). Rice was exempted because the Philippine Government asked for special treatment in accordance with Annex 5 of the WTO Agreement on Agriculture.
1998	Trade liberalisation	In compliance with its WTO commitments, three important laws were implemented. These were the Anti-Dumping Act, the Countervailing Duty ¹⁹ , and the Safeguards Measures Act ²⁰ . Agricultural tariffs were further reduced to 14% in 2000 from 19% in 1998. EO 133 was passed to provide tax and duty free importation of agricultural inputs for five years.
2000	Trade liberalisation	Average agricultural tariffs averaged at 10% in 2003 relative to 14% in 2000. It is useful to note that agricultural tariffs remained higher than tariffs for the manufacturing sector since 1995, the start of the URAA implementation.

Table 4.4 illustrates in particular the industrial bias of trade policy which had negative impacts on the agricultural sector. Numerous studies (Kawai, 1994, Drysdale and Huang, 1995 and Williamson, 1969) illustrate that the protectionist policies of the 1950s to the 1970s in the Philippines distorted the factors of production leading to a decline in the productivity of agriculture.

¹⁸ Specific limits on the quantity or value of goods that can be imported (or exported) during a specific time period.

¹⁹ A countervailing duty is an additional levy imposed on imported goods to offset subsidies provided to producers or exporters by the government of the exporting country.

²⁰ Action taken to protect a specific industry from an unexpected build-up of imports.

In the early 1980s, after three decades of pursuing industrialization based on an import-substitution strategy, the Philippines government was faced with chronic rural poverty and high unemployment rates, low productivity of agriculture and industry, a large amount of foreign debt (which resulted in the 1983 debt crisis), and lack of competitiveness in international markets. Proponents of liberalisation argue that with the demise of ISI the market distortions which discriminated against agriculture have been removed. Hart (1998) among others asserts that agricultural performance is determined in equally important ways by non-price factors which impact on livelihoods. Heltberg and Tarp (2002:122) concluded from a study conducted in Mozambique, for example, that agricultural development initiatives should invest in non-price factors such as “as improved technology, transport infrastructure and farm capital, and strive to help farmers better deal with risk”.

There is a general consensus that reform policies in the Philippines overemphasised the issue of pricing to the exclusion of other critical factors, in particular technological development and infrastructure. Ahmed and Lipton (1997) examine the importance of non-price factors such as infrastructure on agricultural outputs. Concluding from work carried out by Diakosavvas that on average, a 10 per cent increase in government spending will result in approximately a 3 per cent rise in farm output. The implication is that during market adjustments, cuts in government expenditures on infrastructure and agricultural services may negate incentives provided by other measures (such as devaluation and price and trade liberalisations). McCulloch *et al.* (2001) concur with the above highlighting that for long-run benefits to accrue, reasonable supply responses are essential. In the long run, supply responses will be aided by domestic policies to assist investment in complementary infrastructure (irrigation and rural roads), to ensure that agricultural production can be connected to the world market.

The Philippines government embarked on a gradual trade liberalisation programme in 1981 and began to undertake reforms aimed at minimizing trade restrictions, having followed protectionist policies since the 1960s. The goal was to reallocate the country's resources to increase domestic industries' efficiency and competitiveness in the international markets (Salehezadeh and Henneberry, 2002).

It was only during the presidency of Corazon Aquino (1986-1992) that policymakers began to address the underlying causes of agricultural stagnation. Liberalisation measures pursued from 1988 combined with the floating of the peso at a more realistic level began to improve the terms of trade for agriculture. However, the effects of years of protectionism weighed heavily on attempts to increase the competitiveness of agriculture. The Philippines' shift since the mid-1980s from an inward to an outward orientation changed the nature of growth, making it more labour intensive and, it has been argued, more beneficial to the poor (World Bank, 2000). This growth has been attributed to structural reforms, including privatization and trade liberalisation, as well as to the country's renewed access to foreign financing on regular terms through the debt restructuring agreement of 1992. The Philippines, of course, was not alone in pursuing ISI policies as they were encouraged by the international lending agencies, a strategy which has "now been out of favour for a while" (Rodrik, 1998:1). Jensen and Tarp (2002:383) explain that these ISI strategies pursued by developing countries are now considered to have "led to a significant bias against agriculture as measured by agricultural terms of trade". By focusing domestic producer price incentives in favour of industrial production and discriminating against agriculture, domestic policy makers tried to put countries on a fast track to development. The ISI-strategy did not yield expected results and it has been significantly modified in most developing countries during the past two decades.

Although policies that cause price discrimination against the agricultural sector such as ISI have now been rectified, this does not automatically result in an environment that is conducive to positive supply response. Prior to the Philippines embarking on outwards oriented trade policies considerable negative aspects from previous trade policies remained significant in the agricultural sector. Past policies both in the form of ISI and poorly managed liberalisation episodes left Philippine agriculture unprepared for WTO propelled trade liberalisation. What, exactly, were the agricultural liberalisation and modernization policies pursued by the Philippines? It is to this topic which this chapter now turns.

4.5 Philippine agricultural modernization and liberalisation

The Philippines under the URAA agreed to convert non-tariff agricultural barriers into tariffs and to set the latter at or below a certain level (the 'bound' tariff rate). The committed tariffs and tariff quotas took effect in 1995. Uruguay Round participants agreed that developed countries would cut their tariffs (the higher out-of-quota rates in the case of tariff-quotas) by an average of 36 per cent in equal steps over six years. Developing countries would make 24 per cent cuts over 10 years. Least developed countries did not have to cut their tariffs at all.

Table 4.5 presents the Philippines' agricultural commitments upon its accession to the WTO. Tarification which is defined by the Organisation for Economic Cooperation and development (OECD) (2007:774) as, "the replacement of quantitative restrictions on imports with their estimated tariff equivalent," has had deep implications on Philippine agricultural competitiveness.

Table 4.5 Republic of the Philippines commitments on signing the Agreement on Agriculture (AoA)

1	Tarification of quantitative restrictions on agricultural products
2	Reduction of tariffs on some 27 agricultural products (by an average of 33%)
3	Importation of a guaranteed Minimum Access Volume (MAV ²¹) of rice 1995-59,000 Metric Tons 2004-239,000 Metric Tons
4	Amendments of laws contrary to GATT <i>e.g.</i> Tariff Code, Import restrictions on corn.
5	'Binding' tariffs ²² on importation of 537 agricultural products (10%) and 114 agricultural products (1%)
6	Harmonization of sanitary and phytosanitary measures.

(Source: Adapted from Aquino, 1998 and Clarete, 1999)

Table 4.6 presents the initial bound tariff rates set in 1995 and the final bound tariffs rates in 2004 on selected agricultural products. The Arroyo administration (2001-2010) moved to recalibrate upwards a number of Philippine Most Favoured Nation (MFN) tariffs with the re-issuance of the EO241 and EO264 in December 2003 (released to the public in January 2004). MFN treatment ensures that if a country lowers its tariffs to one trading partner, then the same treatment should be available to all WTO member-countries. These executive orders allowed the retention of tariffs for a number of industrial and agricultural products at their 2003 levels and adjusting the tariffs upwards for some 1000 other tariff lines. For products whose non-tariff restrictions have been converted to tariffs, governments were allowed to take special emergency actions ('safeguards') in order to prevent swiftly falling prices or surges in imports from hurting their farmers.

²¹ The amount of imports of an agricultural product allowed to be imported into the country at a customs duty lower than the out-quota customs duty.

²² Commitment not to increase a rate of duty beyond an agreed level. Once a rate of duty is bound, it may not be raised without compensating the affected parties.

Table 4.6 Philippine tariff rates 1995 and 2004

Sub-sector	Initial Bound rate 1995	Final Bound Rate 2004
Irrigated Rice	100	50
Rain-Fed Rice	100	50
Corn	100	50
Fruit	60	40
Vegetables	80	40
Hogs	35	27
Poultry	90	40

(Source: Cororaton, 1997)

A joint executive and Legislative Consultative Caravan on GATT and Philippine Agriculture found, in 1994, that the government had not provided sufficient rural infrastructure to enable the agriculture sector to compete with imports and exports in the global market. The lack of basic infrastructure and support services to Filipino farmers made their production and marketing costs extremely high (Montemayor, 1998). The substandard infrastructure has received attention from many quarters and according to Watkins (1996), a United States Department of Agriculture (USDA) report predicted that, “in the absence of sustained investment in infrastructure...the Philippines could become a regular corn importer by the end of the decade”, which proved correct: in 2002 the Philippines imported 278,246 metric tons of maize and exported just 367 metric tons (FAO-Stat, 2011b).

Numerous statutory instruments have been invoked since 1995 in order to increase the productivity and efficiency of the agricultural sector. The most notable are presented in Table 4.7 However, when examining the impact of national and international policies on production systems within the Philippines, it is important to note that, “the Philippines did not develop as a unitary colonial economy orientated towards a single satellite *entrepot* at Manila”. Instead, “the archipelago emerged as a series of separate societies that entered the world economic system at different times, under different terms of trade, and with different systems of production” (McCoy, 1982:8).

Table 4.7 Agricultural statutory instruments 1995-1999

Year	Act	Aim
1995	High Value Crops Development Act	Develop high value crops with a view to exporting
1997	Agriculture and Fisheries Modernization Act (AFMA)	To modernize the agriculture and fisheries sectors by transforming these sectors from a resource-based to a technology based industry.
1999	Medium Term Agricultural Development Plan	Attain food security and alleviate poverty in the countryside.

For current deliberations the most important of these statutory instruments presented above is the AFMA in that it attempted to prepare the agriculture and fisheries sector to face the challenges of globalization. The main provisions of the AFMA detail the measures and policies from 1999 to 2004 in the agriculture and fisheries sector. The areas covered are numerous and diverse. They include irrigation, post-harvest facilities and other infrastructure; credit and financing; information and marketing assistance; product standardization and consumer safety; human resource development; research and development; extension services; rural non-farm employment; and trade and fiscal incentives. Another important provision of the AFMA is the identification of Strategic Agricultural and Fisheries Development Zones to serve as centres of agriculture and fisheries development. All of these provisions seek to fill important gaps in the provision of non-price factors that impact on agricultural response such as the availability of technology and market access. Nevertheless the actual implementation of AFMA since 1997 had been hampered by a lack of funds. Department of Agriculture records show that in 1998, the PHP 20 billion initial funding was not included in that year's appropriation act. Although funds were appropriated for the AFMA for the period 1999-2002, the amount released was below the amount approved.

This was largely due to bureaucratic procedures and regulations surrounding the actual realise of funds and inefficient programme management. Table 4.8 presents the amount of funds appropriated and actually released under the AFMA 1999-2002.

Table 4.8 Percentage of AFMA budget released 1999-2002

Year	Appropriated PHP (billion)	Released PHP (billion)	Per cent of appropriated budget released
1999	14.9	11.6	78
2000	20.8	16.6	80
2001	16.1	11.4	71
2002	20	14.45	72

This is important as it highlights the lack of funds available to implement the numerous provisions of the agricultural modernisation act. This lack of funding has hampered significantly any attempts to modernise agriculture in order to reap any of the benefits of trade liberalisation. The Philippine government has made numerous attempts to address the problems discussed above in the agricultural sector in particular programmes focusing on corn and high value crops. The implementation of these programmes at the farm level, have been, however, inadequate, not least because they have not been sufficiently funded. The promised post-harvest facility loans and the expenditure of Agricultural Competitiveness Enhancement Funds (ACEF) under the AFMA have not been adequately implemented. These programmes can be considered as general complementary policies, often referred to as safety nets. Safety nets are targeted towards the poor thus reducing the need to identify the shock directly. Constantino (2001) asserts that of the promised PHP 128 billion fund on physical safety nets for infrastructure and competitiveness enhancing public investments, only 40 per cent was complied with. Insufficient intervention by the government in the areas outlined under the AFMA has further decreased the coping options available to small scale producers. This undermines their ability to adjust to changes in their production environment.

4.5.1 Philippine liberalisation mechanisms

The main mechanisms of trade liberalisation utilized by the Philippine government following its signing of the UR-GATT AoA are presented by political administration in Table 4.9 it should be noted that the applied tariffs under the unilateral Tariff Reform Programme are generally below the limits imposed as WTO commitments.

There were no commitments given in the reduction of WTO-inconsistent production subsidies (subsidies that stimulate production) since, according to Clarete (1999), the Philippines maintains a less than 10 per cent subsidy rate. Constantino (2001) explains that since the Philippines began implementing the agreement on agriculture in 1995, there have been very low levels of domestic support. Overall subsidisation for agriculture was at an estimated 4 per cent, well below the permitted 10 per cent maximum, with government price support for corn reaching only 1 per cent of the total value of production. In the case of export subsidies no commitment, again, was necessary, as the Philippines did not maintain export subsidies. The FAO (2003) estimates that domestic support was very insignificant within the context of the overall national budget.

This lack of support is problematic considering the importance of agriculture as a driver of economic development, its contribution to GDP, supposed government food security attainment goals, and the continued dependence of such a significant portion of the Philippine population – and particularly the poor – on the farm sector. The low levels of domestic support also provide an ‘uneven playing field’ when compared with the high levels of support received by European Union producers under the Common Agricultural Policy and by United States producers under the Farm Bill.

Table 4.9 Agricultural trade liberalisation mechanisms 1992-2003

Administration	Aim	Mechanisms	Impacts
Ramos (1992-1998)	Trade liberalisation Economic reforms within the structural adjustment policy.	Continued with tariff reforms. Agricultural tariffs reduced under EO 288. EO 8 lifted quantitative restrictions on agricultural commodities and imposed higher tariffs. The Agricultural Tariffication Act 8178 established the agricultural Minimum Access Volume (MAV) and provided that tariff proceeds shall accrue to the ACEF	Reduced agricultural tariffs from 28% in 1995 to 19% in 1998
Estrada (1998 - 2001)	Liberalisation Deregulation	EO 133 provided for tax and duty-free importation of agricultural inputs for five years. Anti-Dumping Act 8751.	Reduced agricultural tariffs to 14% in 2000.
Arroyo (2001 present)	Agricultural modernization	Allocated funds to put in place safety nets required to offset the negative effects of globalization. Continued with tariff reforms. EO 334 provides tariff ban of 0% to 5%	Agricultural tariffs averaged at a low of 10% in 2003, relative to 14% in 2000.

(Source: Adapted from *De la Cruz et al.*, 2004)

In summary a combination of poor implementation and mismanagement of funds earmarked for modernisation programmes have left Philippine agriculture unprepared for trade liberalisation. In tandem with this, the process of trade liberalisation appears to have been mismanaged in terms of the setting of tariffs below WTO requirements. Support levels are also well below those permitted by the WTO. It is useful to now look at corn and how these broad level issues transpire to affect this specific crop.

4.5.2 Corn and trade liberalisation

General agricultural liberalisation issues were discussed above; this section examines the specifics of trade liberalisation on the corn industry as it is the main focus of this study and it is therefore important to consider how trade regimes and reforms affect it. Under the GATT-WTO agreements the Philippines was required to provide a MAV for imported corn of 130,000 MT starting in 1995 and increasing to 217,000 MT in 2004 at 35 per cent tariff. Quantities over these levels carried higher tariffs of 100 per cent in 1995 declining to 50 per cent in 2004 (Department of Agriculture, 2002c). In 2003 tariffs stood at 35 per cent for in quota and 50 per cent for out of quota, both of which are the bound rates. The utilization of the MAV for corn is high compared with other products. In 2000 the MAV utilization rate for corn was 99.4 per cent and 73 per cent in 2001 according to the FAO (2003) this can be attributed to the fact that utilization rates are generally higher where the domestic sensitivity of imports means that the MAV import ceilings are set at a low level.

Bioco (2004) explains that corn farmers have not attained the efficiency and self-sufficiency to compete against imported corn and corn substitutes. They can only supply 80 per cent of the national requirements. National production reached 4.5 million MT in 2003. Demand, at that time, was around 5.5-6.0 million MT. Supply shortfalls have been mostly addressed by importation of yellow corn of about 200,000 MT per year and wheat of about 600,000 MT per year (as a corn substitute for feed). The balance comprises local corn substitutes (mainly cassava) and other imported corn substitutes. Imported corn was less than 900 metric tons in 1994 but large inflows started in 1995. In 1996, the country imported 402,000 metric tons (\$86 million) to meet the growing demand of the poultry and livestock sectors. This surge in imports occurred at the same time as protectionist measures were being reduced under UR-AoA commitments. According to Dy (2000), "The country's major suppliers of corn in 1999 were China (41 per cent of volume), the United States (34 per cent), and Argentina (24 per cent)". The estimated volume of corn imports in 2002 was 278.2 thousand metric tons (Bureau of Agricultural Statistics, 2003).

Numerous key informants estimated that the demand (5.5 Million Metric Tons (MMT)) and supply (4.5 MMT) situation in 2003 indicated a shortfall of one million metric tons of yellow corn alone.

As reported by Bioco (2004), the corn sector has not benefited from the ACEF. The requirements are too stiff for a small farmer or cooperative to comply with. Worse, the government has not properly promoted ACEF to the intended beneficiaries. As previously explained in Table 4.9 which presented agricultural trade liberalisation mechanisms 1992-2003 tariff proceeds from the MAV are in theory allocated to the funding of the ACEF. In the case of MAV corn, about PHP²³1.23 billion (\$2.2 million) in tariffs was generated from 1995-2001 and PHP 900 million (\$16.75 million) from 1999-2001. The first imports of corn under MAV arrived in 1997. However, it was only in 1999 that the Department of Agriculture was able to establish a special bank account to deposit tariff revenues earmarked for use under ACEF (Account 183). The ACEF funds and programmes are critically needed by the corn sector in order to improve its profitability.

Historical protection of the corn industry through quantitative restrictions has discouraged the transformation of the corn sector into a more profitable industry. Overall, average production costs at the farm gate level stood at about 10 per cent higher than the cost, insurance and freight (c.i.f)²⁴ prices of imported corn. This non-competitiveness of domestic corn can be attributed to a confluence of constraining factors, such as: 1) low adoption of modern corn production technologies; (2) high post-harvest losses; and (3) high transport and marketing costs due to inadequate infrastructure (Department of Agriculture, 2002b).

²³ The c.i.f. price is the price of a good delivered at the frontier of the importing country, including any insurance and freight charges incurred to that point, prior the payment of any import duties and transport charges in the importing country.

Impaired market knowledge also exists because traders rarely follow grades and standards in setting prices. Although the government has set standards of 14 per cent moisture content and 98 per cent purity, these standards are seldom enforced (Mendoza and Rosegrant, 1995).

The liberalisation of the corn industry reflects the overall pattern of the agricultural sector as a whole. Historical policies have influenced the current structure of the industry largely resulting in an uncompetitive corn sector. Again attempts at modernisation and development of the sector have not been successful leaving corn farmers in a very uncompetitive situation and, as we shall see, underprepared for trade liberalisation.

4.6 Trade liberalisation as a livelihood threat

The specific components of trade liberalisation which comprise a threat to existing livelihoods in the study area are examined in conjunction with research findings in subsequent chapters. In order to provide sufficient context it is useful to present some key considerations highlighted by previous studies as regards liberalisation. Trade reforms as a livelihood threat are examined and in particular issues surrounding non-price factors.

Although trade liberalisation as a livelihood threat has been largely ignored by existing literature some key points can be drawn from the literature on trade liberalisation and its effects on poverty and vulnerability and welfare at the household level. Reimer (2002) provides a useful summary from empirical evidence on the linkages between trade, trade policy, and poverty. He summarises that potential links include changes in the price and availability of goods; changes to income and employment; changes in the terms of trade; short-run risks and adjustment costs.

The direct impacts of trade are those that are caused by the mechanisms of trade itself. In theory, gradual reduction of tariffs and removal of QR impact directly on farmers through the lower prices of imported goods and increased competition posed by the cheaper agricultural commodity imports. This direct impact of trade liberalisation is usually through changes in the prices of commodities that have been liberalised. Narayanan and Gulati (2002) term this the 'impact effect'. Research indicates that how these changes transpire at the farm household level in the short run is dependent on the number of price conductors in place. The channels through which price changes are transferred have generated a wealth of literature both in terms of general guidelines (Bannister and Thugge 2001, McCulloch *et al.* 2001, Michalopoulos *et al.* 2002, Narayanan and Gulati 2002, Winters 2000a, Winters 2000b) and country or commodity specific channels. These channels include the structure of the distribution industry, the behaviour of the agents within these channels, infrastructure, taxes, regulations and the government's function in the distribution of goods. Hanlon (2000) discusses the findings of a study conducted on the cashew nut industry in Mozambique following trade liberalisation. He notes two findings which mirror the Philippines experience.

Firstly agricultural subsidies to the Indian cashew nut Industry resulted in an uneven playing field for cashew nut producers in Mozambique. This is similar to corn producers in Mindanao in terms of the subsidies received by European and U.S. farmers. Secondly the study found that any extra profits gained as a result of liberalisation did not trickle down to producers but were held by traders. This study raises questions as regards the benefits of trade liberalisation to small scale producers in countries where support policies and price conductors are either not in place or do not function correctly.

The overall effect of trade liberalisation on welfare depends on the household's ability to adjust to shocks and this new set of prices. McCulloch *et al.* (2001) describe this as switching consumption away from and production towards goods whose price has risen. A critical consideration in assessing these second-round effects is the domain over which the second-round goods or services are traded. This is because the domain of trade defines the number of people and institutions whose behaviour will be altered as these markets adjust to the shock. The ability to substitute one good or activity in the first place is dependent on numerous factors, which are influenced by government policies. Even within stratifications of producers there are gainers and losers, depending on the household status as a net buyer or seller. Ahmed and Lipton (1997) maintain that the impact of adjustment on the poor depends on the share of tradables, non-tradables and exportables in their income as well as in their expenditure and movement in relative prices. Complimentary policies facilitate the functioning of factor markets and endeavour to prevent market failures. The rationale for the implementation of such policies is well laid out in trade liberalisation guidelines proffered by the WTO, International Monetary Fund and economic research institutions (Berg and Kruegar 2002, Bergsten, 1999, Cornia and Court 2001, James 1999, Khorr 2000, and Rodrik 2002). Such policies form a pre-requisite to liberalisation if the theoretical benefits of trade liberalisation are to be attained. However, the establishment of such policies is not sufficient; they must be implemented and accessible to all participants in the food chain.

The favourable impact of these complimentary policies on growth, aggregate income and poverty alleviation are well documented (Banister and Thugge 2001, Michalopoulos *et al.* 2002, and Winters *et al.*, 2002). These policies broadly fall into the

following general areas of macroeconomic and exchange rate policy, the operation and establishment of institutions that provide for the market for labour, the operation of the markets for agriculture, access of the poor to trade-related services such as credit, marketing and transport, and access to safety nets. The provision of non-price factors which impact on supply response remains unfulfilled in The Philippines. The areas detailed under the AFMA provide important facilitators to supply response and in some cases their lack of implementation can in itself provide an inhibitor to supply response.

Enabling factors act as facilitators for smallholders to reap new market opportunities. Six areas that are deemed critical, enabling factors and should be targeted by policy makers were identified by Narayanan and Gulati, (2002), namely vertical co-ordination, reducing transaction costs, building human capital-literacy and training, removing credit constraints, a proactive public sector and international capacity building. In addition to this there is a requirement to have protective instruments which minimize adverse effects. These are termed coping factors by Narayanan and Gulati (2002) and are identified as the availability of safety nets and risk-coping instruments, exit options, most importantly in the rural non-farm sector, protection from monopolistic competition, and technology that serves small holder's needs.

Exit options are an important consideration in the context of reducing poverty; however, opportunities are not readily available to migrants in urban areas. The educational attainment levels and low skills base of respondents severely limits their exit options. In theory, enabling and coping factors should interact and act in tandem and produce a 'coupling effect', which is depicted in Table 4.10. In the Philippines the failure of enabling factors to support smallholders' ability to adjust supply and react to new opportunities undermines livelihood resilience. At the same time the absence of coping factors leaves producers unprotected from adverse policy shocks, and heightens their vulnerability. Table 4.10 highlights the policy implications for implementing this two-pronged approach.

Table 4.10 Policy implications-a two pronged approach

Policy Implications	
Enabling Factors to enable smallholders take advantage of opportunities	Coping Factors to help small farmers cope with and minimize the adverse impact of globalization
1. Vertical Coordination	1. Safety Net & Risk Management
2. Reducing Transactions Costs , improving access to infrastructure, information & inputs, etc.	2. Rural Non-Farm Sector policies to provide exit options or occupational diversification
3. Building Human Capital Literacy & Training	3. Monopolistic Competition Anti-Trust laws, Competition Policy and Contract Enforceability Issues, etc.
4. Removing Credit Constraint through innovations like credit card schemes, warehouse receipts etc	4. Research & Technology specifically addressing smallholder needs and resource poor regions
5. Role of Public Sector esp. in certifying, inspection, testing, etc.	
6. International Capacity Building in negotiations, technological capacity building	

(Source: Adapted from Narayanan and Gulati, 2002:79)

Small scale producer's livelihoods are therefore in a precarious situation. Firstly policies fail to support the ability to respond to changes in the production environment. Secondly producers are left exposed to policy shocks. Therefore it is not surprising that in the Philippine agricultural sector, the impact of the AoA has been generally a decline in global competitiveness among sensitive Philippine agribusiness products. This is shown by

selected studies of the Society Towards Reinforcing Inherent Viability for Enrichment (STRIVE) Foundation (Gonzales, 1999; Gonzales, 2000). The global competitiveness of five agricultural products (rice, corn, beef cattle, hogs, broilers and eggs) was analysed in the pre-AoA (1994) and post-AoA (1999) periods under both import and export trade regimes. In the analysis, the agribusiness products were further disaggregated by levels of technology for rice and corn and degree of commercialization for the livestock and poultry products. In general, the results showed that agricultural products which were competitive as import substitutes before the signing of the AoA had their competitiveness eroded under an export trade regime. The commodities which were generally not competitive before the AoA had their non-competitiveness subsequently further exacerbated. The major reason for this decline in cost competitiveness was the general 'unpreparedness' of Philippine agriculture to face global competition. Winters *et al.* (2002:62) explain that:

"There is some evidence that poorer households may be less able than richer households to protect themselves against adverse effects or to take advantage of positive opportunities. Thus there is an important role for such predictions in guiding complementary policies to accompany trade reform, both to strengthen social protection for losers and to enhance the ability of poorer households to exploit potentially beneficial changes."

Quiroz and Alberto (1995) assert that any policy reform package will have as its main components a reduction in trade restrictions, an alignment of macro policies and a liberalisation of markets in general. These policies, according to Quiroz and Alberto, can be expected to increase the price risks faced by some segments of society. At least agricultural producers will start facing increased price volatility as domestic prices start following international price signals more closely. In order for the poor to reap any of the opportunities brought about by trade liberalisation supply response is necessary. However "their location and demographic structure and the gender, health status, education and assets of their members will influence these responses" (McCulloch *et al.*, 2001:11). Erikson and Silva (2009:49) looked at how climate stressors and global trade liberalisation in Mozambique affected the local vulnerability context in two Mozambique

rural villages concluding that, “Uneven opportunities and differentiation both socially between households and geographically between villages drive patterns of vulnerability”. The impact of trade liberalisation on farmer vulnerability has not received a large amount of attention. Winters *et al.* (2002:44) discuss that given the multiple causes of vulnerability “it is extremely difficult to unpick the impact of trade liberalisation from that of other events influencing households”. Although they do discuss that trade liberalisation can effect household income which can effect household vulnerability in terms of “changes in mean incomes; changes in the portfolio of activities undertaken by households; and poverty traps”.

What has been generally overlooked in the neoliberal literature, both academic and policy oriented, is what effects this shift in trade policy has had for small producers, for rural poverty, and for rural livelihoods. There has been an assumption, based more on econometric modelling than on empirical case studies that this change has been to the benefit of farmers. This thesis is, in part, an attempt to see how such policies have impacted on rural producers and livelihoods, and their responses to them.

4.7 Conclusion

This chapter has presented the context of this study in order to lay the foundation for subsequent chapters. The disaster and threat context of the Philippines was introduced in order to illustrate the various livelihood threats that people experience. This context is important moving forward as it provides an understanding of the existing vulnerability and hazard context prior to trade liberalisation in terms of natural and human induced hazards. Trade liberalisation and accompanying market reforms occurred within this context of existing threats. These threats cannot be viewed in isolation as they combine at various levels, impacting on existing coping mechanisms and livelihood resilience. The complex emergency in Mindanao will be explored further in the next chapter.

Trade reforms and accompanying agricultural policies which were presented have had various impacts on agricultural producers as highlighted by previous studies. The unfavourable impact of past policies and ISI strategies and the lack of attention given to non-price factors that influence supply response were highlighted. The lack of fund allocations and implementation of provisions of the AFMA and the ACEF all play an important role in a general lack of preparedness for liberalisation by small scale corn farmers. The absence of complimentary policies and enabling and coping mechanisms contribute to this status of unpreparedness. Although the price distorting policies presented here have to some extent been rectified the remaining non-price factors that impact on agricultural supply response necessitate further inquiry. Chapter five examines how these national level policies and instruments transpire at the Mindanao and study site level.

5 Chapter Five: Mindanao and the Study Site Vulnerability Context

5.1 Introduction

In order to address the research question, 'When confronted by livelihood threats arising from market integration, what patterns of livelihood response are used by affected small scale agricultural producers?' It is useful first to identify the livelihood threats arising from trade liberalisation at the Mindanao level. In order to provide a deeper understanding of the context in which producers in Magpet and Malabog operate this chapter is laid out as follows; this chapter firstly examines the underlying threat and vulnerability context at the regional Mindanao level. A brief historical overview of the conflict in Mindanao is presented in order to provide the historical context which has resulted in the island's current state of underdevelopment. The corn industry in Mindanao and the issues which affect it are examined in order to form an understanding of how national level policies and programmes discussed in the previous chapter transpire and effect corn producers in Mindanao.

The research sites are then examined in order to demonstrate their current agricultural systems and the livelihood options that are open to farmers. The threat and vulnerability context of the study sites during the study period is examined. The assets available to producers in Magpet and Malabog as well as the key threats they face is introduced. This overview introduces how producers in Magpet and Malabog operate within their production context. Importantly producer's terms of trade in both Malabog and Magpet are examined in order to draw similarities in the two cases but also to demonstrate where and how the construction of producer's livelihood strategies differ. The demographic trends in both sites are also discussed.

Demographic patterns are discussed specifically here as they provide important insights into the vulnerability context, livelihood strategies and can also play a key role in livelihood resilience. Finally the changes in cropping patterns in Magpet and Malabog are examined over the ten years prior to the fieldwork. Notably, whilst both sites have similar resources and face similar vulnerability issues, their responses to trade liberalisation have differed.

5.2 **Mindanao**

The island of Mindanao is the most southern and second largest island in the Philippine archipelago (see Figure 5.1) and is composed of 25 provinces. Three culturally distinct groups make up the population of Mindanao. Christians form the majority with a 75 per cent share of the population. Muslims (known as Moros) and Lumads (indigenous people) constitute respectively, 20 per cent and 5 per cent of the population. Islam spread to Mindanao from the Molucca Straits in 1380 and was adopted by a number of ethnic groups of Mindanao, including the Maguindanaos , the Maranaos and the Tausug. Visayan, a dialect of Cebuano, is spoken throughout much of Mindanao along with other local languages and dialects; however, Pilipino which is based on the Tagalog language is generally used for government or other official business. It is common for Cebuano and Pilipino/Tagalog to be used intermediately in the same sentence in Davao city.

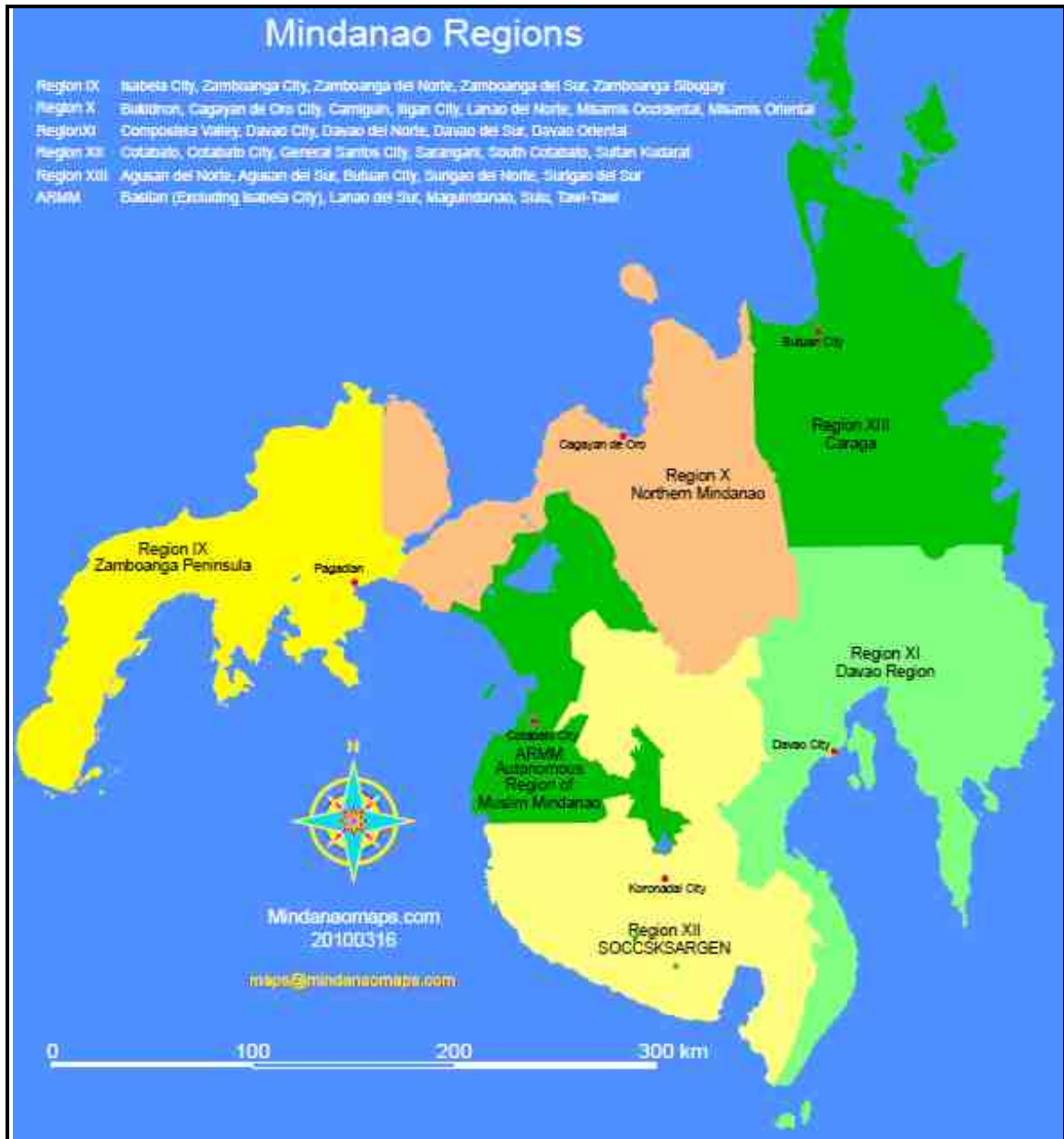


Figure 5.1 Map of the regions of Mindanao (Source: Mindanaomaps, 2010)

5.2.1 Mindanao threat context

Chapter four pursued the Philippines threat context; here it is useful to explore how these national level threats manifest themselves at the Mindanao level. In order to explore these threats it is useful to first consider the research results from the five SL analysis workshops conducted during the course of this study.

Five SL analysis workshops were conducted in July 2004. A variety of PRA tools were utilised in order to populate the various boxes which made up a livelihood framework. These results will contribute towards the discussion and analysis in subsequent chapters of this study. In this chapter they provide a useful introductory overview of the general livelihood threat context in Mindanao. Table 5.1 below presents the vulnerability and livelihood asset context findings emerging from the SL analysis workshop. Workshop participants compiled individual and community level asset pentagons, seasonal calendars and timelines from which this table is compiled.

Table 5.1 Livelihood assets and vulnerability context in order of importance as identified by SL analysis workshop participants, 2004

Assets	Vulnerability
Natural resources , Cooperative services, Indigenous knowledge and skills, Access to NGOs/church based organisations, Skills on contour farming/weaving/food processing	Floods, Droughts, Landslides , Pests, Human migration, Unemployment, High cost of inputs, Political conflict , Low quality of produce, Manipulative traders, Insufficient government services

(Source: SL analysis workshop, October 2004)

Notable from these results (Table 5.1) is the absence of government intervention. Government extension services are absent, making farmers particularly susceptible to traders who are often the sole suppliers of market information in the area. Lack of government planning, budgeting, technical support and marketing assistance makes it more difficult for small farmers to adapt their farming systems with confidence.

This leads farmers to be more risk-averse than they would be under an agriculture policy where the government invests in a coherent and articulated strategy. The issues identified by respondents largely accord with issues previously discussed at the national level and, in particular, issues which stem from the lack of implementation of the AFMA. Threats both natural and human were also identified which again correspond with those threats highlighted at the national level in the previous chapter.

5.2.2 Mindanao and conflict-historical perspectives

Any discussion of the Philippines and in particular Mindanao needs to examine the various conflicts that are occurring within the country. These on-going conflicts play an important role in understanding the underdevelopment of Mindanao relative to other parts of the Philippines. As highlighted by Luna (2001:218) “It is important to note that there are so-called complex political emergencies affecting the country, particularly the political conflict with the communists and the Muslim secessionists in the south”. The history of these conflicts is important in terms of understanding the historical development of the study sites. The Philippines is predominately a Catholic country with approximately four million Muslims in the southern islands region of Mindanao. Mindanao has been experiencing an armed conflict for over 40 years, claiming the lives of over 120,000 people, while simultaneously seriously hampering the development of communities situated within the region. The Government of the Republic of the Philippines and the Moro Islamic Liberation Front have been engaged in peace talks since 1997. While the region’s conflict is commonly perceived as being that of a religious nature, its roots in fact lie in a complex history of cultural and structural violence, as well as oppression rooted in complex land related issues. Tuminez (2008) provides a comprehensive overview of the conflict both historical and current highlighting the historical roots of the present day conflict in Mindanao.

As well as the Moro insurgencies, the communist New People’s Army (NPA) launched an insurgency in 1968 and is still fighting for the establishment of a communist state in the Philippines. Finally, the Abu Sayyaf which is regarded as a terrorist group engaged primarily in kidnapping for ransom has a small presence on the southern islands of Mindanao but with little presence in Central Mindanao where this research was undertaken. In terms of this study these on-going conflicts are important as they have led to displacement of respondents and continue to pose threats to the peace and order of Mindanao creating a climate of insecurity.

Both study sites have in recent years been impacted by armed conflict and the climate of uncertainty which that creates which is discussed further in subsequent chapters. In particular displacement, loss of assets and lack of agricultural investment at both the macro and household level are reviewed. Table 5.1 depicts an internally displaced person's camp in Cotabato. The manner in which Mindanao was 'settled' played an important role in the current conflict and the present ethnic composition of the island and the study sites.



Figure 5.2 Figure internally displaced person's camp, Cotabato 2008

(Source: Mackie, 2008)

The respondents in both study sites are largely Christian 'settlers' who ethnically originated from the more northern islands of the Visayans or Luzon. Settlement programmes of Mindanao date back to colonial times when the population of Luzon and the Visayans were encouraged to move to the Mindanao frontiers. Different colonizers (in particular the US) and subsequent Philippines governments implemented programs of resettlement with varying degrees of success. Although all programmes offered some sort of land ownership to those who resettled, some programmes included significant financial incentives.

Most of these programmes focused on agriculture and the resettlement of farmers due to increasing land pressure and population growth in Luzon. After World War Two the net migration to Mindanao accelerated.

Whilst figures vary as regards the number of settlers Wernstedt and Simkins (1965:90) estimate that, “between 1948 and 1960 the percentage increase of the population of Mindanao (87 per cent) was more than twice that of the nation as a whole (41 per cent)”. They estimate that during this time frame there was an addition of two million people to the population of Mindanao, and between 1903 and 1939 1.4 million migrants entered Mindanao. The Muslims or Moros of Mindanao lost much of their ancestral lands to the settlers through this systematic ‘land grabbing’. Islam (1998:452) maintains that, “The Moros now constitute only 22 per cent of the population in their own homeland. Today much of the wealth in Mindanao belongs either to Catholics or foreign investors.” The fact that most of the wealth of Mindanao including its abundance of natural resources (in particular mines, natural gas reserves and plantations) are owned by people perceived as outsiders further contributes to tensions on the island. Present day conflict and insurgencies are largely a result of historical events resulting in unequal distribution of wealth and a lack of foreign investment. The underdeveloped status of much of rural Mindanao in particular can be attributed to the impacts of this on-going conflict.

5.2.3 Mindanao and development

Mindanao lacks much of the obvious signs of economic development which are readily evident in Metro Manila and other large cities such as Cebu in the Visayas. The conflict and resulting security situation as discussed above has led to a lack of foreign and outside investment and a distinct lack of infrastructure. This lack of infrastructure and investment has negatively impacted on the development of Mindanao as a whole and on the agricultural production environment. One outcome of this protracted crisis is manifested by the high poverty incidence relative to other regions of the Philippines (see Table 4.1). The human development indicators for Mindanao also lag behind the rest of the Philippines, in particular Luzon. This is discussed and examined further by the Human Development Network (2009) in the Philippines Human Development Report 2008/2009 which highlights comparative gap changes in regional Human Development Index HDI between 2003 and 2006. The provinces which experienced a decrease in HDI ranking and those provinces with the lowest HDI rankings are predominately in Mindanao. In comparison to other parts of the Philippines, Mindanao lacks a presence of large global retailers such as Starbucks coffee which seem to appear on every street corner in Manila. This lack of investment leads to a distinct lack of employment opportunities, especially for young school leavers. Local entrepreneurs have tried to fill this gap both in the clothes and hospitality sectors but many of these businesses close after a few years due to a lack of customers. Two dollar cups of coffee are beyond the financial means of much of the local population.

At the outset of this study, secondary and exploratory key informant research indicated that how impacts from trade liberalisation transpire at the farm household level, at least in the short run, is dependent on a number of price conductors being in place. In Mindanao many of these price conductor channels are either missing or are not functioning properly. When considering the links between price changes and actual effects, several factors need to be examined. As discussed in section 4.6 whether or not the price transmission actually occurs depends on small scale farmers' responses, government transfers and second round effects.

In Mindanao a lack of infrastructure impacts negatively on many of these price conductor channels and this, in turn, can be linked to the security context. This lack of infrastructure has been previously mentioned but it is useful here as part of the discussion on development in Mindanao to review the actual status of infrastructure in Mindanao during the study period. In Mindanao, around 90 per cent of the total computed road length was unpaved during the study period. Transport infrastructure spending for rural areas is allocated in the national budget; however, Aquino (2003) asserts that actual government expenditure is below budgetary allocations. This results in high transport costs for producers.

Another important infrastructure deficit which impacts on corn producers is the *Cabotage* law. This law restricts foreign vessels from competing with domestic vessels in transporting domestic cargo. It prohibits foreign vessels from picking up international cargo from more than one international port in the Philippines. As a result, exporters in the Philippines incur high inter-island shipping costs when transporting their products from a domestic ship to an international ship, or vice versa. International cargo en route to an international collection point acquires cargo space on domestic vessels thus decreasing the amount of space available for domestic cargo. This combined with the regulation of the shipping industry in general has adversely affected Mindanao's agricultural producers. As the regulated shipping rates for non-containerised basic commodities are set below the shipping cost there is limited availability of appropriate services. Frequently, corn shippers are unable to ship grain due to unavailable space although in theory shippers are not permitted to reject these cargos. Key informants maintained that this inhibits agricultural diversification, as non-containerised basic commodities such as corn are the only remaining regulated class. In Mindanao shipping infrastructure is important for rural producers in order to access commercial markets and competitively priced inputs which are transported from Manila.

The lack of roads and issues regarding shipping, impacts on corn producers in various ways. The lack of adequate farm to market roads is a major impediment to livelihood options. In some cases although a road may be physically present, poor maintenance makes it virtually impassable during the rainy season except by motorbike (see Figure 5.3) which results in an increase in post-harvest losses. Ali and Pernia (2003) highlight the importance of rural infrastructure saying that, “Rural infrastructure investments can lead to higher farm and non-farm productivity, employment and income opportunities, and increased availability of wage goods, thereby reducing poverty by raising mean income and consumption.”



Figure 5.3 Picture of the main road into Malabog during the rainy season

(Source: Catre, 2004)

The lack of both roads and shipping infrastructure, impacts on the degree of market integration by producers. According to Mendoza and Rosegrant (1995), there appears to be imperfect market knowledge in the Philippine corn market primarily due to the inaccessibility of traders resulting from inadequate transportation and infrastructure facilities. Digal (2004) goes a step further, stating that this lack of infrastructure in Mindanao actually provides an environment conducive to the exercise of buying power. All of the above negatively impact on corn producers who form the focus of this study.

5.2.4 Mindanao corn and infrastructure issues

Having provided an overview of the development status of Mindanao it is useful to now consider corn production within the Mindanao context. Corn production is as discussed above negatively impacted on by infrastructure and development issues. Firstly, an examination of Mindanao's corn output on a per region basis raises some important issues.

The volume of corn production in Mindanao from 1995 to 2001 declined as presented in Table 5.2, particularly among the top corn producing regions. Llorito (2001) points out that in 1990 Mindanao harvested 2.08 million hectares of corn; by 2001 this figure had decreased to 1.55 million hectares. This decline indicates a lack of public investment in the sector (Fabre, 1998). More than 90 per cent of the Mindanao corn output is shared by Northern Mindanao (21 per cent), Southern Mindanao (24 per cent), Central Mindanao (25 per cent), and the Autonomous Region of Muslim Mindanao (ARMM, 23 per cent); however, most of these regions are not performing positively as most have not recorded substantial production increases (Mindanao Grains Forum, 2003). In the years following 2001 the output of most of the regions increased largely due to an increase in the area planted with corn. However, improvements in corn yields could potentially decrease prices in the short run leading to a reduction in the area under cultivation in the long run.

Table 5.2 Mindanao corn production, by region in metric tons, 1995-2009

Region	1995	1999	2001	2003	2005	2007	2009
Zamboanga Peninsula	195,621	122,306	134,309	176,287	223,208	219,679	177,248
Northern Mindanao	814,867	776,819	798,733	817,182	938,227	1,048,344	1,170,624
Davao region	160,109	145,814	148,406	214,344	293,413	354,247	225,078
Soccsksargen	1,039,054	1,028,086	919,042	870,124	959,286	1,123,584	1,146,629
Caraga	55,371	37,434	67,747	74,545	98,595	126,037	88,591
ARMM	564,492	685,986	718,345	673,514	630,889	895,024	950,429

(Source: Bureau of Agricultural Statistics, 2011)

The 1st Mindanao Grains Forum (2003) focused on low corn yields in the Philippines highlighting that as a national average, grains production in the Philippines is inefficient. Mean yield for corn has been extremely low, at 1.52 MT/ha in 1996 as compared to major corn producing countries in the same year, *i.e.* 3.15 MT/ha in Thailand, 4.04 MT/ha in Argentina, and 7.97 MT/ha in the United States. Mindanao corn yields, with the exception of ARMM that boasted a yield of 2.27 MT/ha, are below the Philippine average. The Davao region's yield in 1996 was 0.96 MT/ha while Caraga (north eastern region of Mindanao) was 1.32 MT/ha. These low productivity figures are not surprising. As explained by Panganiban (1998), it was not until 1966 that the government embarked on a serious nationwide corn self-sufficiency programme. The corn industry had been plagued by low productivity (0.44 to 0.53 metric tons per hectare), inferior quality of corn grain (due to premature harvesting and improper drying), and uncertain supply in the feed milling, livestock and poultry sectors. As much as 20 per cent of the corn crop is lost during post-harvest operations and transport.

Due to soaring feed costs and immense pressure from livestock producers, the government approved in March 2004 the duty-free importation of 350,000 metric tons of corn and an unlimited volume of soy meal over the next six months in order to reduce the cost of pork. The location of the main corn market is unfavourable to Mindanao producers. Pig farms are mainly found in Southern Tagalog (15 per cent), Central Luzon (14 per cent) and Southern Mindanao (10 per cent), with the industry being dominated by medium sized commercial farms (Dy, ed., 2000). The geographical location of the pig industry ensures that the Manila wholesale market is the main market for corn as most livestock including poultry growers are located near Metro Manila. The pig industry in Mindanao is mostly comprised of small scale and backyard production. Unusually, Muslims in some parts of Mindanao are involved in pig farming²⁵. Although they will feed the pigs in the stall, they do not participate in their slaughter which is normally carried out by a mobile Christian butcher or slaughter man who then takes away the meat either buying it himself or selling it on their behalf.

Most feed millers in the country are located in Central Luzon and Southern Luzon. Most corn imports likewise enter Manila port. The bulk of production, however, is in Mindanao. Teh and Yorobe (1996) stressed that the weak infrastructure linking the production sector to the consumption sector, as well as the cartelization of inter-island shipping (see above), explains why Thai corn shipped from Bangkok will have a lower price at the port of Manila than a similar load of corn coming from Mindanao. Previous research by AFRIM discovered that the farm gate price received for corn in Mindanao is well above the world price even before the various trader-marketing margins are added (Jordan, 2003). This situation can be accredited to a lack of developed infrastructure in Mindanao. This has been shown by Lapina (1999), who studied the competitiveness of yellow corn under import substitution in South Mindanao for the period 1995-1996 to 1998-1999 using mostly projected data, including world prices.

²⁵ The scenario of Muslims being involved with pigs is covered in Al –Bagara 2.73 section of the Quran. “Law of Necessity”.

In order to determine whether local corn shipped to Manila can still compete with imported corn considering the present marketing and distribution infrastructure. Lapina's results found that in South Cotabato, domestic corn was competitive only in 1998-1999 at 35 per cent tariff. At the lower tariff rates, domestic prices were generally no longer competitive.

Another study conducted by the Philippine Peasant Institute examined the income and cost of corn production in Mindanao. Findings from this study illustrated the large mark-ups for corn. The retail mark-up for corn comprises 50 per cent of the total retail value. The wholesale mark-up comprises another 15 per cent. This large retail mark-up was attributed to two factors. One is the large transportation cost for corn and other agricultural products. Shipping charges for agricultural produce like corn are much higher than those for manufactured products. Secondly monopoly practices in the retail sector led to high mark-ups due to concentration of trading especially for feeds. Lim, (1996) discusses findings of this study. The study found that Mindanao's infrastructure deficit, in particular farm to market roads, contributes adversely to the high cost structure of corn. Lack of infrastructure also exacerbates post-harvest losses due to produce been damaged on the way to the market. In Malabog respondents discussed during PRA exercises that while cauliflower was considered the most profitable crop in terms of profit margins, "*it's [cauliflower] too expensive to transport due to its fragile nature*". In Mindanao a lack of infrastructure underpinned by lagging development and conflict combine together to create a climate unfavourable to agricultural producers. How this transpires at the study site level is explored further both in the following sections and chapters.

5.3 Study site context

Although elements of this study, in particular preliminary research, was conducted throughout the Philippines, the focus of the in-depth research and subsequent findings are concentrated in two areas of Mindanao, namely the municipality of Magpet, Cotabato province in Region XII - SOCCSKSARGEN and Barangay Malabog, Paquibato District, Davao City province, in Region XI - Davao (see Figure 5.1). Both areas are prone to floods, landslides and although technically below the typhoon belt have experienced typhoons and severe flooding caused by typhoons in recent years. A variety of data collection tools were utilised in order to provide a contextual analysis of prevalent conditions and trends in both Magpet and Malabog.

While some secondary data was available from the provincial government as regards the study sites, the accuracy of these data was disputed both by key informants and respondents. Furthermore difficulties existed in ascertaining how these data were collected, by whom and for which purpose. Access to census data was also restricted due to the prevailing security situation. Issues regarding the validity and reliability of secondary sources were previously discussed in chapter three section 3.8. Therefore the information presented here is based on primary research unless indicated otherwise.

5.3.1 Magpet

The first study site discussed here is the municipality of Magpet, located in Cotabato Province, Mindanao. Magpet is 45 km from Kidapawan City the provincial capital. The barangays which compromise the Municipality of Magpet are Temporan, Balite, Bagsak and Mahongkay. A variety of PRA tools were utilised in order to compile a profile of this area as detailed in chapter three. Most of the inhabitants are Ilonggo and Christian. A household has an average size of seven members.

The areas of Magpet are planted with agricultural crops such as corn, rice, bananas, and fruit trees. About 75 per cent of the total land area of Magpet is agricultural land and the terrain is rolling. Around 15,000 hectares in Magpet is identified as a potential area for corn production, however, only 7,000 hectares were cultivated for corn during the study period. Corn farmers in the research sites have farm sizes ranging from 1 to 15 hectares with the average farm size of respondents being 2.5 hectares. Table 5.3 details the prevailing land use pattern in Magpet in 2003. Respondents identified that 61 per cent of the lands that were cultivated by farmers are part of the Integrated Social Forestry programme of the Department of Environment and Natural Resources. This programme grants farmers the right to develop these areas as their source of income for 25 years being renewable for another 25 years. While the municipality of Magpet has 25 corn dryers these are difficult to access, due to distance and many of them are antiquated. Respondents identified a lack of access to driers and post harvest facilities in general as a major production related problem.

With regards to the marketing of corn, the common practice of the farmers is to sell their produce to traders in Antipas from whom they purchased their inputs. The inputs bought by the farmers were not on a cash basis. It was through a 'charge-to-crop basis', an arrangement under which harvested crops are used as the method of repayment to traders for the inputs received plus interest. Interest rates are normally much higher than formal lending institutions. Another problem experienced in the marketing of produce was the high transportation cost from farm gate to the trader in Antipas.

Due to these infrastructure conditions the farmers in the remote barangay areas were identified by the local government of Cotabato province as one of the recipients or beneficiaries of Special Area for Agricultural Development (SAAD) project. This project is significant as it identifies Magpet as an area in need of agricultural development and aims to improve the agricultural sector of the province. During the study period the SAAD project provided extension services in Magpet.

Table 5.3 Land use pattern in Magpet 2003

Land use	Area (hectares)	Percentage
Built up areas	20.0	31.10%
Irrigated areas	19.75	3.06%
Rainfed areas	15.0	2.32%
Corn	152.5	23.68%
Coconut	139.0	21.58%
Banana	17.0	2.63%
Assorted fruit trees	13.5	2.09%
Root/crops/vegetable	5.0	0.77%
Existing fishpond	0.75	0.11%
Pasture/ grassland	261.5	40.60%
Total	644	127.94% ²⁶

(Source: Magpet producer survey results, March 2003.)

²⁶ Categories are not discreet

5.3.2 Malabog

Malabog, the second study site discussed here, is an extremely isolated area with limited rural infrastructure; access to schools, medical facilities, and other social services is limited. Malabog is part of the infamous Paquibato district, a mountainous area that the Philippine armed forces once considered a stronghold of communist insurgency in the south of the country. Although the area is classified geographically as part of Davao city, this classification is extremely misleading as Malabog is a rural mountainous area only accessible by motorbike during certain parts of the year.

Major dialects spoken in Malabog are Cebuano, Ilonggo and Matigsalog. Interestingly, the barangay has numerous religious organizations including Roman Catholic, Seventh Day Adventists (SDA), Iglesia ni Cristo, Jehovah's Witness, Baptist Alliance, Philippine Benevolent Missionaries Association, Pentecostal, Pilipinista, United Church of Christ in the Philippines (UCCP), and Four Square.

Access into Malabog is mainly through a 33-kilometre ride from Panabo City, Davao del Norte. It is 65 kilometres to downtown Davao City. A space on an overcrowded motorcycle (see Figure 5.4) known as a habal-habal is the major mode of transport within and out of the barangay.



Figure 5.4 Photograph of a habal- habal (Source: Hearne, 2006)

Public utility Jeepneys (see Figure 5.5) serve only the main transport routes to the neighbouring towns. Due to very poor road conditions or their total absence in the rural settlements, residents are forced to walk or travel by horseback to Malabog centre on regular occasions.



Figure 5.5 Photograph of a Jeepney (Source: Hearne, 2005)

During the workshops, participants identified the availability of natural resources through resource maps presented in Figure 5.6 and Figure 5.7 below which are further discussed in subsequent chapters.

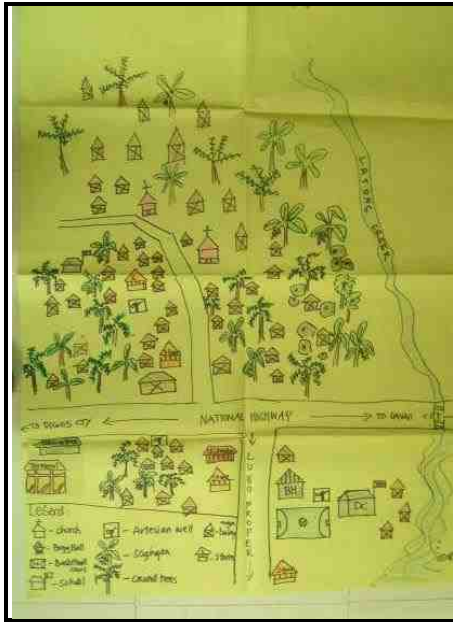


Figure 5.6 Resource map of Malabog (Source: Participatory workshops Malabog, 2004)

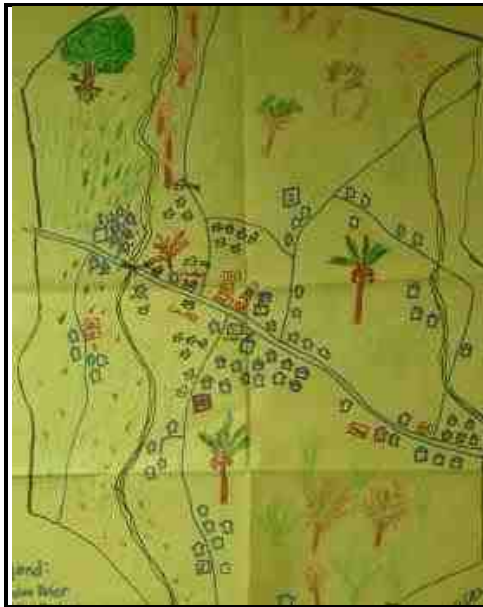


Figure 5.7 Resource Map of Magpet (Source: Participatory workshops Magpet, 2004)

Crops that are cultivated in the area are copra, coffee, cacao and soybeans; cereal crops such as corn; high-value fruits such as banana, lanzones, mangoes and durian; and high value vegetables like cauliflower, cabbage, bell pepper, broccoli and carrots. Pig raising, goat-raising and backyard poultry are the main livestock kept in the area. Livestock provides Malabog farmers with additional income; pigs, chicken, goat, carabao and beef are sold in Malabog and neighbouring towns.

There are 12 solar dryers, seven corn and eight coffee mill post-harvest facilities in the barangay. The area is one of the main suppliers of high value vegetable crops to Davao City and the neighbouring province of Davao del Norte. Its favourable climate and elevation is suited to high value commercial fruits and crops like banana, lanzones, coffee, cacao, and soybeans. Given its present productivity rate, it still has the potential to develop and expand its agriculture, as large tracts of fertile land are underutilized. Malabog is considered by the Philippines government as an underdeveloped area largely due to poor accessibility.

Major people's and non-government organizations in the area include MIEDECO, Malabog Farmers' Associations, Malabog Women's Organizations and a Rural Improvement Club. Between 1992 and 2002, Malabog farmers expanded and or shifted from planting traditional cereal and industrial crops such as corn, copra, cacao and ramie to fruits and vegetables. Reasons cited by respondents for the change in production patterns are examined further in subsequent chapters. For the purpose of this contextual analysis it is useful to consider that respondents cited the following as important drivers in production diversification: higher and more regular market demand, price stability of vegetables relative to other crops, year-round harvest season resulting in constant income, and relatively lower labour and capital requirements.

Malabog farmers also produce tundan bananas (local variety of banana) for Metro Manila, the country's biggest market. Mindanao increased banana production as lands traditionally planted with bananas in Luzon converted to other crops. Tundan banana trees provide fruit for three years and require minimal chemical inputs. Except for the summer months (during school holidays), demand for bananas is steady. Table 5.4 Tundan Banana Prices 2003 (PHP/kg) illustrates the various selling prices of

tundan bananas at various stages of the supply chain in 2003. A kilo of tundan is bought at around PHP 5 in Malabog, and is sold to a retail customer in Manila for approximately PHP 25 a kilo – a mark-up of 500 per cent. Respondents indicated difficulties as regards the perishable nature of the fruit. A high rate of spoilage is inherent in banana production, thus highlighting the need to reach the market quickly. Traders use spoilage, transport and labour costs as the justification for their large price margins.

Due to the favourable elevation and climate vegetables are harvested and sold almost weekly year-round. Respondents estimate that virtually 100 per cent of the vegetables grown are exported to urban markets, including Davao, Cebu and Manila. During the northern Philippines typhoon season the supply of vegetables like squash, eggplant or espada (red pepper) decreases in Manila. This lack of supply results in an increase in the price received by respondents for these vegetables as Malabog is situated below the typhoon belt.

Table 5.4 Tundan Banana Prices 2003 (PHP/kg)

Purchase Price in Malabog	Wholesale Price in Davao	Retail Price in Davao	Wholesale Price in Manila	Retail Price in Manila
5.00	10.00	15.00	15.00	25.00

(Source: Malabog producer survey results, June 2003)

Although different crops may be sold to different types of traders, respondents indicated that in general 85 per cent (51) sell their produce to agricultural traders, 53 per cent (32) of respondents sell to MIEDECO, and 20 per cent (12) sell to other cooperatives, retail buyers, or directly to customers at public markets. The price received by respondents from traders can fluctuate on a weekly basis. Table 5.5 provides an overview of prevailing farm gate and retail prices in 2003 for various vegetables illustrating the large differences in selling price at the farm gate and retail level. Additionally, traders finance vegetable production costs and purchase harvested produce below the prevailing buying price.

In terms of the financing of production costs, 97 per cent of respondents cited themselves as a source of capital, MIEDECO was cited by 35 per cent, 15 per cent cited traders, and 3 per cent cited money lenders. Respondents may, however, utilize more than one source of capital. 53 per cent of respondents cited only one source of finance, 42 per cent cited two, and 5 per cent cited three sources. All respondents were utilizing some level and type of finance. Due to the perishable nature of vegetables, farmers must accept the market price at the time of harvesting as there is no cold storage facility in Malabog. When market prices are high enough to absorb high transportation costs, a number of farmers sell their produce directly to retailers or consumers.

Table 5.5 Overview of prevailing farm gate and retail prices 2003 (PHP/Kg)

Type	Buying Price at Malabog (PHP/kg)		Retail Price in Panabo City (PHP/kg)	Retail Price in Davao City (PHP/kg)
	Highest	Lowest		
Sayote (gourd)	1.0	0.2	8.0	15.0
Espada (pepper)	10.0	1.0	15.0	23.0
Carrots	10.0	5.0	25.0	23.0
Squash	5.0	1.0	10.0	9.0
Radish	3.0	1.0	20.0	23.0
Pechay (cabbage)	5.0	1.0	30.0	22.0
Eggplant	10.0	1.0	10.0	28.0
Lettuce	20.0	5.0	40.0	73.0

(Source: Malabog producer survey results, June 2003)

An examination of the prevailing production figures for cauliflower in Malabog are presented in Table 5.6. Respondents compiled participatory farm budgets which incorporated an identification of major problems experienced as each stage of production.

Cauliflower was the chosen crop as it is considered the most profitable and therefore offers a viable livelihood alternative. However, it is considered problematic by producers, as it has to be harvested even if the price is low. The market for cauliflower is

limited to middle and upper class consumers. It has also been identified as a high maintenance crop and expensive in terms of fertilizer and transportation due to its fragile nature. However, even with all of these constraints, respondents maintained that it offered the greatest profit margins.

Table 5.6 Vegetable (Cauliflower) producer terms of trade per hectare in Malabog and associated problems 2003

Activity	Cost(PHP)/Price	Problem
Land prep, harrowing	2,000.00	Weather, pests
Ploughing	5,000.00	
Cauliflower seeds	1,000.00	70% survivability
Fertilizer	3,000.00	
Chemicals	8, 000.00	Road inconvenience
Labour/maintenance	12, 000.00	
Harvest	2, 500.00	10% discount on buyer price
Transport	5, 625.00	
Total expenses	39, 325.00	
Income 3,750kg x PHP 20	75, 000.00	
income: less 10% on gross kg		
Net Income	35,675.00	
Assumption: PHP 135 per day (based on 22 working days a month)		

(Source: Malabog PRA workshops, March 2004)

The price received at the farm gate for cauliflower varied from PHP 15-PHP 100 per kilo depending on season and demand. Buyers classified the quality of produce as Class A; smooth clear, bigger, larger, compact; or Class B, less smooth and less white, smaller, less compact. As regards the marketing chain, the wholesale price reported by respondents was PHP 40 per kilo and the retail price PHP 80 per kilo. Notable from these figures is the 10 per cent discount given to buyers. This is in fact not a discount in the true sense of the

word as it is a standard arrangement; it is in fact a reduction in the selling price. This 'discount' illustrates the prevailing buyer power that exists within the supply chain. Producers estimate that the selling price in Davao City will be double what they receive locally.

Malabog producers diversified crop production away from traditional crops in order to improve their livelihoods. Malabog producers now produce fruits and vegetables for urban markets but their livelihoods are impacted on by access to affordable credit and infrastructure issues. Whilst there had been a consistent increase in on-farm income as shown by an average 8 per cent increase per year, more than half of the respondents viewed their present economic lives as the same or even worse than a decade ago; the main reason cited was the current higher cost of living compared to 1993.

Although producers diversified in response to changing market conditions, the result of this diversification in terms of an improvement in livelihoods was not readily evident. However, the ability to diversify is what is deemed important as a contributor towards livelihood resilience. The comparison of the study sites threat context is useful as it reveals that both areas face similar production constraints and natural resource endowments but have responded to similar changes in their production environment in different ways. The main difference highlighted between the two areas is the changes in cropping patterns. Interestingly most respondents considered themselves worse off than before trade liberalisation.

5.4 Demographic trends in Malabog and Magpet

In the Philippines changes in the demographics of communities are part and parcel of rural life. This is particularly true in underdeveloped areas such as rural Mindanao where local economic opportunities are limited. It is important to consider demographic changes in order to move beyond 'snapshots' of livelihoods at a given point in time. Changes in the size and structure of the population influence how natural resources are used as well as putting pressure on assets, such as land. Changes in the age structure of the population can play important roles in technology transfer and the uptake of new technology.

Communities can also lose or gain human assets through migration patterns.

In terms of migration patterns in Magpet and Malabog there were two predominant forces at work during the study period. Firstly, there is an underlying trend of outward-migration resulting from both conflict and lack of economic opportunities in Magpet and Malabog. This phenomenon in the Philippine context was discussed by Berner (2000), who estimated that in the Philippines each year, hundreds of thousands of migrants come to Manila and to a few other urban centres. As a consequence, the urban growth rate, at some 5 per cent per annum, is one of the highest in the world with more than half the population living in urban areas. Another prevalent trend in rural Mindanao is that of the Overseas Foreign Worker (OFW). A large number of Filipinos leave the Philippines each year in search of employment in the Middle East and other parts of the world. These OFWs contribute significantly to the economic wellbeing of families back home through remittances which will be explored further in subsequent chapters.

A pattern of inward-migration was also occurring as those who migrated in the '80s and '90s were returning due to lack of economic opportunities in the city. In explaining the underlying sectorial trend, the World Bank (2003) asserted that in the Philippines, there has been little additional shift in employment from agriculture to industry and services since the mid-1980s. Although the labour productivity of industry is about five times that of agriculture and about twice that of services, labour productivity has deteriorated in industry and stagnated in the other sectors since 1984, with a decline in capital intensity.

Therefore, though there is considerable scope for such sectorial shifts in employment to gain more income, it may not happen without better economic management.

Whilst residents of Malabog and Magpet may have migrated to the cities or elsewhere in search of economic opportunities, in many cases those who had migrated previously were returning due to a lack of opportunity's which will be reviewed in the subsequent chapters. This inward-migration was illustrated through numerous life stories. **Jose**, a tenant farmer from Magpet explained in an interview in Kidapawan (10/10/2004), *"In 1978, at the height of the revolution, my family decided to move to Davao city. Because of the hard urban life in Davao, in 1991, my family decided to return to the barangay. We went back to farming."*

5.5 Malabog and Magpet change in cropping patterns and livelihoods

Both Malabog and Magpet face similar vulnerability contexts: underlying conflict, a lack of infrastructure and demographic trends. However, their cropping patterns from 1992-2002 differed significantly. In the years prior to when the Philippine government joined the WTO (1995) and approved the AoA, the major crops in Malabog were copra, corn, coffee, and cacao. Trade liberalisation of agriculture and resulting changes in the production environment have resulted in buying prices for these crops being unstable, due in part to the influx of cheaper imported produce. At the same time, while the price of farm inputs should be cheaper, theoretically, under trade liberalisation, prices for chemical fertilizers and pesticides have steadily increased. Corn is the preferred crop for personal consumption over root crops and vegetables in both areas but rice is still preferred over corn.

Respondents in Malabog perceived their livelihood status as being 'better' prior to 1995 due to the lower cost of living, more stable farm gate prices, and more predictable market conditions. The main change highlighted by respondents in the agricultural sector in Malabog since 1996 was that all respondents diversified agricultural production into fruits (banana, lanzones, durian, mangoes) and vegetable (low and high value types). With increases in income levels from the preceding years, 42 per cent of the respondents cited improvement in their livelihood. However, 32 per cent of respondents stated that no substantial change occurred as the increase was offset by inflation. The remaining 27 per cent believed their livelihood turned for the worse, citing an increase in the cost of living as the main reason for this. Post diversification producers in Malabog complained that generally, the agricultural market in Malabog is still dominated by big agricultural traders based in the cities of Panabo and Davao. Prices are determined and dictated by them and, as such, traders who have advantages of capital, market information, and market access are reaping large profit margins.

In Magpet the main crop grown by respondents prior to liberalisation was and continues to be corn. Respondents perceived that prices for corn were more stable and inputs were cheaper prior to 1995. All other respondents (except six who diversified) indicated that they considered themselves to be financially worse off now.

The main changes in Magpet since 1995 were a 29 per cent increase in the use of chemicals per hectare, with 35 per cent of respondents increasing the number of ploughings from one to two and an added side dressing. This side dressing is an extra dressing (referred to as a top dressing in the UK). The side dressings utilised by respondents in Magpet were fertiliser in an attempt to increase yields.

Respondents identified that expenditure on chemicals had increased; however, 90 per cent of survey respondents indicated that there was no change in their main sources of income in the period 1992-2002. Three respondents indicated that a change had occurred in expenditure patterns beyond the increase in chemicals. They stated that this was due to unforeseen family emergencies which influenced expenditure patterns.

5.6 Conclusion

This chapter provided an overview of the Mindanao context during the study period by exploring the asset and vulnerability context as well as providing an overview of the historical settlement of Mindanao. The current conflict and underdeveloped status of Mindanao in comparison to other parts of the Philippines is also presented.

The impact of national agricultural and trade policies presented in chapter four is considered from the Mindanao perspective in particular aspects with impact on the corn industry. The two main study sites were introduced looking at producers' terms of trade and demographic trends. This overview demonstrates that Malabog farmers responded to the threat of declining and unstable prices for traditional crops by shifting to fruit and vegetables production. This diversification was influenced partly by a steady increase in demand from Davao, Metro Manila and Cebu-despite the lack of infrastructure.

Importantly for the discussion that will follow, Magpet respondents did not change cropping patterns in response to changes in their production environment. The issues facing corn producers in Magpet indicate that the corn supply chain is wrought with problems. Diversified production in Malabog does not escape underlying constraints.

The question, therefore arises: what enabled diversification in Malabog? Was there a hidden force acting as a catalyst for change? In the case of Magpet, although it is obvious that enabling factors were not in place, the fact that there was no historical adjustment to market forces raises the possibility that perhaps the producers' terms of trade were acceptable to them and therefore, they did not need to diversify. What are producers' aspirations? Further examination of the response patterns of producers in Magpet and Malabog to threats resulting from changes in their production environment is necessary as well as a further perusal of the production context. In particular a closer examination of what factors inhibited diversification in Magpet and facilitated diversification in Malabog is essential given the reasonably similar resource and vulnerability contexts.

6 Chapter Six: Coping in Magpet

6.1 Introduction

This chapter sets out to examine the livelihood strategies identified through research with respondents in Magpet. The livelihood strategies identified are those pursued by respondents in Magpet during the period 1992-2002. These strategies are key to understanding their livelihood resilience and the ability to cope with shocks and hazards. Therefore it is important to ascertain how Magpet producers are responding to changes in their production environment. The livelihood strategies used by respondents offer insights into how respondents 'manage' changes in their production environment. In this case changes based on deterioration linked to trade liberalisation. Livelihood strategies are examined through a sustainable livelihoods framework lens, looking at how respondents use their asset base within their production context to construct livelihood strategies from which emerge livelihood outcomes.

Livelihood threats facing Magpet producers are examined focusing on threats to the asset base, in particular factors which affect access to assets and the financial returns from the use of assets. Utilising this production context, the rationale behind these livelihood strategies is examined. In the case of the Magpet producers a strategy of non-diversification or coping was largely followed. This examination takes into account inhibitors to diversification such as limited access to the asset base and other issues which contribute towards producer uncertainty.

Those producers who are exceptions to the rule and did diversify their agricultural production are then examined in order to ascertain how they arrived at diversification as a livelihood strategy. This offers insights into factors that can contribute towards producers' ability to respond to change and thus livelihood resilience. This is important in terms of understanding the role of the asset base as a contributor to the ability to respond to change versus the role of other factors which increase uncertainty and risk.

6.2 Magpet producer respondent production and vulnerability context

In order to examine the main livelihood strategies of producers in Magpet it is useful to first examine the producer context. This section builds upon contextual information presented in chapter five and the study site specific information presented in chapter three, section 3.5.4.

In terms of the livelihood strategies that have been employed, survey results indicate that agriculture, specifically corn production was the main agricultural activity of respondents. Secondary livelihood sources cited by respondents included backyard animal raising and vegetable gardening. Seasonal farm labour was included as another source of income during the months when farm income was low. Raising of animals was largely utilised as a saving in case of a health emergency or to pay school fees. Primary school in the Philippines is provided by the state; however, parents must pay 'extras' which in Magpet were approximately \$30 per year per child. Respondents also raised carabao as draft animals. Through participatory income and expenditure pie charts Magpet participants indicated that their main source of income was corn. The average contribution of corn to overall income was 76 per cent. Pie charts found that respondents' main expenditure was food; the average expenditure on food was 66 per cent of total expenditure.

The prevailing cultivation seasons for corn are March to May for the first cropping and August to October for the second cropping. In terms of income fluctuations respondents referred to March to May as the 'lean' months due to the prevailing cropping patterns (see Figure 6.1). During this season food consumption is reduced. Less protein is eaten with more corn and rice been consumed. As respondents don't have savings to purchase food during this season their coping mechanism is to reduce consumption of food during this period.

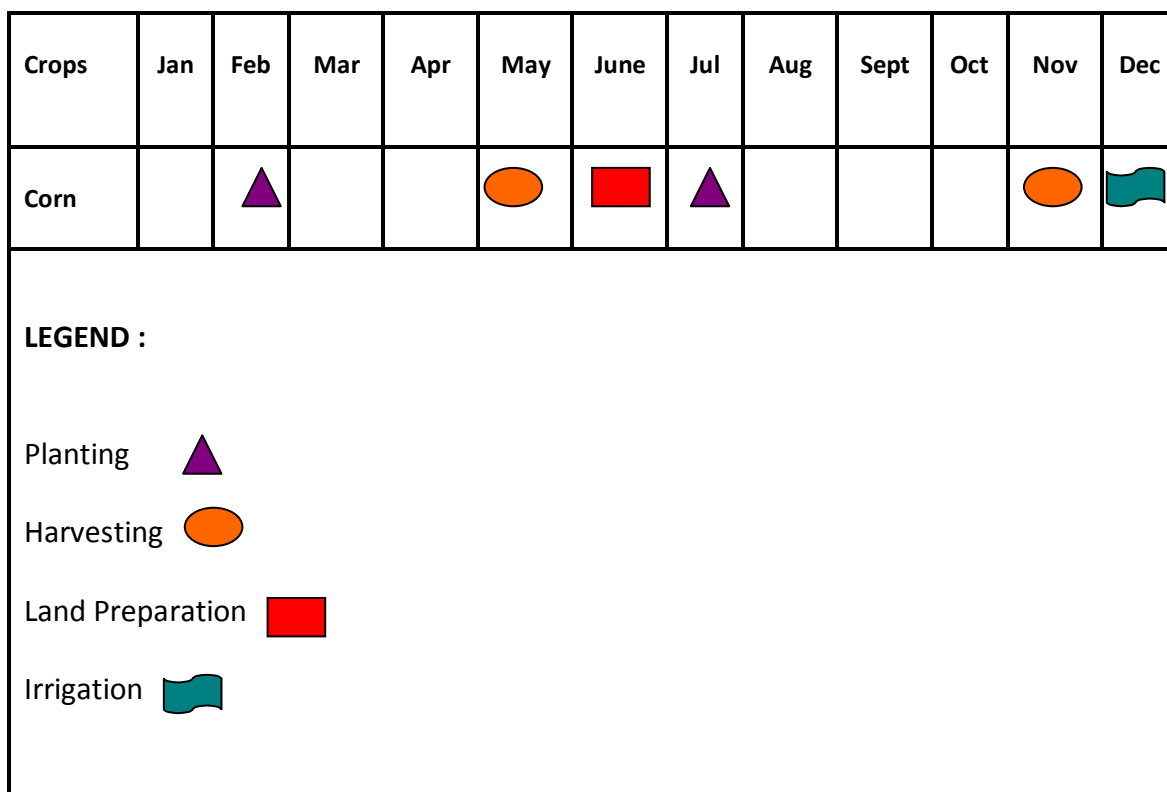


Figure 6.1 Magpet seasonal cultivation calendar for corn (Source: PRA workshops, March 2004)

As regards livelihood outcomes research results found that respondents had an average estimated annual income of PHP 63,806 and annual estimated average household expenses of PHP 49,000 including farm production. Household average income in 2002 was \$835. The average annual income per capita of PHP 9,115.14 (\$167) was below the provincial poverty threshold of PHP 12,000 (\$218) per annum for 2002. The provincial poverty threshold of Cotabato is low by global standards (less than a dollar a day). This figure is set at this level in order to take account of the non-formal economy, barter systems and the relatively low cost of staples in the area. Participatory farm budgets indicated that corn farmers made an average profit of PHP 20,000 to PHP 34,000 annually from 1 hectare of cultivated land with a total production cost of PHP 13,850 per hectare as broken down in Table 6.2. Respondents indicted low levels of savings or non-existent savings. This overdependence on corn as a livelihood leaves respondents at risk due to market fluctuations.

Respondents recalled the hardships faced in years when corn prices were low during life story interviews. **Felix**, a tenant farmer in Magpet in an interview in Kidapawan (10/10/2004) explains, *“We started with planting rice and corn as a means of our livelihood. My parents and my family still struggled because our yield was simply not enough to feed the entire family and the price we got from the trader was so low.”*

This low level of savings necessitates borrowing money for the following years inputs, as well as borrowing to meet large expenses such as school fees or medical emergencies. **Danilo**, a tenant farmer from Magpet, said in an interview in Kidapawan (10/10/2004). *“In terms of the social aspects, the concerned government agencies cannot easily respond to the needs of the community because of the lack of information. In my family, in time of health crisis, we cannot meet the financial need for hospitalization.”*

During the course of this study respondents in Magpet were kind enough to extend their hospitality to me on numerous occasions. In particular during the initial stages of the survey I was regularly offered a cold soft drink for which I was very grateful on hot humid days. Respondent's incomes are low by global standards, but their local purchasing power provides for a relatively reasonable level of comfort. Based on my personal observations although respondents are financially 'poor' they are relatively 'comfortable' in comparison to other rural producers I have visited in South East Asia. Although their furniture was mostly plastic and electrical appliances and running water were scarce. Electrical supply arrangements are haphazard and often shared between neighbouring houses through complex and precarious wiring systems. I never felt uncomfortable accepting hospitality in Magpet. In other comparable situations in South East Asia and the Philippines although I have accepted similar hospitality I have been concerned as regards the cost to the family.

Different aspects of vulnerability impact on and dictate how livelihood assets can be used in order to eke out a livelihood. Vulnerability under the SLA framework falls into three categories of shocks, seasons and trends. More specifically there are three basic categories of threats (Anderson and Woodrow, 1998) which were examined in detail in chapter two: Those based in nature; those based in violence; and those based on deterioration; such as trade shifts, which are the focus of this study.

Major livelihood threats at the Mindanao level were discussed in chapter five in particular issues resulting from a lack of infrastructure and investment. How these broad based findings on livelihood threats manifest themselves at the household producer level was further examined utilising a PRA workshop in Magpet in November 2004.

This workshop sought to draw out the underlying production threat context through a series of exercises including participatory farm budgets, market chain analysis, flow diagrams, seasonal calendars, preference ranking exercises and income and expenditure pie charts. Through a series of pair wise ranking exercises respondents identified and ranked priority problems. Threats identified were a lack of infrastructure in particular farm to market roads, prices received at the farm gate for corn, trader credit relationships, high cost of inputs, lack of post-harvest technology and unstable prices for corn. These problems identified form threats to existing livelihoods but can also form inhibitors to supply response.

Inhibitors to supply response undermine livelihood resilience. These threats have negative effects on the livelihoods of producers in Magpet even if each is examined in isolation. When these threats are examined together interesting issues as regards the multidimensional nature of vulnerability emerge. In particular threats which result from a lack of infrastructure combine to increase producer vulnerability both in terms of the price of inputs and outputs. A lack of infrastructure and resulting prices is squeezing producer's profit margins from 'both sides'. This leads to a treadmill effect. As the prices received at the farm gate per kilo decline, producers attempt to increase the quantities of corn that they sell. In order to increase yields producers increase inputs specifically fertilizer applications (as discussed in chapter five, section 5.5). The increased application of fertiliser necessitates purchasing fertiliser at increased prices. Table 6.1 below presents the consolidated rankings of the identified threats identified by Magpet respondents, and these will now be discussed in more detail in the following sections.

Table 6.1 Livelihood threats identified and ranked in Magpet, 2004

Area and Product:	Problems ranked in order of Importance
Magpet/Corn:	Interest on loans (access to capital)
	Input costs and quality including inflation of fuel price Transport costs Price received. Distribution channels Post-harvest facilities Soil Condition Technology-lack and type of extension services

(Source: PRA Workshops, March 2004)

6.2.1 Access to affordable credit and inputs

Interest on loans or access to affordable credit was identified by respondents as the major livelihood threat they faced (see table 6.1). Credit in this case included farm and non-farm loans as well as inputs borrowed on a 'charge to crop basis'. Participatory supply chain analysis and flow diagrams revealed that farmers largely sell their produce which consists of 80 per cent corn to traders in Antipas from whom they purchased their inputs. The inputs were purchased by farmers on a 'charge-to-crop basis'. The average interest rates were 40 per cent to 50 per cent over a six month period or 6.7 to 8.3 per cent per month, while respondents indicated that some traders charged interest rates as high as 15 per cent per month. This arrangement hampers the ability of farmers to obtain the highest market price for their produce at the time of harvesting. In terms of the purchase and selection of appropriate inputs, farmers are 'locked' into buying inputs from the same trader they have a credit relationship with. In practical terms this means that respondents cannot buy inputs at the most competitive price available.

Respondents are also limited to purchasing whatever product lines the trader carries. Although insecticides or fungicides may be required during the growing season farmers are not able to identify if they were necessary prior to planting corn. As inputs are 'purchased' in advance on a 'charge to crop basis' it is a considerable risk for farmers to 'purchase' insecticides or fungicides prior to the growing season as they may not need them. The livelihood threats identified and ranked in Table 6.1 depict numerous production related threats, importantly 49 per cent of respondents indicated during the workshop that the main problem that they face as producers is the high price of inputs. A further examination of the prevailing production costs in Magpet in 2003 as identified by respondents through participatory farm budgets is presented in Table 6.2 which illustrates that agricultural inputs constitute the highest production cost. These production figures are further substantiated by similar corn production enterprises in Mindanao.

Table 6.2 illustrates the high input costs associated with corn production in Magpet, based on average 2003 exchange rates. Input costs are approximately \$145 per metric ton as compared to \$67 in the United Kingdom (UK) and \$9 in the United States (US) based on average yield data for the same period (Nix, 2004). However, it is difficult to compare the individual costs presented here against a similar cost breakdown in the US or the UK. The high level of mechanisation in the US and the UK completely alters the nature of the cost structure per hectare.

Table 6.2 Corn production costs per hectare in Magpet, 2003

Activities	DAP	Unit					PHP
1. Land Preparation							
- Ploughing	-15	10	MAD	PHP	150		1,500
2. Planting							
2.1 Material/Inputs							
-Seeds	0	1	Bags	PHP	1800	/bag	1,800
-Fertilizers:(Basal)							
14-14-14	0	7	Bags	PHP	480	/bag	3,360
2.2 Labour							
-Furrowing	-1	5	MAD	PHP	150		750
-Planting	0	10	MD	PHP	100	/MD	1,000
-Basal Application	0	4	MD	PHP	100	/MD	400
3. Off-Barring	15-18	2	MAD	PHP	150	/MAD	300
4. Spot Weeding	26-28	2	MD	PHP	100	/MD	200
5. Hilling-up		2	MAD	PHP	150	/MAD	300
5.1 Inputs							
- Side-dressing							
45-0-0		3	Bags	PHP	520	/bag	1,560
0-0-60		1	Bags	PHP	480	/bag	480
- Labour		4	MD	PHP	100	/MD	400
6. Pest Monitoring & Control	28-35	1	MAD	PHP	150	/MD	150
7. Pest Monitoring & Control	40-70	1	MAD	PHP	150	/MD	150
8. Harvesting	105-110	10	MAD	PHP	150		1,500
TOTAL							13,850

DAP-Days After Planting, MAD-Man-Animal Days, MD-Man Days

(Source: Participatory Farm Budgets, November 2004)

These figures, though, fail to account for interest on loans, which average about PHP 1,560 per hectare per year. Interest on loans may include non-farm loans such as those used to pay school fees, these loans are being used to subsidise agricultural production in an indirect way. Low levels of government loans are available sporadically; however, there are numerous issues as regards accessing these which will be revisited in subsequent sections. **Marcelo**, a tenant farmer from Magpet explained in an interview in Kidapawan (10/10/2004) that, *“although loans may be borrowed officially for the farm (through a government scheme), the money can be used to pay school fees. After I pay the school fees I have no money to buy seeds or fertiliser so I get them from the trader on a charge to crop basis. The money I use for school fees should be for the farm but what to do? I have no choice.”*

The main point is that the effects of the combination of high input costs and low yields combine to make corn production uncompetitive. Low yields will be further examined in section 6.2.4; firstly it is important to consider why input costs are so high. The input cost findings presented above were substantiated by national figures, which indicate that retail prices of all fertilizer grades for 2003 were relatively higher than those in 2001 and 2002. When this increase in input prices is viewed in conjunction with the decrease in implicit tariffs on agricultural inputs as previously mentioned in chapter four, questions pertaining to the structure of the input industry arise. Tariffs on fertilizer and pesticides were 3 per cent in 2003, as compared with a 12 per cent and 16 per cent average respectively from 1990 to 1994. Guzman (2000) discussed the extent of concentration of the fertilizer and seed industry in the Philippines explaining that the crop protection association of the Philippines which accounts for around 95 per cent of total sales of fertilizer is dominated by multinational corporations. Protection from monopolistic competition is important in the agricultural input market. Respondents indicated that input prices were increasing. Interestingly, some respondents incorrectly presumed that trade liberalisation was responsible for these price rises. Thus, the lower border prices of inputs from reduced tariffs did not benefit farmers. This increasing price of inputs was attributed to inadequate infrastructure and distribution channels.

Theory allows that, “access to a variety of foreign inputs at a lower cost shifts the economy wide production function onward” (Dornbusch, 1992:74). In the case of Mindanao this access was undermined due to infrastructure issues and monopolistic competition.

These high input costs place a significant threat on the livelihoods of producers in Magpet which is exacerbated by the fact that these high input costs are met by obtaining credit which is costly. The prevailing purchasing system for inputs results in declining producer returns, high credit payments and a cycle of indebtedness. The combination of these three factors has significant impacts on the livelihoods of producers in Magpet. Loans accessed at high interest rates impact negatively on producer terms of trade and more broadly on overall livelihood options as an inhibitor to diversification.

6.2.2 Transportation costs

Inadequate infrastructure in Mindanao as discussed above impacted negatively on the pricing of inputs. The impacts of this infrastructure deficit have also been identified as impacting on other aspects of the production context. Respondents identified that a major threat experienced in the marketing of produce was the high transportation cost from farm gate to the trader in Antipas. Whilst the lack of infrastructure at a Mindanao level and its impacts on agricultural producers was examined in chapter five results from Magpet demonstrate high transport costs incurred at the local level. The multi stage distribution chain and the associated transaction cost at each stage results in an expensive end product. A breakdown of the various costs from Magpet to Manila as identified by respondents through participatory market chain analysis is presented in Table 6.3 illustrating the highest transport cost per kilo is incurred from the farm gate to Antipas.

These costs were compiled utilizing the results of participatory supply chain analysis exercises compiled by respondents in Magpet and further substantiated by key informants in the corn industry and secondary sources. As illustrated by Table 6.3 the transport cost incurred by corn producers was approximately PHP 1.58 per kilo of corn per kilometre. The cost from the farm gate to the barangay centre was the highest cost per kilo at PHP 0.90 per kilo. However, since 80 per cent of respondents sell to traders in Antipas the figure from farm gate to Antipas is used in Table 6.3 below. Carabao or horses are the mode of transportation from farm gate to barangay centre. This inadequate infrastructure in particular farm to market roads contributes adversely to the high cost structure of corn.

Danilo, a tenant farmer from Magpet explains in an interview in Kidapawan (10/10/2004) the adverse effects of infrastructure on both input prices and the prices received by respondents for their produce: *“We cannot avoid the difficulties because that is a part of life. If we will talk about the politics (because of the inefficient farm to market road) labour and transport rates for hauling of farm products are high while the buying price for our farm products is very low.”*

Although numerous studies have examined farmers in urban and peri-urban areas primarily agricultural producers are located in rural areas as “it is the immobility of natural resources that primarily defines the rural economic role” (Wiggins and Procter, 2001:429). The benefits to the rural poor of roads, which link these areas with urban markets, are well documented (Jacoby 2000, Windle and Cramb 1997). In addition Philippine provincial data reveals that roads, particularly when complemented by schooling investment can result in significant indirect and direct impacts which improve the welfare of the poor (Balisacan and Pernia, 2002).

Table 6.3 Cost structure of Corn from Magpet to Manila, 2001

Price Structure per kilo	Cost PHP per kg-White	Cost PHP per kg-Yellow
Farm gate Price	6.870	6.500
Farm gate to Antipas (based on 15km)	0.300	0.300
Retail Margin-Minus Antipas to Davao transport cost.	-0.060	2.420
Antipas to Davao (based on 85km)	0.510	0.510
Wholesale Margin- Minus transport cost-Davao to Manila	4.836	3.206
Davao to Manila (based on 967Km)	0.774	0.774
Total Cost per kg	13.230	13.710
Total Cost per Metric ton \$	254.423	263.654
World Price per Metric ton (2001) \$(FOB ²⁷) Corn	75.000	75.000
Per cent above World Price	71	72

(Source: Adapted from participatory market chain activities, March 2004 and Bureau of Agricultural Statistics, 2001)

In Table 6.3 in order to avoid the risk of double counting, the transport costs were subtracted from the retail and wholesale margin. Transport costs may be a component of either the wholesale or retail margin. This depends on the individual marketing arrangements the specific marketing margins and the functions carried out by actors at each stage of the supply chain. In terms of the computation of costs the overall total will remain the same.

These figures further highlight the adverse impact on cost of inadequate farm to market roads particularly as discussed from the farm gate to barangay centre.

²⁷ Free on Board (FOB) means that the seller pays for transportation of the goods to the port of shipment, plus loading costs.

Elsie, a tenant farmer from Magpet, in an interview in Kidapawan (10/10/2004) like most of the other Magpet respondents explains that while drought and other factors affects livelihoods a constant underlying threat to livelihoods is a result of insufficient roads: *“Our family struggled to meet our daily needs. Our only means of livelihood was corn farming. I went to school in 1981 and because of the difficult time, I had to stop when I was in grade six to work on the farm. It was during this time that our farm suffered from drought. We had to settle for root crops as an alternative for our daily meals. Our livelihood was not doing well with the absence of a proper road from our town to Antipas which gravely affected sales of our goods.”*

In terms of Magpet price received at the farm gate an examination of the 2003 price estimates reveals that the farm gate price of yellow corn grain hit an average of PHP 6.94 per kilo, while the price of white corn grain averaged at PHP 7.26 per kilo. As of December 2003 local corn prices reached an unprecedented high farm gate price of PHP 9 – PHP 11 per kilo. This large price increase can be attributed to the fact that the landed cost (Manila) of US corn reached PHP 11.50 per kilo and the landed cost (Manila) of Indian wheat reached PHP 11 per kg due to production shortfalls in India. Earlier, Mariano (1996) found out that historically, the domestic price of corn has been 50 per cent higher than the world price. Mariano added that the landed cost of Thai corn, for example, was PHP 3 per kilo (at the time of his study), while corn shipped from Mindanao was PHP 5.50 per kilo.

Respondents indicated dissatisfaction with the price received for corn from traders although these findings indicate a high price received for corn compared to the prevailing world price. Profit margins rather than price received for corn is low. When high transport costs are considered in conjunction with the high input costs it highlights the unviable nature of corn production under these conditions. The price received by producers at the farm gate minus high input costs leads to very low (if any) levels of profit from which producers gain their livelihood. The high price of Mindanao corn in comparison to global and landed corn prices in Manila highlights the uncompetitive nature of corn production in Magpet.

This is further substantiated by Chupungco (2001) who conducted a price competitiveness analysis, adjusting for marketing and distribution cost up to Manila from the respective production areas; it was found that domestic corn was either marginally or not competitive at all with imported corn at the Manila wholesale market. This is attributed to the high distribution costs as discussed in the previous section incurred in bringing the corn from the production areas to Manila. Given this prevailing cost structure of high input and transport costs, it is now necessary to consider the outputs achieved from corn production in Magpet. This examination will provide the 'full picture' as regards the level of competitiveness of corn as a livelihood enterprise.

6.2.3 Low production outputs

When the corn cost structure presented above for Magpet is calculated per kilo based on average yields it is evident that the production cost per kilo is extremely high. This is partly due to low yields. Importantly results of participatory farm budgets in Magpet found that the prevailing production costs of PHP 7.25 per kilo are above average selling price of PHP 6.94 for yellow corn and PHP 7.26 for white corn. Respondents did not make any differentiation in the production costs of white and yellow corn. This figure indicates that producers are incurring losses in corn production enterprises. Therefore other sources of income or credit are subsidising corn production enterprises in some form. These production figures are further corroborated by similar corn production enterprises in Mindanao, which indicate that unless corn prices stabilise at the current high rate, producers would in fact be operating at a loss.

The low corn yields experienced by producers in Mindanao as a result of a lack of technology, post-harvest losses and small farm size were discussed in chapter five. This is compounded by the lack of formal agricultural extension services, (some Integrated Pest Management training was provided by the Department of Agriculture). Extension services in the areas of diversification and value-adding activities are non-existent. **Jose**, a tenant farmer from Magpet in an interview in Kidapawan explains that a combination of these factors undermines attempts at gaining a livelihood from corn production (10/10/2004): (Jose's family migrated to Davao but returned to the barangay in 1991) *"Despite the large amount of farm inputs, we did not have enough income because of the inefficient farm to market roads, lack of government support, and insufficient government basic services."* *"In 1998, our barangay was among the beneficiaries of the plant-now-pay-later programme of the Governor. Most of the people however, were not able to pay because of the insufficient social preparation."* As highlighted by Jose the inability of respondents to repay loans and the lack of loan preparation received by respondents prior to receiving the loans suggests inadequate project identification by local government. The inability to repay loans highlights the low levels of income at the disposal of agricultural producers this is looked at further in section 6.4.1.

The Magpet corn producer context is undermined by limited access to assets in particular financial assets (credit) and physical assets (infrastructure). This combined with the high costs of inputs, low yields, a lack of extension and post-harvest services and low prices received for corn results in low profit levels. When this is viewed in conjunction with global corn yields and the price of imported corn it is obvious that corn production is not a sustainable livelihood. This raises numerous questions as regards the rationale for continuing to seek out a livelihood from corn production. Why are producers in Magpet continuing to follow this livelihood strategy? What is inhibiting them responding to changes in their production environment. These questions are further discussed in the following section which attempts to examine the rationale behind non diversification of corn producers in Magpet.

6.2.4 Rationale behind non diversification in Magpet

Research findings indicate that corn producers in Magpet lack the means, the market and technical information to adapt to price decreases. Magpet corn producers continue to seek out a livelihood from corn production which is financially unviable based on the production context information presented above. Producers need ways of diversifying income by either diversifying agricultural production or diversifying income sources or value adding to current agricultural production. As discussed by Scoones (1998:6), “A livelihood is sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities or assets.” As previously discussed the ability to respond to change is key to livelihood resilience.

Although Magpet respondents recognize the decline in real farm gate prices of corn and the increasing prices of inputs, there was no notable change in cropping patterns between 1992 and 2002. Even at the high prices received producer households per capita income averages at about 0.46c USD a day. These findings raise numerous questions as regards a lack of response to prevailing conditions by producers. Is this non response a livelihood strategy in itself? Have producers in Magpet made a choice not to respond to prevailing market conditions due to risk aversion, or is it simply that the overriding production context does not enable diversification due to lack of access to important assets such as credit?

Changes in livelihood strategies are based on the resources available and the context in which people attempt to achieve their livelihood goals, and are adapted in order to deal with unstable conditions such as the livelihood threats discussed in previous sections. According to Scoones (1998:3) the key question to be asked of any analysis of sustainable livelihoods is, “Given a particular context what combination of livelihood resources results in the ability to follow what combination of livelihood strategies with what outcomes?”

In this instance, since the livelihood strategies employed by farmers in Magpet are already on hand it is necessary to unpack the factors leading to these strategies. This approach allows a reading of the underlying factors leading to the existing strategies. Sufficient consideration needs to be afforded to the various dimensions and their sub components that comprise what is neatly presented as a given livelihood strategy. As discussed in chapter two a livelihood goes far beyond income generation. The ability to pursue different livelihood strategies is dependent on the basic material and social tangible and intangible assets that producers have at their disposal. These livelihood resources constitute the 'asset' base from which productive systems stem, allowing the construction of livelihood options. All of these factors combine at some level to enable diversification and improve the resilience of the livelihood system.

6.3 Is non-response a strategy in Magpet?

The production context above and the lack of response by Magpet corn producers to negative conditions indicates that producers are following what was discussed in chapter two as a coping livelihood strategy. Livelihoods strategies are explained in chapter two are generally classified in broad terms into coping or adaptive strategies. Devereux (2001) defines coping strategies as responses to adverse events or shocks, while adaptive strategies are adjustments to adverse trends or processes. The distinction between *ex ante* risk management and *ex post* coping with crisis is more complex. Risk management is interpreted by Ellis (2000) from the work of Walker and Jodha, (1986) as a deliberate household strategy to anticipate failures in individual income streams by maintaining a spread of activities to gradual negative trends. Strategies themselves are subject to a host of influences while “the coping strategies of those who are poor and deprived vary by region, community, social group, household, gender, age, season and time in history” (Chambers, 2006:35). The lack of supply adjustment by producers in Magpet does not fit neatly into the coping strategy or adaptive strategy group.

Risk aversion may well reduce producers’ response to price incentives, particularly if these prices are felt by producers to be uncertain (Lipton, 1987). Lack of market and price information and suspicion of the governments' willingness to pursue and sustain stringent reform policies does not help producers to make the necessary adjustments (and price expectations) to respond to price increases. The importance of non-price factors as a component of supply response can in some cases prove more important than the price factors. In certain instances, incentives towards agriculture can in fact be undermined or completely wiped out by non-price factors “ a deficient infrastructure, for example, as is the case in many third world countries, can wipe out the price incentive to produce more”(Mamingi, 1997:32).

From a purely economic perspective the general supply function of the farming industry can be expressed as a function of time, technical advance, net production, net price, expected price of the factor input and expected future price. This of course assumes that producers behave in a rational profit-maximizing manner and fails to take account of risk aversion. Agricultural supply adjustment is also subject to time lags in the short run. In this context, the availability of assets also impacts on the ability to adjust supply.

The response or a lack of supply adjustment in the case of Magpet producers does not correspond completely with the divisions in strategy presented above into either coping or adaptive strategies. Therefore the rationale resulting in this response needs further examination. Coping is discussed above as a short term reaction to shocks and stress, although in Magpet there is no evidence to suggest that producers are following this strategy in order to 'cope' in the short term. Whilst the conceptual discussion above is useful in order to form classifications and categories in the case of Magpet it is difficult to 'fit' the prevailing livelihood strategies into any of the presented definitions. The concept of a coping strategy suggests that that corn producers are producing corn as a form of risk management and that corn producers are following this strategy based on informed production decisions. There is no evidence in decision making trees compiled by Magpet producers to suggest this. The rationale for producing corn when viewed from a production context perspective is extremely unclear. It is necessary to further unpack the livelihood strategy of corn producers in Magpet in order to ascertain what factors are leading producers to a non-response in these circumstances.

6.4 **Asset access as a rationale for non-response**

In Magpet six respondents diversified agricultural production in response to the prevailing production context while 25 did not. Is the lack of diversification being caused by limited access to the asset base? Limited accesses to affordable credit and inputs as well as the limited infrastructure have previously been discussed as having a negative impact on livelihood strategies. This section seeks to explore whether this limited access to the asset base is also forming barriers to supply response.

Participants identified the availability of natural resources through resource and farm maps examples of which were presented in chapter five. The most notable findings from these maps were the sufficient availability of water and the suitability of terrain for diversified farming in both the study sites of Magpet and Malabog. The participants also identified poor soil fertility and susceptibility to soil erosion of the sandy and clay loam soils as the cause of low yields. Farmers recognize the production benefits of artificial inputs in order to increase yields; however, when this is considered in tandem with trader credit relationships which necessitate the use of crops as collateral with traders this limits the ability to diversify.

6.4.1 Physical and Financial Assets and input relationship

Non-diversifiers indicated the high cost of inputs as a major constraint to diversifying agricultural production. Firstly, the cost of agricultural inputs has increased over the last decade as previously discussed in section 6.2.1. All of the farmers surveyed avail of some level of credit for purchasing their inputs. The high costs associated with obtaining credit are trapping farmers in a cycle of debt with traders and creditors, which results in a 'treadmill effect', where farmers gradually increase the amount of inputs they apply in order to increase yield in order to clear debts. Lastly, continual application of fertilizers and pesticides is acidifying the soil, reducing its potential yields over the longer term.

Traders provided 80 per cent of the respondents with credit facilities, filling in the gap left by the absence of the formal credit sector. This leads to the formation of a relationship, which in itself reduces transaction costs but increases the dependency cycle, further reducing the producers' ability to react to economic shocks. A study conducted by Hendriks (1994) on the credit relationships in the Philippine vegetable sector found that small farmers and small traders have little room for manoeuvre, since they depend on the capital of their traders. This relationship in Magpet is quite complex. Research found that 50 per cent of respondents not only received credit from their traders, but also purchased inputs from them. The remainder largely purchased their inputs from the cooperative.

The lack of access to credit was highlighted by **Teo**, a tenant farmer in Magpet, in an interview in Kidapawan (11/10/2004): *"Our barangay was among the beneficiaries of the 4000 pesos farm input loan of plant-now-pay-later programme (administered by the local government). The community greatly benefited but up until now, most of them have not paid their due loans yet. I believe that this project would truly succeed if orientations on the proper implementation of such projects were given prior to distribution among the beneficiaries. " "The community does not have enough knowledge and skill on farming technologies as well as on animal farming. Some have the skills on vegetable farming but lack financial support. In our community, most of us rely on the credit for farm inputs which is being provided by abusive capitalists. This is the reason we, the farmers, continue to suffer. Income from the plant-now-pay-later programme of the government is insufficient to help us pay our credit."*

Although the government is attempting to address this issue through schemes such as plant-now-pay-later, as highlighted by Teo, issues still remain as regards loan repayments and the amount of the loan available. Table 6.2 calculated corn production costs as PHP 13,850 per hectare. The PHP 4,000 plant-now-pay-later loan available from the government is as discussed by Teo not enough to contribute significantly towards production costs.

Marcelo, a tenant farmer from Magpet discusses in an interview in Kidapawan the inability to pay back cooperative loans (10/10/2004): *“With regards to our farm related projects, Mahongkog multi-purpose complex granted us loans for farm production but unfortunately, the farmers are having a hard time paying back because the yield was very low. Our community basically underwent economic instability because of uncontrollable factors such as drought and lack of farming facilities and farm to market roads.”*

During the study period there were discussions at the Mindanao local government level as regards the low level of repayment of government farm loans. Key informants discussed that farmers will always pay back the traders and loan ‘sharks’ first out of fear of intimidation and higher interest rates for inputs in the future as a penalty for late repayment. Key informants indicated that government loan beneficiaries are often not identified correctly, as many of the identified beneficiaries are so impoverished they will spend the loan on providing food for the household (although not directly due to restrictions of the loan schemes). If credit which is allocated for farm inputs is reallocated for the purchase of food this provides an insight into non response by Magpet loan beneficiaries. Magpet loan beneficiaries are prioritising consumption needs over investment, a lack of investment capital is an inhibitor to diversification into high value crops such as vegetables which is discussed below.

Respondents reiterated that there was, *“No problem obtaining finance, the high interest cost is the problem”*. Interest rates are as high as 50 per cent. The real issue is a lack of access to affordable credit. Formal lending institutions that offer credit at reasonable interest rates have stringent lending pre-requisites, such as a credit history, and high collateral requirements. Thus, access to these funds is closed to rural small scale producers.

During participatory workshops, producers were asked, “If I give you \$100, what would you spend it on?” 83 per cent of respondents answered loan repayments and labour. However, when this question was rephrased to, “If I give you \$100 to spend on the farm, what would you spend it on?” Although labour remained an answer, loans were no longer included. This is an important finding in that it indicated that producers do not consider the servicing of loans as a farm expense. Indeed the main answer (76 per cent) for the second question was, “various types of farm inputs”. This finding is further substantiated by previous research on production costs when, without prompting by researchers, respondents did not include loan repayments in their participatory farm budgets balance sheets. The existing credit situation which limits producer options is currently being addressed by micro-finance NGOs and government initiatives; however, their coverage is sporadic. The evidence presented above as regards non ability to pay back loans also indicates that beneficiary selection criteria and accompanying financial training is weak. Beneficiaries who fail to pay back loans are falling further into debt which is increasing rather than decreasing their vulnerability context. This further inhibits rather than facilitates the ability of producers to respond to changes in market prices.

Livelihood strategies will depend on household or producer category. The level of profit from corn and resource endowments may or may not enable farm producers to increase competitiveness or seek alternatives. The impact of a price change on producers will depend on how much the sale of this good contributes to total expenditure, or how it contributes to the overall livelihood strategy. Income is an important consideration in terms of providing the necessary resources to adjust supply and diversify production.

According to Mamingi (1997:22), “income level has a positive impact on agricultural output to the extent that the higher the farmers income, the higher the level of production, *ceteris paribus*”. This is mainly explained by the fact that with a higher income, the farmer can easily acquire the much-needed inputs that can help boost production. Physical assets are important in terms of diversification but they often require large capital investments. In the case of Magpet respondents would need to borrow capital at high interest rates. Briones (2008) discusses that high-value commercial crops generally require greater upfront capital investments.

The lack of access to capital acts as a barrier that limits the farmers, in Magpet, in shifting production from low-return crops, such as corn and coconut, to high-return crops, such as cauliflower. High return crops often require specialised equipment which is particular to each crop.

However, high interest rates also increase the riskiness of diversification even when producers can access credit. This lack of access to physical assets negatively influences producer's vulnerability. Physical assets can reduce post-harvest losses thus adding value to current corn outputs. The low level of dryer provision and drying facilities increases producer vulnerability to weather patterns as high rainfall and thus moisture content rapidly decreases the price they receive for their produce during periods when moisture specifications are enforced (see section 4.5.2). As the main expenditure of Magpet producers is on food, to deviate income away from this in order to seek livelihood alternatives or purchase post harvest facilities is not feasible. Respondents identified that it is difficult to apply modern technologies due to the lack of vital information on farm production, and limited access to adequate funds to purchase new agro-post harvest facilities. This combination of a lack of information and finance increases the risk of adopting new varieties of crops which initially raise production costs (Aydin, 1986).

Infrastructure issues have been discussed in considerable detail at both the Mindanao level in chapter five and at the local level in the sections above. It is important for this study to note that a lack of infrastructure alone provides a major inhibitor to supply response. All the maps compiled by participants indicated lack of farm to market roads and infrastructure in general. DFID (2002) provides an informative explanation of how investment in infrastructure services can contribute to growth by enabling economic players to respond to new types of demand in different places, and by lowering the costs of inputs used in the production of almost all goods.

This combination of a lack of access to affordable credit, limited technical knowhow/skills and a lack of physical assets to reduce post-harvest losses all form inhibitors to supply response. These issues which increase vulnerability form inhibitors to diversification while at the same time increasing uncertainty as regards diversification options which may contribute to risk aversion. All of the above factors inhibit diversification but it is important to consider that these inhibitors are experienced by both diversifiers and non-diversifiers. Therefore factors other than those that are discussed above and that inhibit supply response need to be considered.

6.4.2 Human assets

SLA theory allows that human assets are the most important asset as they influence how all the other assets are utilised. Human assets play an important role in managing other livelihood assets switching livelihood assets or changing the way in which livelihood assets are utilised. Although respondents ascertained that a labour shortage existed during harvest time, this is unlikely as only two participants had seasonal jobs and commented that there was a shortage of employment opportunities in the study area. It is more likely that existing farm income levels do not permit the employment of additional labour other than that of the family. Family labour plays a crucial part in the production calendar. Seasonal calendars compiled during the PRA workshops in March 2004 revealed that farmers will attempt to carry out labour intensive activities during the school holidays when the children are available to work on the farm. Some respondents maintained that the traders exploit this situation by offering lower prices for produce harvested just before the start of the school term. Traders know, respondents said, that the farmers could not wait another week to harvest due to a lack of labour. Farmers need to sell their produce once harvested at a lower price due inadequate post-harvest storage facilities.

In Magpet, the extension providers during the study period were the provincial government of Cotabato through the SAAD and the Mindanao Rural Development Programme. In terms of the quality and type of extension, participants indicated that government trainings were based on current government initiatives and policy rather than being demand driven. Respondents identified that government programmes largely followed the 'official line' at the national level which currently is concerned with improving yield levels. One such initiative is the Hybrid Corn Area Expansion Programme of the Department of Agriculture. This entitles farmers to PHP 1,200 discount upon purchase of hybrid seeds, which have a higher yield than the traditional open pollinated variety seeds. Access to information as regards NGO and government initiatives is not widely publicised. Government programmes are often complicated for farmers to access.

Adelino a land owner in Magpet explains in an interview in Kidapawan (10/10/2004) that the fact he held an elected local government position enabled him to access information as regards NGO programmes. **Adelino:** *“Our life was very difficult as we started without even owning land, a house, and animals that could be used for farming. Because of this, my father decided to move to this barangay and there we started to try our luck. We eventually managed to acquire a carabao, lands and built a house. By 1999, I got married and it was from this time that I had to struggle to feed my family.” “It was only when I became barangay chairman that I was able to understand how effective is the NGO in helping us to gain access to technical skills and other projects such as electrification, infrastructures, water system, education and other government programmes like family planning.”*

Training for production techniques are provided by numerous NGOs, CADTEC and SAAD on organic fertiliser and Monsanto and CADTEC on conservation tillage technology. Monsanto, in general, promote their own products. A failure of adequate public sector technology research, in particular in the area of agricultural inputs, has enabled global agri-input companies to penetrate this sector and fill the gap left by the absence of the public sector. In order to reduce transaction and marketing costs their efforts are concentrated on working through production groups such as co-operatives. These technology providers have a captive market for their products due to the absence of public provision in this area.

Short-term adjustments are critical in factor markets; in particular, the flexibility of the labour market. The level of educational attainment of the respondents suggests that they do not possess transferable skills, and thus are not in a position to reap any of the benefits of liberalisation but rather bear the brunt of external shocks. In theory, liberalisation raises the overall demand for labour; however, this increase in demand rarely transfers to the unskilled sector. Wood (1995) asserts that in most developing countries, the demand for unskilled labour (defined as workers with no more than a basic education) has fallen substantially over the past couple of decades, relative to the demand for skilled labour. The acquisition of new skills by respondents is deemed unlikely in the current setting.

With the exception of some co-operative training and the intervention of a small number of NGOs, no training schemes are currently in place.

In summary, Magpet respondents lack knowledge as regards to new technology and transferable skills. Labour shortages are noted at harvest time but this is very much a seasonal occurrence as there is a lack of employment opportunities outside of harvest time. In terms of diversification the lack of skills and extension services undermine the ability to respond to changes in the production environment in terms of diversifying agricultural production. Respondents do not possess a large amount of transferable skills and are therefore limited in the choices of non-farm income diversification available to them.

6.5 The role of remittances

In the rural Philippine's OFW's and their remittances are very much part of the fabric of rural life. Gonzaga (2009) estimates that in 2009 \$ 17.3 billion in remittances was transferred through various banking channels a year on year growth rate of 5.6 per cent. Iredale, *et al.*(2004:116) provide an informative overview of international migration from the Philippines explaining that, "After more than a quarter of a century of experience in the export of labour, fuelled largely by emigration pressures built up over long years of economic and political mismanagement, the Philippines today has become the largest exporter of human capital in Asia." Filipinos work in more than 100 countries in the world. Empirical evidence reveals the following patterns regarding international migration in the mid-1980s and 1990s: the increasing primacy of temporary labour migration over permanent migration; the increasing prominence of Asia as a work destination; the decline in importance of the Middle East as a job site; the increasing feminization of labour migration and the continued importance of foreign remittances to the economy of the Philippines (Adams and Page, 2003). Kelly's (1999) work on labour markets in the Philippines concluded that just as the household is extended far beyond the walls of the house by contributing members located far afield so too is the local labour market a 'network space' of connections at varying distances rather than a geographically contiguous 'place'.

Migration resulting in remittances can play a role as a facilitator or an inhibitor to diversification; however, the strategic use of remittances in diversifying or building up the asset base can be constrained by several factors. Wouterse and Taylor (2008:627) explain that remittances "could reduce the 'push' to diversify for risk reasons", in that remittances offer a buffer against market risk associated with mono-cropping. On the other hand, if new activities are perceived as risky, and if a lack of liquidity constrains investment, the presence of migrants in rural households could stimulate diversification into non-staple activities.

Although producers cite a lack of access to credit or financial assets as an inhibitor to supply adjustment, an examination of the income and expenditure pie charts compiled by participants identified that all respondents in Magpet were receiving some form of remittances. Remittances were 'sent' either from family members working locally or internationally. However, the amount received constituted a very small percentage of income (ranging from 1 per cent to 8 per cent.) Six respondents were 'unsure' as regards the amounts received. Respondents discussed that family ties and togetherness are considered more important than increased income and equally there is no evidence of long-term investments of these remittances. This could indicate that these remittances are being used to finance daily living expenses and farm operating costs. The 'opportunity cost' of migration is low in Magpet but it would seem so are the benefits to the sending community. This is contrary to research carried out by Gonzalez-Velosa (2011: 31) who found from her research on the Philippines results that, "contradict views that remittances primarily sustain current consumption with no impact in productive investments".

Regarding incomes from relatives or migrant remittances, "on average, a 10 per cent increase in the share of international migrants in a country's population will lead to a 1.6 per cent decline in the poverty headcount" (Adams and Page, 2003:1). De Haan and Rogaly (2002) say that research on the effects of migration on areas of origin is relatively scarce, but the few that exist generally show that, at the macro-level, remittances contribute relatively little, and out-migration usually does not radically transform poor areas. Many studies emphasize that migration may create dependency rather than generate development. Paris *et al.* (2010:25) from a study carried out on the Philippines, Thailand and Vietnam found that, "households without migrants have much larger sources of non-farm income than migrant households in all three countries". However, their data did not capture whether non-migrant households develop non-farm livelihood activities because they cannot engage in migration, or whether they do not wish to migrate because they have a satisfactory range of farm and non-farm income sources. Or in the case of Magpet do remittances form an inhibitor to diversification as people don't need to diversify as remittances are sufficient to cover necessary expenditures?

The six diversifiers in Magpet received the lowest levels of remittances of all respondents in Magpet. This is not sufficient evidence to indicate that they diversified due to receiving low levels of remittances, it is more likely that they are considered 'better off' than other relations and therefore do not receive the same levels of remittances. Findings in the case of Magpet demonstrate remittances are not large in terms of cash received; they are, however, propping up the corn balance sheet. This was not clear to respondents, following the compilation of participatory farm budgets, the balance sheets did not correspond with information provided through pie charts and input cost data. The role of remittances in corn production only became clear after numerous questions were asked as regards income gaps. Remittances are not considered large enough to be an inhibitor to supply response but it is difficult to ascertain their true contribution to the corn enterprise balance sheet.

This difficulty in attributing a cash value to remittances is due to the nature of how they arrive. Although some money is still sent in 'envelopes' or through *Western Union* transfers, (who have a large presence in Mindanao), remittances do not always come in the form of cash. Regularly expensive gifts are sent or brought back by the OFW which can then be sold. It is common for hospitable bills or school fees to be paid by OFW's for their family. Although remittances are contributing to household income their role in household and farm expenditure is not clear. Respondents indicated that most of their received remittances were spent on consumption and not investment. It was difficult to untangle whether or not remittances are spent on everyday consumption such as food. This would then free up finances to be allocated to farm expenditure.

It was also difficult to ascertain if remittances were contributing to the purchase of one off expenditures such as fiestas or 'luxury' items. In the case of Magpet, levels of remittances are not high enough to provide an incentive to make capital investments in new technology. Remittances do, however, seem to be high enough to buffer respondents from all of the financial impacts of unprofitable corn enterprises. Remittances may therefore reduce the need for or the push factors associated with agricultural diversification.

6.6 Issues which contribute to uncertainty

Beyond inhibitors to diversification as discussed in the previous sections above other factors contribute to uncertainty and increase the risk involved with diversifying agricultural production. These factors which increase risk can in themselves form an inhibitor to diversification. Uncertainties are summarized by Ellis (1988) under four main categories namely natural hazards, market fluctuation, social uncertainty which refers to insecurity over the control of resources and lastly state actions and wars. Timelines and life story's compiled by respondents in Magpet indicated that over various time scales events have occurred which would contribute significantly to uncertainties as classified above. The data collected also identified that a combination of these uncertainties can form inhibitors to supply response. As discussed in chapter four in Mindanao the underlying context exists which would contribute to all the uncertainty categories presented above. Although households may face similar constraints in terms of production based inhibitors to supply response they will manifest themselves differently at the household level. How inhibitors play out at the household level depends on the composition of and risk management strategies by the household.

In other words different households have arrived at the same response i.e. no response for very different sets of reasons when viewed through the uncertainty lens. Given the high levels of uncertainty a strategy of 'no response' can it itself be viewed as a viable livelihood strategy in order to maintain current livelihood assets until things improve. Such a strategy would indicate high levels of risk aversion.

As a component of the participatory workshop in November 2004 respondents compiled timelines covering the previous 50 years. Participants identified events that were important to them in terms of livelihoods. Interestingly a large number of the events deemed important are related to agricultural production activities. The major events which occurred at the community level were identified as road construction due to the commencement of logging activities and infiltration by armed communist insurgents.

At the household level the introduction of hybrid corn seeds in 1981, synthetic fertilizer in 1992, the creation of the SAAD projects in 2001 and the introduction of irrigation in 2003 were all deemed important.

Migrants originally resettled in Mindanao as part of the resettlement programmes when land was cheap and fertile, however, within Mindanao there is strong evidence of enforced geographical mobility as a result of political conflict, conflict with landed 'gentry' and a lack of peace and order. Although respondents families have settled in Mindanao since the early or mid-1900s as discussed in section 5.2.2 they are still referred to as settlers, as are all of the non-Moro and Lumad current inhabitants of Mindanao. The peace and order situation since the 1970s has led to further displacements and relocations within Mindanao. Although the causes of relocation and displacements may differ the results for respondents are largely the same in terms of loss of assets and uncertainty.

Elisio, a tenant farmer from Magpet discusses the results of conflict in an interview in Kidapawan (10/11/2004): *"We initially lived in the old Ampatuan boundary in September 1952. When we were able to save enough for the family for two years, local conflict prompted us to transfer to Agusan. Life was very difficult in Agusan because there we lost our savings. We had to struggle to meet our day to day needs. The family decided to move to North Cotabato. Here we initially stayed and worked as tenants on a parcel of land owned by somebody else. It was very difficult to acquire this land because it belonged to Mr. Omegas. To make use of this land, we started planting rice and corn. The farm harvest wasn't doing well because aside from the fact that other animals fed on our crops, cowboys and other authorities under the protection of the Mayor constantly harassed us. I would say I was a victim between two political clans, the area of Mr. Omegas and that of Mr. Duma. Such harassment went on for years until the conflict between the clans really intensified to the point of war."*

Forced displacement and civil unrest in general provide an inhibitor to investment and supply response. The impact of conflict on agriculture is discussed by Longley *et al.*(2006) notable impacts include abandonment of land and inputs as well as the forceful acquisition by militia or other groups of such.

Given the historical incidence of such displacements and civil unrest as depicted through life stories and timelines this is certainly an issue for producers in Magpet. **Esau**, another tenant farmer from Magpet explains in an interview in Kidapawan (11/11/2004) the continuous cycle of displacement and resettlement experienced by respondents: *“We are from Panay, Negros, Visayans. We went to Mindanao in 1950 and stayed in Digos, Davao del Sur. Copra was our main livelihood for two years in Digos. Because of the hardships we were in, my father went to Cotabato to avail himself of the land distribution in the place. My father planted rice for 3 years but the harvest was not good because of the constant rainy season that hit the area. He got frustrated and sold the land. We moved to Ca-oran, La Esperanza, Sultan Kudarat. Within one year of stay in La Esperanza, conflict between local Muslims and Christians erupted. We moved to San Fernando, Valencia, Bukidnon. Barangay San Fernando is very far from Valencia. To reach Valencia town, we had to walk for two days. Life was very difficult for us. We had to cross rivers, pass dangerous tracts/routes for two days just to deliver our farm products and sell them in the town proper. We did not eat for several days. A series of events gravely affected our livelihood - political intimidations, militarizations, government linking the church with the NPA, presence of NPAs, evacuation, and Martial Law. Conflict between the revolutionaries and the military affected our livelihood. The absence of farm to market roads had badly affected our livelihood.”* Esau’s interview highlights that a combination of both livelihood threats which inhibit response such as infrastructure and factors which increase uncertainties such as conflict and forced displacement often combine in a complex manner. This combination of factors increases risk and vulnerability. Results indicate that although the overall trend is a lack of diversification the rationale behind this is due to numerous factors, which are inhibiting supply response.

Respondents explained that after their families relocated to Mindanao from the Visayans and Luzon, the meagre income from corn was considered preferable to their previous livelihood options. Respondents explained that similar to the pioneers who developed the ‘wild west’ in the United States an overwhelming ethos of ‘try your luck’ existed. In most cases the land needed to be cleared prior to cultivation and so some income from cleared land is considered preferable to no income.

In the case of Magpet respondents indicated through numerous outputs the overall negative impacts of a mixture of livelihood threats and issues which contribute towards uncertainty. **Teresa**, a tenant farmer from Magpet discusses in an interview in Kidapawan (10/10/2004) the negative impacts of conflict and low yields: *“My Father moved to Mindanao from Cebu during 1960s. Life was very difficult in Cebu so that my Father moved here to look for a job. The conflicts between Muslims and military were so intense that we decided to move to another Barangay. There we suffered so much. We had to settle for root crops for all our daily meals. We were 13 in the family and it pains me to see my mother in tears every time she saw us eating root crops during our meals. My father worked on the farm but the yield was simply not enough to meet our daily needs and often we went without food for days. ”*

The life story extracts presented throughout this chapter demonstrate that it is evident that more than one factor contributes towards an inability to shift supply and an increase in uncertainty. Again it is this multi-dimensional nature of vulnerability that is discussed by **Felix**, a tenant farmer in Magpet, in an interview in Kidapawan (10/10/2004): *“I started rice and corn farming in 1976. At that time, the volume of my harvest was for our basic family consumption and some daily maintenance. In 1979, the family decided to move to Cotabato. Initially, we had a hard time due to some local conflict but we managed to overcome such issues as we really need to start again and meet our daily family needs. We started with planting rice and corn as a means of our livelihood. My parents and my family still struggled because our yield is simply not enough to feed the entire family.”*

Issues which contribute to uncertainty and risk have in the case of corn producers in Magpet provided an inhibitor to supply response which limits the resilience of the livelihood system. The six producers who diversified also faced similar exposure to uncertainty in particular conflict and displacement. The exceptions to the rule, of those that did diversify agricultural production and their exposure to uncertainty are examined below.

6.7 Exceptions to the rule

In terms of those households which have diversified and are expectations to the rule the following findings are important in terms of ascertaining why they are exceptions to the rule in Magpet. Although all producers faced similar production contexts six corn producers in Magpet managed to diversify agricultural production. A perusal of the diversifier's participatory budgets indicates that other income-generating activities may in fact be a significant contributor to the ability to diversify agricultural production. These diversifiers either have a slightly higher cash flow or access to credit.

Results indicate that those who have diversified crop production have also diversified livelihoods away from agricultural activities. Of the six diversifiers that were found in the area the maximum percentage of income earned from agriculture was 55 per cent. Diversifier's income comes from a variety of sources. Importantly all of those who diversified either were classified as landowners (1) or beneficiaries of the ISF scheme (5). This would suggest that land could be used as security against a loan in the bank; however, there was no evidence to support this. In Malabog were all respondents managed to diversify only 19 had proof of ownership. This does tie in with SLA thinking, in that access to one asset increases access to the other assets. Equally this could indicate that those who diversified possess characteristics (personality or education) that enable them to own land in the first place and also diversify income. The ability to diversify based on personal rather than structural characteristics offers an important contribution to this study and is revisited in detail in chapter eight. It is useful in the case of Magpet to consider, however, that those who did diversify faced a similar threat and vulnerability context to those who did not diversify.

In terms of displacement due to conflict **Vic**, an ISF scheme beneficiary, explains in an interview in Kidapawan (12/10/2004) that although she and her family experienced the adverse effects of conflict they still were able to diversify agricultural production: *“There came a time when our house was raided by military because they suspected us as NPA members. I was pregnant then and my husband was so worried that I might be hurt. My husband decided to move to Kidapawan. We cannot cope with the presence of the three factions (military, NPA, and Muslim rebels). It doesn’t really matter if we only have rice for our daily meals, so long as we are living in a peaceful community. Local conflict became rampant in Temporán, one group from the bagobo tribe, ransacked the farmland of the Ocampos and killed their cows. We were so afraid because we were caught in the middle of the encounter; we had to crawl among the swamps and fields to avoid getting hit by stray bullets. Several families left because aside from the fact the armed conflicts were rampant, we also had no roads where we can easily transport our crops and farm products. Now we also have good farm to market roads. Many have gone back to farming. An elementary and high school has also been established. The community has benefited much from the projects; the transport of seedlings to farm is easy because of the good farm to market road. My father used to farm corn as his only crop but because of the technology and information, he learned to plant rubber, coconut, and mango. He tried planting rubber and gemilina and later shifted to banana. As the saying goes “you reap what you sow”. That is why, for me, there is a wide difference between our livelihoods in the past compared to the present. Back then, we basically had nothing; now, thank God for we are doing fine. I am hoping that this activity will be able to help us, the small farmers with our livelihood especially now that the price of fertilizers has increased. The oil price increase has also affected us. For the farm techniques, I suggest that we, the small farmers, should practice crop diversification so as to further increase our income.”*

Nelfa, an ISF scheme beneficiary and diversifier again discusses the negative impact of conflict on livelihoods in an interview in Kidapawan (12/10/2004) : *“In the 1970s, the NPAs group became rampant in our community. Because of the rising conflict between the revolutionaries and the government, many of us lost our livelihood. Because of suspension of writ of habeas corpus, the people had almost no rights to protect themselves. Thus, many of the people chose to be revolutionaries and activists during the Marcos regime. At that time, our farm harvest was good because of the still fertile soil and good climate. The problem was, we had a hard time selling them because of the lack of farm to market roads and transportation. My husband worked as a labourer, vulcanizer, farmer, and conductor to meet our daily family needs. He focused on farming but the income was simply not enough to sustain our daily needs. We moved to Antipas and started a barbecue business. The income was also not enough for our needs. We went back to Datu Cielo and maintained our farm. We diversified our crops (lakatan and tundan banana and tomato) to increase our income. Because of this diversification, we managed to build our house (concrete) and meet our daily needs.”*

Jon, an ISF scheme beneficiary and diversifier discusses the negative impact of numerous combined threats on his livelihood in an interview in Kidapawan (12/10/2004): *“The climate was also quite dry and harvest was difficult until 1995. We had no harvest because drought was prevalent. We had to borrow capital from small traders to sustain our farm. I quit studying in Kidapawan because of financial reasons. The El Nino occurrence in 1997 affected our farm. We were not able to recover yet from the drought and here is another problem that further drowned us in poverty. Now I started to venture into banana crop because it is not difficult to maintain compared to corn farming. Now I am considering also rubber trees so that I have an alternative in case my banana farm is harmed by the unpredictable climate that we are experiencing right now.”*

In Magpet three other producers diversified agricultural production away from corn. One went to Saudi Arabia to work for many years, one respondent is educated to postgraduate level and has a reasonable income from her job and the other inherited a small parcel of land from his parents.

It is evident that all respondents in Magpet face similar constraints in the form of inhibitors to diversification which increase risk and uncertainty in the form of conflict, natural hazards and fluctuations. It is therefore important to look beyond current livelihood strategies and consider other factors that can facilitate supply response.

6.8 Conclusion

This chapter presented the livelihood strategies and outcomes identified through research of corn producers in Magpet. Access to livelihood assets as a component of livelihood strategies was perused, in particular the lack of access to affordable credit, high transport costs, high input costs and low yields were all identified as contributing to the unfeasibility of corn production as a livelihood strategy. Given this production context the inability of 25 out of 31 respondents to adapt to changes in the production environment was considered. Findings identified that aspects of the production environment are also providing inhibitors to supply response, in particular lack of access to affordable credit and poor infrastructure. The role of remittances as a facilitator or inhibitor to diversification was also questioned with inconclusive results in the case of Magpet. Other issues such as conflict which contributed towards uncertainty and risk were identified. The six producers who diversified were examined in order to ascertain what factors enabled them to respond to changes in the production environment, findings identified that these producers experienced similar inhibitors to supply response as diversifiers but other events allowed them to diversify.

This chapter highlights that it is necessary to look beyond the producer context and current livelihood strategies in order to examine further the factors that enable producers to adapt to changes in their production environment. Existing literature on supply non-diversification focuses on contextual inhibitors to supply response and issues contributing towards risk and uncertainty. The multiple rationales for non-diversification by producers in Magpet can loosely be classified under a complex mixture of these headings. The specific reasons for non-diversification at the household level are more complex and tangled. Importantly, the four diversifiers also experienced inhibitors to diversification as outlined in the literature. Given that they, too, faced issues of uncertainty and risk would suggest that the classic reasons for non-diversification need to be reconsidered. In particular how these transpire at the household level.

This chapter has demonstrated that well documented inhibitors to diversification, as presented in existing literature, are valid and correct but that farmers can still manage to diversify within these conditions.

The next chapter looks at the livelihood strategies used by producers in Malabog in order to respond to changes in their production environment.

7 Chapter Seven: Adaptation in Malabog

7.1 Introduction

This chapter sets out to examine the livelihood strategies used by producers in Malabog in response to changes in their production environment due to threats based on deterioration as a consequence of agricultural trade liberalisation.

Livelihood threats facing Malabog producers are similar to those being experienced in Magpet. Therefore in order to avoid repetition they are identified but not discussed to the same extent in this chapter. Malabog producer livelihood strategies are examined again utilizing a SLA framework lenses. The key point here, and a key underpinning reason for the comparison, is that in the case of Malabog, producers *did* adapt to changes in their production environment leading to diversification of their agricultural production.

The reasons cited for diversification are examined in order to examine the rationale behind diversification. Diversification at the community level is examined in order to analyse the role of the community context in the diversification process. Factors which, according to the literature, can facilitate or inhibit diversification such as social and human assets, gender and remittances are also examined to ascertain their influence on Malabog producers' ability to adapt. Finally, historical influences in Malabog and the role they play in current livelihood strategies is also perused in order to determine the significance of historical factors on current supply response. This chapter aims to set up the context in order to unearth the complex dynamics that enabled diversification in Malabog.

7.2 Malabog producer respondent production context

Like Magpet, it is useful to examine the livelihood strategies employed by producers in Malabog when faced with livelihood threats as a result of market integration, the outcome of these strategies and the assets that were brought to bear in the process. In terms of livelihood strategies, in the decade prior to 2002 the respondents in Malabog identified through decision trees (see Figure 7.2) that they reduced their cultivation of yellow corn due to unstable prices, increased input costs, the increased cost of credit and decreased farm yields due to increased soil acidity. Fruits and vegetables replaced corn production although white corn '*bisaya*' is still grown in smaller amounts for household consumption purposes instead of rice, which is more expensive. Survey results found that all households still grew corn but 29 households harvested corn only once a year with 13 households harvesting twice a year and 18 households harvesting three times a year. This demonstrates the extent to which corn has been reduced in the overall crop rotation. The substitution of white corn for rice in household consumption is strongly dependent on ethnic group and locality. Many communities in Mindanao do not eat substantial amounts of white corn. In recent years due to the global food price crisis, the Philippine government has been promoting corn as an alternative to rice for household consumption purposes – a campaign which is meeting much resistance at the household level.

In Malabog, respondent farm income averaged PHP 23,441 a year per household from 1993 to 2002. Average total household income in 2002 was PHP 53,300 (\$69 at the average exchange rate) of which PHP 35,711 was attributed to on farm activities. In Malabog 10 per cent (PHP 5,377) of income was attributed to backyard livestock raising (respondents do not classify this as farm income). Other sources of income accounted for 23 per cent (PHP 12,213). Examples of other income sources cited by respondents include labour on other farms, a sari-sari store (very small shop often as part of someone's house as depicted in Figure 7.1), pension, and remittances (both local and global). Based on the average household size of seven the per capita income is \$138 .



Figure 7.1 A sari sari store

Historically 70 per cent of yellow corn grown in Malabog was sold to traders in Panabo, Davao del Norte with the remainder being sold to traders in Calinan, Davao city. From 1998-2001 the buying price for yellow corn reached a record-low of PHP 3.00 per kilo in Davao City. These traders traditionally sold their corn to large producers of pigs in Luzon, however, with the reduction of the MAV in corn as explained in chapter four, the landed cost of corn in Manila from China or Thailand is cheaper than corn originating in Mindanao. The large traders in Panabo and Calinan thus diversified their business to cover other products or sold corn to local pig producers in Mindanao. It is possible that a result of this diversification by wholesale traders in Panabo and Calinan forced smaller traders and the cooperatives who buy from Malabog to diversify in order to meet wholesaler demand. This in turn would force diversification by Malabog producers. This is suggested but not borne out by the study as diversification away from corn by traders would decrease demand for corn at the farm gate level.

It is important to mention this as it could be one of a number of small factors which combine to facilitate diversification.

Malabog is one of the main suppliers of high value vegetable crops to Davao City and the neighbouring province of Davao del Norte. An estimated 80 per cent of the barangay's produce is sold through Panabo City, Davao del Norte, while the remaining 20 per cent is sold in Calinan, Davao City. Malabog has the potential for further agricultural development as large tracts of land are not cultivated. However, the region is generally an economically depressed area due mainly to poor infrastructure and accessibility. Slow implementation of vital infrastructure projects such as farm-to-market roads result in higher costs for transporting agricultural harvest and a high spoilage rate of fresh produce.

The total farm area of all respondents was 112 hectares. As mentioned in chapter three, the average farm size was 1.9 hectares, the smallest being 0.5 hectare and the largest 4 hectares. Some 58 per cent of respondents classified their land type as purely hilly or steep, with 40 per cent classifying their land as a combination of hilly and plain types. Only 2 per cent stated that their land was 'plain'. Those with smaller farms had a higher percentage of vegetables and bananas in their overall portfolio of activities, while producers with larger farms still maintained larger percentages of corn production. One explanation for this as put forward by key informants is that respondents with larger farms are in a position where they can maintain a larger and more diversified livelihood portfolio. Access to increased amounts of land enables this. On a per hectare basis vegetables and bananas are preferred due to higher profit levels and lower labour requirements. However, as a risk aversion strategy corn is still maintained on the larger farms. Scoones (1998) suggests that diversification may involve developing a wide income-earning portfolio to cover all types of shocks and stresses, or it may involve focusing on developing responses to a particular type of common shock or stress through well-developed coping mechanisms.

Table 7.1 provides an overview of Malabog respondents' crop production context. This is a summary of the combined household level outputs. In terms of livelihood outcomes, Malabog respondents have similar resources and face similar inhibitors to diversification as those experienced by respondents in Magpet.

Unlike Magpet, however, respondents in Malabog managed to diversify agricultural production as depicted by the varieties of crops grown (Table 7.1). This is a central puzzle – and an important one – and unravelling the reasons is a core element of this chapter.

Table 7.1 Malabog respondent’s crop production context

CROP	annual production (kg)	price (kg)	gross income (PhP)	annual expense S (PhP)	gross profit (PhP)
Tundan (banana)	180,067	7.00	1,260,469	63,208	1,197,261
Vegetables	118,220	5.00	591,100	50,467	540,633
Copra	38,091	11.30	430,428	63,108	367,320
Corn	27,900	6.50	181,350	22,908	158,442
Lanzones	12,015	20.00	240,300	19,224	221,076
Cacao	4,912	70.00	343,840	9,330	334,510
Coffee	3,982	32.00	127,424	8,081	119,343
Ramie	3,500	57.60	201,600	24,000	177,600
Durian / Mangoes	340	50.00	17,000	-	17,000
Total	389,027		3,393,511	260,326	3,133,185

(Source: Producer survey, Malabog June 2003)

The respondents have been farming for an average of 17 years, with the shortest period at 2 years and the longest at 47 years. The table highlights the relatively large number of crops in the rotation. The average number of crops planted by each farmer is three. There is a diversified spread of crops from traditional crops such as corn to fruit and vegetables. Tundan banana is planted by 70 per cent of the farmers, followed by corn (53 per cent), copra and coffee (52 per cent each), various vegetables (50 per cent), cacao (33 per cent), lanzones (23 per cent), durian and mangoes (13 per cent), and ramie (7 per cent).

Income is also diversified in terms of seasonal spread (based on when crops are harvested). Annual average harvesting frequency for each crop is as follows: banana 23, corn 3, copra 2, coffee 1, various vegetables 23, cacao 4, lanzones 1, durian and mangoes 1, and ramie 5 times a year. This illustrates the diversified nature of agricultural production in Malabog. This spread of crops also diversifies income sources and reduces fluctuations across seasons. This decreases risk considerably as producers are not relying on the market price of one crop for their livelihood.

7.2.1 Asset and vulnerability context

During PRA workshops conducted in March 2004, participants identified the availability of natural resources through resource and farm maps as depicted in figure Figure 5.6. The most notable findings from these maps were the sufficient availability of water and the suitability of terrain for diversified farming (similar to Magpet). The participants also identified poor soil fertility and susceptibility to soil erosion of the sandy and clay loam soils as reasons for low yields. Respondents identified high costs of credit and lack of infrastructure as the main threats to their livelihoods which are similar to the threats faced by producers in Magpet.

During the PRA workshops, Malabog producers were asked, *“If I gave you \$100, what would you spend it on?”* The response was mainly food, inputs for the farm and half of the respondents indicated that they would pay off existing debts. However, when this question was rephrased to, *“If I gave you \$100 to spend on the farm, what would you spend it on?”* the answer from all respondents was *“farm inputs including labour”*. Again this was similar to the response from the respondents in Magpet. Malabog respondents did not consider interest on credit a farm expense. Credit is considered a normal part of household income and expenditure. Even though the inputs themselves may be obtained on a credit basis they are in fact subsidising household expenses. Money that could otherwise be spent on inputs is used for household running costs similar to the scenario previously discussed in chapter six. This is an important finding as it is difficult to diversify production when farmers operate in a cycle of indebtedness. Debt in itself can be considered an inhibitor to diversification as discussed in the previous chapter. Malabog respondents ‘managed’ to diversify agricultural production while operating within this cycle of debt and the production context presented above.

7.3 Diversification as an adaptation strategy

Diversification is widely understood as a form of self-insurance against risks and shocks. Ellis (2000) discusses the importance of diversity in contributing to both natural and human systems in particular where the system is highly sensitive to external shocks such as price change. Diversification works to reduce risk by spreading it across several enterprises. Diversification can occur at different levels such as enterprise diversification (planting different crops or inter-cropping), market diversification (alternative sources for purchasing inputs and selling outputs) and vertical integration (diversifying into own production of inputs and own-processing of outputs) (Start and Johnson, 2004). Specialisation of agricultural production on the other hand focuses production on one specific type of farming. Specialisation can result in greater production efficiency due to the increasing level of production output per unit of production or agricultural intensification. "However, intensification can only work when market and societal conditions enable farmers to sell their produce at a price that compensates the increased cost of production deriving from the use of high yielding inputs". (Warren,2002:4) In the case of Malabog and Magpet high input costs and a lack of infrastructure would undermine attempts at specialisation.

Brookfield (2001) explains that diversification of production and livelihood opportunity, investment and finding new ways of using and managing resources are roads to agricultural change, and the triggers of change are not only those of external pressure. In a constantly changing world, adaptation, innovation and the seizing of opportunity have been, and until now remain, the key to survival and successful change.

The rationale for diversification as identified by respondents was discussed above; however, to shed further light on these explanations it is necessary to look at the contextual issues which facilitate or inhibit diversification in Malabog given that the same factors that inhibited diversification in Magpet seem to play a role in facilitating diversification in Malabog. Agricultural diversification took place in Malabog as a response to declining prices. Various definitions are put forward as to the nature of diversification. Broadly it can be defined as (i) a shift of resources from farm to non-farm activities, (ii) use of resources in a larger mix of diverse and complementary activities

within agriculture and (iii) a movement of resources from low value agriculture (crops and livestock) to high value agriculture (Hayami and Otsuka 1994, Vyas, 1996, Delgado and Siamwalla 1999). It is important to examine why and how this diversification took place as the ability to adapt to changes in the production environment is key to livelihood resilience.

Livelihood diversification can be classified as an adaptive livelihood strategy although as discussed by Ellis (2000:63) “diversification is one potential outcome of adaptation but not the only one”. Coping strategies in terms of unplanned responses to shocks or stress can alter livelihood strategies but such strategies differ from diversification as part of an adaptive strategy. Livelihood strategies were explored in detail in chapter two, however, in general they comprise the range and combination of activities and choices that people make and undertake in order to achieve their livelihood objectives. Livelihood strategies can change overtime not only due to domestic cycling but also because of changes in the wider socio-economic environment. Diversified livelihood strategies are evident in Malabog and in varying levels in the other 14 producer case studies that were compiled throughout the Philippines. Malabog producers diversified their agricultural production in the decade preceding 2002, unlike producers in Magpet who faced similar constraints or livelihood threats.

Ellis (2000:56) highlights that diversification can be driven by a range of factors, many of which were experienced in both Magpet and Malabog such as ,“declining returns on farming compared to other activities , which in itself may occur either due to rising real production costs or declining real prices”. In the case of Magpet and Malabog, producers faced both an increase in production costs and a decline in the price received for farm produce.

In Malabog income and expenditure pie charts indicate a range of activities which contribute towards livelihoods. Malabog participants identified their main source of expenditure as food, loans, clothes and education. Respondents ranked these and depicted them through pie charts. The major sources of income in 2002 were identified as farming and livestock. Farming in this case included industrial crops such as copra, coffee, cacao, soybeans, and corn; high-value fruits including banana, lanzones (small fruit),

mangoes, and, durian; high value vegetables like cauliflower, cabbage, bell pepper, broccoli, and carrots. In Malabog secondary sources of income included livestock. The breakdown of livestock farming by respondents is as follows 57 per cent pigs, 55 per cent chickens, 31 per cent goats, 29 per cent carabaos, 10 per cent cows, and 7 per cent horses.

In terms of livelihood portfolios and trade-offs, in the case of producers in Malabog while respondents all diversified production away from corn they did so at varying levels. Research results found that the levels of diversification and types of crops grown were influenced by the size and type of land available. Scoones (1998) explains that the degree of diversification depends on the resources available and the levels of risk associated with each option. He goes on to identify five options for confronting risk, namely accumulation of buffer stocks, spread of activities over space and time, the mix of activities, insurance or consumption smoothing and finally improving the overall resilience of the system. In chapter six, factors that contribute to risk and increase uncertainty associated with diversification were discussed. These included issues such as conflict and access to credit.

The factors which 'pushed' diversification in Malabog overlap to a certain extent with issues that contributed towards risk aversion in Magpet. Both groups of producers faced similar constraints but these were acted upon differently by producers in each area (with the exception of the six diversifiers in Magpet). This is revisited in the next chapter which attempts to move beyond contextual influences on the ability to diversify. Negative changes in the production context inhibited supply response in Magpet. Did the same negative changes facilitate supply response and thus diversification in Malabog? In order to answer this question the next section considers the rationale for diversification provided by respondents in Malabog.

7.4 Rationale for diversification as identified through the research

The reasons cited for diversification by producers in Malabog at the household level as identified through decision trees are presented in a consolidated version in Figure 7.2. Decision trees were compiled by respondents during the course of a participatory workshop in 2004, in order to ascertain if the motivation for diversification could be categorised as consisting of 'push' or 'pull' factors. The reasons identified for diversifying can be grouped into two themes: market forces on the one hand and environmental considerations which impact on soil fertility and yields on the other.

Respondents cited the following factors as important drivers in the decision to diversify production; fruits and vegetables have higher appraisal values as security against loans, lower input requirements, lower maintenance costs, higher and more regular market demand, prices are stable for vegetables relative to other crops, year-round harvest enables labour requirements to be spread and results in constant income and relatively lower labour (lower paid labour) and lower capital requirements as opposed to other crops. The environmental reasons cited by respondents in Malabog for diversification are protection from wind, reduced air pollution (trees), maintenance of soil fertility, prevention of soil erosion, and reduced flooding and landslides.

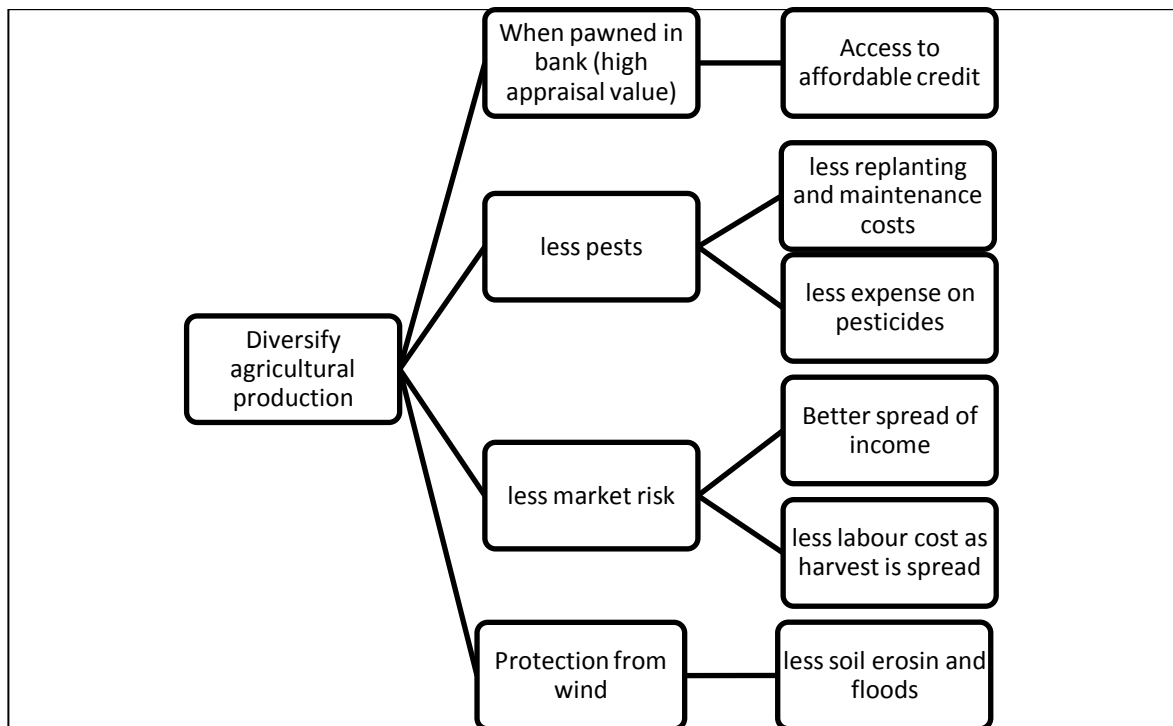


Figure 7.2 Malabog consolidated decision tree (Source: Adapted from participatory workshop, Malabog 2004)

In Malabog one reason cited for diversification was that fruits and vegetables have a higher appraisal value as security for loans. Malabog respondents viewed diversification into fruit and vegetables as a means of accessing more affordable credit. In Magpet a lack of access to affordable credit was cited as a major inhibitor to diversification into fruit and vegetables. The livelihoods of respondents in Malabog demonstrate a degree of flexibility not evident in the livelihoods of producers in Magpet. The flexibility of a household's livelihood determines the type of strategies that a rural household will adopt and how it can respond to change. One of the goals of the SLA is to bring analytical clarity to the livelihood strategies that people pursue. Broadly-speaking, the more flexibility people have in their livelihood strategies, the greater their ability to withstand or adapt to shocks and stresses.

Flexible livelihoods are also better placed to take advantage of opportunities that might arise to achieve their livelihood objectives. Choice and flexibility depend upon factors such as the assets people have and the constraints or opportunities created by policy, institutions and processes. Diversification of agriculture in favour of more

competitive and high-value commodities is reckoned an important strategy to overcome many of the emerging challenges posed by the liberalisation and eventual globalization of agriculture. Evidence suggests that macro level aggregate diversification theory and thus policy formulation do not always result in the expected pattern of small holder supply response. Although some households adopt strategies that rely on a few activities (specialisation), most of them adopt strategies that are complex, diverse and versatile (Chambers 1989). In the case of Malabog, producers diversified their agricultural production away from traditional crops to high value fruit and vegetables. Joshi *et al.* (2003), cite the work of various scholars in order to summarise the benefits of agricultural diversification. In the short run these are: (i) shifting consumption pattern, (ii) improving food security, (iii) increasing income, (iv) stabilizing income over seasons, (v) generating employment opportunities, (vi) alleviating poverty, (vii) improving productivity of scarce resources e.g. water), (viii) promoting export, and (ix) improving environmentally sustainable farming systems through conservation and enhancement of natural resources. Although the reasons cited for diversification by Malabog producers are largely economic they fall into all of the categories discussed above except promoting exports and a shift in consumption patterns. A shift in consumption patterns was only identified by one respondent as a reason for diversification; he diversified in order to provide food for the household.

Respondents do not normally eat their own vegetables as mentioned in chapter five; all of the vegetables produced were sold to traders. This is not unusual in Mindanao; similar communities in other areas who grow vegetables also sell all of their produce. The vegetables demanded by the market such as cauliflower are not normally part of the farmers' diets. In rural Mindanao vegetables are considered a 'poor' man's meal, and the respondents preferred to eat rice and dried fish and during lean times rice is the preferred 'filler up'. Whilst demand for vegetables is growing in the urban areas of Mindanao, consumption is still limited in urban households. In restaurants, vegetables are ordered separately to the main dish and it is difficult to obtain vegetarian meals. Respondents do eat the bananas they grow but they prefer not to eat them regularly. In Malabog

diversification was not driven by household food security issues but by economic and market conditions.

Joshi *et al.* (2003) discuss that several forces influence the nature and speed of agricultural diversification from staple foods to high value commodities including rapid technological change in agricultural production, improved rural infrastructure, and diversification in food demand patterns (see also Prabhu *et al.*, 1995). These are broadly classified as demand and supply side forces. The demand side forces include per capita income and urbanization. Supply side forces include infrastructure (markets and roads), technology, resource endowments, and socio-economic variables such as the literacy rate. In the case of Malabog, while there has been some change in demand side forces as vegetables become more popular in urban areas, while factors that influence supply remain largely unchanged such as infrastructure. Whilst the reasons for diversifying are well recognized, the enabling or coping mechanisms discussed in chapter five are not implemented fully in Mindanao. These 'safety nets' facilitate a supply response and are important in supporting any efforts made by producers to diversify production. Given the lack of 'safety nets' in Mindanao, the fact that producers in Malabog managed to adapt to changes in their production environment is significant and necessitates further examination of other supply side forces.

This research concentrates largely on the supply side forces, and in particular weight is placed upon the rationale for supply side responses and the factors that enable or inhibit such responses. Agricultural supply response is explained by Mamingi (1997:18) as "the agricultural output response to a change in agricultural prices or, more generally, to agricultural incentives". Of particular interest from a sustainable livelihoods framework perspective are the institutional processes, and in this case government policies, which mediate the ability to carry out agricultural supply response strategies.

Vertical co-ordination in the supply chain for corn and vegetables in the Philippines has increased through co-operatives, contract farming and production clusters (geographic concentration of interconnected vegetable and corn growers). Findings from this research indicate that these initiatives are largely producer driven and not propelled by government initiatives. An adequate legislative framework to protect the interests of

small scale farmers is not in place. In terms of supply chain traceability and value adding schemes, the regional Department of Agriculture for Davao extension services admitted at a public meeting when questioned as part of this research that they had no experience in any of these schemes. What this research and the cited literature highlight is the role of institutional structures and support networks in facilitating diversification. As we will see below, this was a critical explanatory factor when it comes to understanding diversification (or the lack thereof) in the research sites.

In Malabog the role of institutional structures and support networks in supporting diversification was identified through Venn diagrams (Figure 7.3) produced as part of the PRA workshops held in March 2004. Participants in both workshops in Malabog and Magpet were asked to construct as a group a Venn diagram depicting the relationship between individuals, groups and institutions in the community as perceived by respondents. These diagrams comprised of touching or overlapping circles of various sizes, with each circle representing an individual or institution. The size of each circle indicated their importance and the overlap indicated the degree of contact or inclusion in decision making. Figure 7.3 and Figure 7.4 present the Venn diagrams for both Malabog and Magpet which have been modified in order to group the organizations identified by type of organization as opposed to the original names and organisations utilized by the participants.

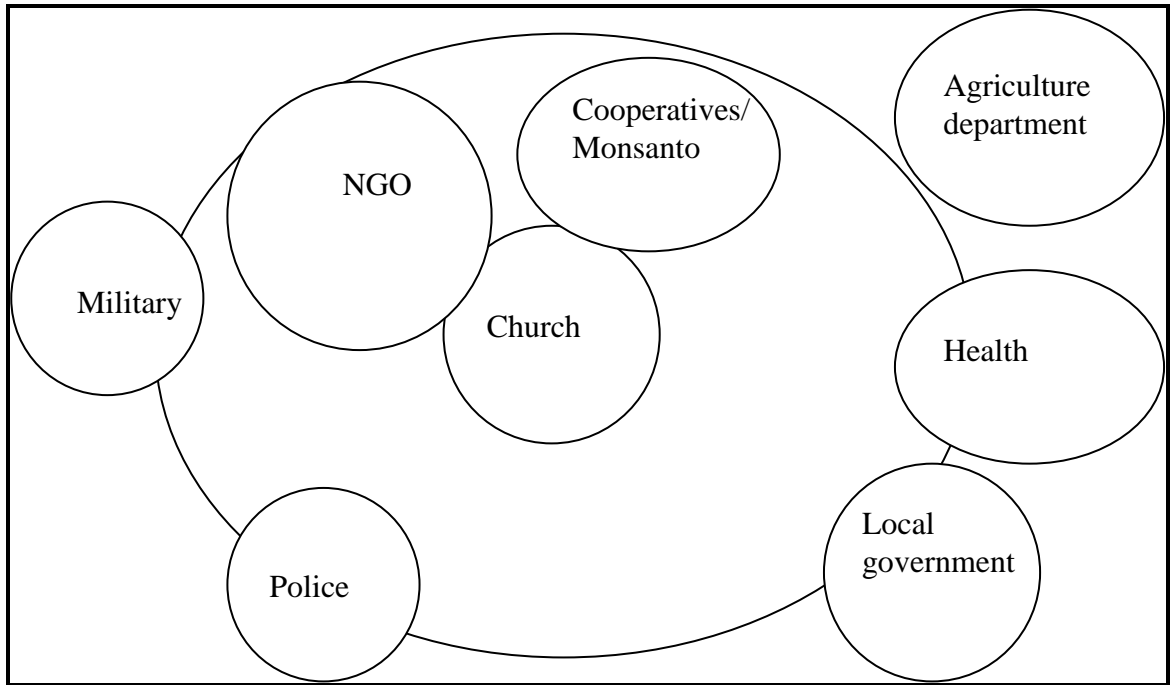


Figure 7.3 Venn diagrams Magpet (Source: adapted from participatory workshop Magpet,2004)

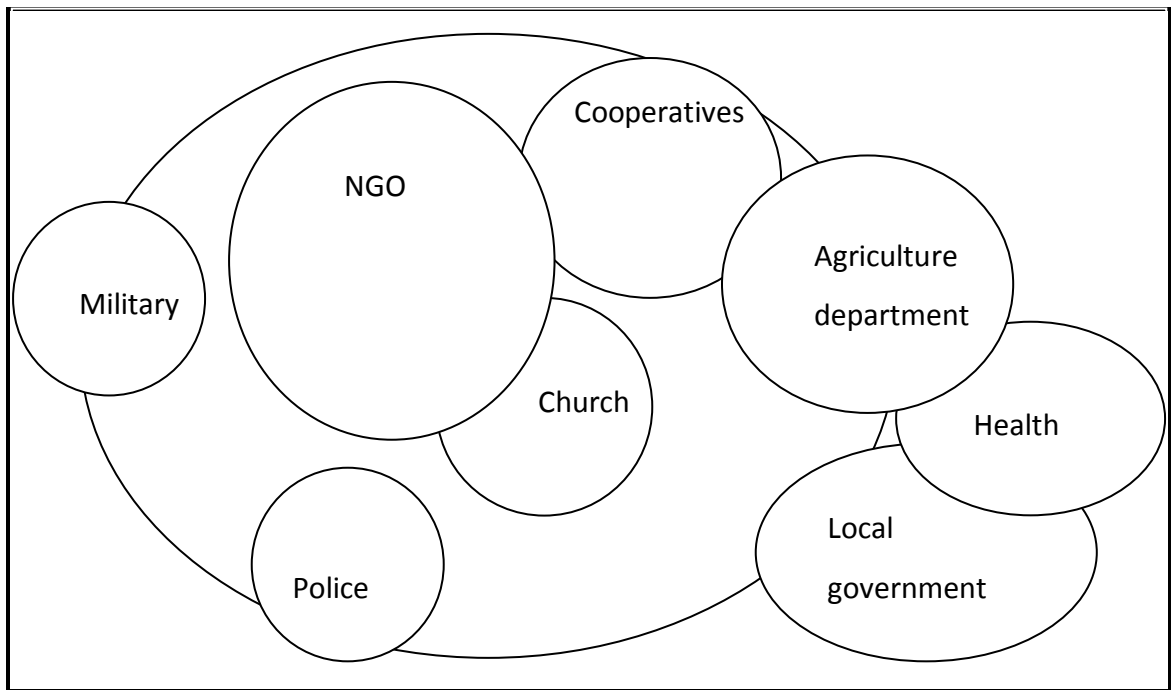


Figure 7.4 Venn diagram Malabog (Source: adapted from participatory workshop Malabog, 2004)

Support from Local Government Units (LGUs) and national line agencies to Malabog farmers have been almost non-existent. Although Malabog producers do perceive LGUs as been of greater importance than as perceived by producers in Magpet. Changes to the farming patterns in Malabog are largely a result of farmers' own initiatives combined with NGO intervention to adjust to changes in the market. Producers in Malabog have a history as identified through participant timelines, of adapting to prevailing cropping patterns due to conflict and decreasing soil fertility. Timely intervention by NGOs also seems to have played a role in diversification. These 'timely interventions' are importantly not a current phenomenon and are strongly grounded in historical interventions. The current diversified production context in Malabog was not introduced as a risk migrating mechanism in order to cope with trade liberalisation. Diversified agricultural production emerged in the 1980s and the 1990s when inter cropping and diversification gained momentum as an alternative to mono-cropping due to decreasing soil fertility. The types of crops introduced in the 1980s and 1990s necessitated the reduction of corn in the overall crop rotation.

These market changes do not seem to be related to any articulated government strategy. Asked about support or assistance from any local government office or national line agencies, some of the respondents cited the plant-now-pay-later scheme and technical trainings extended by the City Agriculture Office and a few bags of fertilizers provided by the Philippine Coconut Agency in 2000. However, these initiatives were insufficient and too sporadic to have made an impact. The Venn diagram exercises highlighted a lack of government assistance.

Malabog producers' diversified status did not result from national or regional enabling initiatives: it came about predominately due to historical interventions by NGOs encouraging environmentally sound crop rotation practices. These interventions, which resulted in a diversified production mix, should in theory improve the livelihood status of producers; however, this is impeded by lack of government provisions as previously explained. Cauliflower has been identified as the most profitable livelihood alternative, yet producers struggle to penetrate the cauliflower market due to the inadequate provision of the non-price factors which impact on supply response such as infrastructure and post-harvest technology. The current policies and institutions are not creating an enabling environment in order to overcome constraints, and this prohibits supply adjustment and the exploitation of new opportunities. Although adjustment programmes are established at the regional and even national level as discussed in chapter four, supply responses are inhibited due to institutional priorities and norms at the local level.

This research shows that the access to social capital and the ability of respondents in Magpet and Malabog to influence PIPs is adequate in theory. The Philippines is well recognized for favouring peoples' participation, "if the evident range and extent of the formal and informal associations and networks that provide succour and assistance in troubled times are accepted as indicators of its existence" (Bankoff, 2007:338). However, participatory processes, meetings and consultations often do not feed into or influence policy level decision making.

Malabog respondents stated that local government often held meetings around local election time and initiatives discussed were not followed up or converted into projects or policies. In terms of access to institutions, results from the PRA exercises identified that farmers who are active members of farmers' organizations can, in theory, avail themselves of three types of subsidies from the Office of Municipal Agriculture. This is a provision of AFMA. These subsidies are a 50 per cent discount on certified seeds, fertilizer credit assistance, and as previously discussed in chapter six 'plant-now-pay-later' programme attached to the cultivation of hybrid seeds. This targeting of agricultural support through producer organisations is not beneficial to all producers as farmer's organisations can be difficult to access by the most marginalized producers due to barriers to entry. A total of 33 respondents from Malabog are members of MIEDECO and their membership of this organization ranged from less than a year to a maximum of 17 years. Of this group, 19 are also involved in other organizations in the community. Of the 27 (47 per cent) non-MIEDECO members, 25 are members of different community organizations, with the remaining two farmers having no organizational involvement whatsoever. There is, in other words, what appears to be a degree of institutional thickness in Malabog. In Magpet while 55 per cent of respondents were members of CADTEC only half were members of different community organisations all of which were affiliated in different degrees to church based organisations.

One important finding to emerge from this exercise was that in Malabog; the number of NGO's was greater and deemed to have a closer relationship to producers than the NGO's indicated in the Magpet respondents' Venn diagram. Results also indicate that higher levels of social capital exist in Malabog as compared to Magpet. Access to goods and services which are channelled through organizations and producer networks are more accessible to Malabog respondents.

The failure of previous agricultural reform attempts is adversely influencing current reform agendas. How economic agents in the market react to proposed reforms relies heavily on the perceived credibility of these reforms. Malabog respondents indicated a lack of confidence in government programmes. Actions and expectations will only be altered accordingly when reforms become credible. The speed of agricultural

programmes, which may be implemented for political gain rather than economic necessity, also relies heavily on internal politics. Agricultural programmes will not take place at the local level until credibility is established through the effective implementation of reform programmes. The successful implementation of reform depends, in turn, largely on the government's administrative and financial capacity. Therefore, reforms should be tailored to suit the actual implementation capacity of the government in order that credibility in reform is established. Findings indicate that attempts to implement AFMA have failed miserably due to numerous constraints. AFMA is highly unrealistic as discussed in chapter four, as are further projections for all the corn programmes. These are all well written and professional policies, however, their implementation was considered by key informants including regional government as unfeasible. The market has quite literally been thrown into a state of uncertainty. Producers find it difficult to respond to price changes when the policies governing them are uncertain. Critical areas, and those which most influence the poor, have been neglected.

In terms of a pro-active public sector, smallholder participation is deemed essential in terms of certification, technology testing and adoption of new technologies. Again, this is occurring through the intervention of NGO's and international development agencies but rarely in conjunction with local government units. Malabog respondents reiterated through numerous exercises that although they had diversified production they still faced numerous problems in the supply chain. Timely and appropriate agricultural extension is necessary, as are mechanisms for the dissemination of market and technical information. Alongside these reforms, the establishment of complementary markets for credit, agricultural inputs and services will all smooth the progress of supply adjustment.

7.4.1 Community level diversification

In Malabog since all households diversified, the community can be said to have diversified agricultural production. Although all respondents diversified and it is tempting to consider the community as a cooperating unit, results from Malabog indicate that this is not the case. Rigg (2007: 50) explains that the term community, “has social and cultural connotations and comes loaded with intimations of cooperation, consensus and an underpinning corporate ideal”. In Malabog there is no evidence to support any such cooperation. (Reardon *et al.*, 2007) explains that household motives for diversification, as well as the opportunities available to them, differ significantly across settings and income groups, suggesting that important distinctions exist between diversification undertaken in order to accumulate, driven mainly by ‘pull factors’; and diversification undertaken in order to manage risk, or cope with shock, or agriculture in decline driven by ‘push factors’. It is important to look beyond just sources of income. The same person may use his or her assets in diverse ways choosing to invest in assets that they think are important such as small livestock. Livelihood strategies may also aim to preserve existing assets and income rather than generating new income.

At the community level, respondents indicated from decision trees that there was never a given point in time when a general decision was taken to diversify. Respondents indicated through these decision trees that diversification took place gradually over a period of about 18 months. Results found that respondents did not identify the success of early adapters as a driving force in subsequent diversifier’s decision to diversify production (pull factor) but that a general consciousness did exist that corn farming was no longer a viable livelihood strategy (push factor). During the course of PRA workshops there was some discussion as to who actually diversified first with no clear early adapters being identified; it was very much a gradual process. To return briefly to the point made in the previous section as regards the higher appraisal value of fruit and vegetables as security for loans. Diversification literature would consider this a pull factor. Malabog respondents did cite this as a reason for diversification but they did not associate the ability of early diversifiers to use this higher appraisal value to access loans as a pull factor. This could be due to agricultural production time lags.

Even though respondents did not consider the success of 'early adapters' as a motivation for diversification, it is useful to consider that had early adapters received low returns for their produce, then would other producers have followed suit and attempted to enter this market? Given that 85 per cent of respondents sell their produce to agricultural traders a large amount of similar information as regards market demand and selling conditions was available to respondents and shared. There is no evidence of any respondent attempting to diversify their production into niche markets which differed substantially from diversification patterns (largely diversifying from corn to vegetables) at the community level. Although diversification of production was assisted by NGO interventions, this was not the primary objective of these interventions. Some extension and technology training workshops were held on intercropping with a view to promoting sustainable agriculture and integrated crop management. These interventions took place with the objective of addressing issues of declining yields; they were not market driven and did not deal with demand issues such as market analysis. Notably the first time that respondents compiled a participatory supply chain analysis or discussed the market chain was during the course of this research.

Malabog farmers responded to the threat of declining and unstable prices for traditional crops by shifting to fruit and vegetable production to meet a steady increase in demand from Metro Manila and Cebu. Although MIEDECO had no direct role to play in the shift in crops, its programme and advocacy for sustainable agriculture within and outside its membership did influence agricultural practices in Malabog. To sum up, at the community level, diversification took place gradually and was driven by market conditions. Traders and the cooperatives played a role in the sharing of market information and results show that all respondents had access to the same types of market information. But at no stage did the community act as a single decision making unit. Community diversification took place gradually and was composed of diversification by respondents at the household level.

Although diversification at the community level was driven by market forces it is useful to consider the rationale for diversification at the household level.

At the household level, the availability of endowments, in particular labour constraints, access to inputs, credit and extension services, and institutional and structural restrictions all played a significant role in shaping patterns of supply response. Livelihoods are generated from a variety of sources and activities and change overtime. They characteristically comprise several different activities for each given household, even for each member over the course of a year.

The rationale for the diversification of producers in Malabog comprised many price and non-price factors. Although the unstable nature of corn prices provided the general backdrop for this diversification, a further inquiry offers some important insights into the driving forces from the household production context. Farmers diversified from corn to high value crops which obtain a higher appraisal value if put as security against a loan from the bank. Fewer inputs are required in terms of pesticides, and overall there are less maintenance costs. Basic family food security needs are also addressed. Harvest is more regular and continuous and the diversified basket of goods reduces over reliance and risk associated with mono-cropping. There are less labour expenses, as the women in the household contribute significantly more labour than with corn production for both practical and cultural reasons. Gender did play a role in diversification in Malabog but how important this role was and the specifics of this role need to be further considered.

7.4.2 Gender and diversification in Malabog

Findings identified that even under conditions of similar vulnerability people act differently to changes in their production environment. In Malabog, all of the producers who took part in this study diversified agricultural production. Davies and Hossain (1997) discuss that women's lack of ownership and access to assets form a constraint in their capacity to adapt. However, results from Malabog indicate otherwise. In Malabog 26 females were interviewed and 34 males. The survey results show that 54 per cent of the women and 32 per cent of the men viewed the changes in their livelihoods over the last ten years as positive. In terms of inter-household roles, fruit and vegetable farming were identified through PRA workshops as more labour intensive than traditional crops such as corn. The increases in households' demand for farm labour increased the role of women in farming.

Whilst this increase in activities contributed to an increased 'double burden' for women, their control of resources also increased as women were identified as the main sellers of produce in the wet markets (fresh food markets). Survey results indicate that female respondent households harvested luya, ramie, lanzones and copra more regularly than male respondent households. Fruits and vegetable farming, being more labour intensive than traditional crops, required more farm labour thus increasing the role of women in the whole farming process. As fruit production has increased so has the work load of women and although females normally manage the marketing of fruit in practice this does not necessarily translate to an increase in control over resources.

As discussed by Safflios-Rothschild (1985) the extent to which women are involved in production is not necessarily positively related to their access to economic power and that being gainfully employed does not necessarily increase women's decision making power in the family. Conversely, 19 per cent of women compared with 32 per cent of men viewed changes in their livelihoods over the last ten years as negative. Findings demonstrate that gender in this case is not an inhibitor to diversification. Results did, however, identify that lower paid labour requirements are a reason for diversification.

Women in Malabog did increase their contribution to farm labour after diversification. However, this does not necessarily translate into a gender issue, as using free family labour is a profit maximizing behaviour.

7.4.3 The role of remittances

The role of remittances in Malabog differs substantially from that identified in Magpet. Only two respondents indicated in their income and expenditure pie charts that they received income through remittances. However, the amount they received constituted 45 per cent of their total income. The absence of remittances may explain the increased awareness demonstrated by Malabog participants when compared to Magpet in terms of the profitability of various production enterprises and their overall market awareness. Remittances provide a buffer or a safety net from unstable or declining prices received at the farm gate. The two respondents who receive remittances have a lower total farm income which is less diversified than other producers. Their expenditure differed slightly in that more was spent on education and socio cultural activities and vices. Neither spent more money on the farm as a result of remittances in comparison to the other diversifiers who were not receiving remittances. Although there is no obvious cultural or ethnic reason for the relatively low level of remittances received in Malabog, key informants have suggested that it may in fact be due to a low level of English language skills linked to the remote nature of the area. English is the official language of instruction in Philippine high schools, however, in remote areas this is rarely enforced due to the low level of English language skills of the teachers. In general terms Filipinos tend to migrate to places where they have existing networks and support systems established by those who migrated previously. If there has historically been low migration from an area this lack of an established 'receiving community' may inversely impact on potential migration and remittances received in Malabog.

Remittances were received by two respondents in Malabog and there is no evidence to suggest that this increased their access to inputs or facilitated diversification in any way; if anything, the results indicate the opposite. This finding although not significant is contrary to the existing literature. Gonzalez-Velosa (2011:23) found from her research in the Philippines that, while remittances have a negative impact on the fraction of farms producing traditional crops, high value crops "increase by 2.0-3.2 per cent in response to a 10 per cent growth in remittances".

Her results suggest that remittances, perhaps by alleviating credit constraints or reducing the cost of capital, may be facilitating investments in the production of higher value crops. This is further substantiated by Wouterse and Taylor (2008:627) who contend that, "As a substitute for formal or informal credit, migrant remittances may enable households to overcome liquidity constraints on investing in new technologies and activities." However, it is difficult to ascertain if respondents diversified less because they did not need to (due to the remittances received) or if they diversified less due to a lack of family labour due to migration and education. Importantly it is considered obligatory for migrants without children to educate the children of close relations who in turn usually migrate and educate the children of their close relations. Although this study does not yield significant findings as regards to this, it should be mentioned as it often plays an important role in long term livelihood strategies.

7.4.4 The role of social and human assets in study site response

Undoubtedly, human and social capital play important roles in the formulation of livelihood strategies but it is notoriously difficult to capture their contribution to successful livelihood strategies (as discussed in chapter two). In terms of human capital, respondents in Malabog demonstrated a firm grasp of global and local market forces. In the workshops that I attended my conversations with respondents as regards trade liberalisation and general issues affecting agriculture led me to consider Malabog respondents 'more aware' than those in Magpet. Considering the remote nature of the area as indicated elsewhere, respondents' knowledge of current market trends was remarkable. Does an ability to adapt to changes in the production environment stem from what was discussed in chapter two as social capital and human capital? Human and social capital here refers to access to networks, groups and institutions and the skills and knowledge to use this access in terms of livelihood opportunities.

During the Venn diagram exercises (Figure 7.3 and Figure 7.4); Malabog participants included 42 different groups, NGO's or government departments in their diagrams. Magpet respondents included just 18 organisations. In addition, in Magpet the level of interaction with organisations and the importance attached to them in terms of influence on decision making was less than in Malabog (with the exception of CADTEC). This finding is interesting as Magpet respondents have greater accessibility to neighbouring towns and thus greater physical access to organisations than those in Malabog. When respondents in Malabog were asked if MIEDECO had helped them increase their income, 94 per cent (31) of the 33 members answered 'yes'. The types of assistance cited most often were the annual patronage refund for selling produce to the coop and purchasing from its consumer store. In Magpet, five survey respondents indicated no access to any form of organisational extension services. Twelve respondents indicated that they were receiving some level of extension service from the Department of Agriculture, while five respondents were receiving inputs and extension services from Monsanto, which provided services through CADTEC. The remaining respondents were accessing either services from an NGO or some government programme.

Unlike the Malabog respondents, the nature of relationships in Magpet was ad hoc and only seven respondents were receiving extension services from more than one source. Respondent's classified services received from Monsanto and CADTEC as the same and did not differentiate between the two in terms of service provision. Both areas experienced historically similar levels of conflict and displacement, and therefore conflict can be discounted as a motivator in accessing organisational and institutional services.

Human assets are considered the most important of all the assets. Sufficient human assets, in terms of skills or education, enable people to use their other assets in the SL framework more efficiently. The research results, however, do not indicate any significant differences in the attained educational levels of participants in Magpet and Malabog. However, a perusal of the timelines produced in participatory workshops did indicate that Magpet producers had access to approximately twice the level of technical training and advice as those in Malabog. Magpet is also situated closer to an urban centre which hosts many NGOs and the Department of Agriculture offices and so logically one would assume that Magpet producers would have more access to technology training and extension services than the 'far-flung' barangay of Malabog. These findings therefore question the role of access to human assets, and in particular, skills training, as a facilitator for diversification.

Resilience in the context of stresses and shocks is key to both livelihood adaptation and coping. As discussed in chapter two those who are unable to cope or adapt are inevitably vulnerable and unlikely to achieve sustainable livelihoods. In the case of the Malabog producers, they demonstrated their ability to respond to various threats which is key to livelihood adaptation and coping. The role of social and human assets in facilitating adaptation in Malabog is inconclusive. Magpet respondents had greater access to skills and training than respondents in Malabog yet they did not diversify agricultural production. This finding raises questions as regards the role of human assets in livelihood resilience. In chapter two human assets were identified as contributing towards capacity and resilience. These findings indicate that different types of human assets play different roles in the ability to adapt to changes in the production environment. In Malabog market

awareness aided diversification but in Magpet higher levels of capacity building failed to facilitate diversification.

7.4.5 Historical influences

Payne and Lipton (1994) assert that assessing resilience and the ability to positively adapt or successfully cope requires an analysis of a range of factors. They include an evaluation of historical responses to various shocks and stresses. Different types of shock or stress, in turn, may result in different responses, including avoidance, repartitioning, and resistance or tolerance mechanisms. Historical responses are important in this context as rural households derive their livelihoods from different sources; liberalisation measures are expected to affect them in a variety of ways. Therefore, this section considers not only the outcomes, but also the historical incidents which influence adjustment measures and how these are translated into production and investment decisions by small scale agricultural producers. Similar to respondents in Magpet, during the course of a workshop conducted in Malabog in March 2004, respondents compiled timelines covering a period of fifty years. An example of a timeline is presented in box 7.1 below. Importantly, these timelines highlighted an underlying trend of conflict leading to displacement and migration. At the community level the major events identified were a pattern of outward- migration and the sale of farm land in the 1970s and a pattern of inward- migration due to the improving peace and order situation in the 1990s.

Box 7.1 Malabog timeline

1950 -1959

Soil was fertile

1960-1969

Plants were in good quality even without fertilizer

Start of rice and corn production

1970-1979

Start of out-migration due to conflict between Muslims, Christians, NPA and The Armed Forces of the Philippines.

1980-1989

Out-migration from '82-'86. Almost 30 percent of people Migrated due to ongoing conflict.

Root crops were planted in areas where soil is no longer fertile

Lower corn market price due to unfit soil lead to some ramie production.

1990-Present

Corn production stated to decrease and crops other than rice and corn were introduced like eggplant, cacao and coffee

Started using fertilizers and chemicals for planting due to poor soil condition and Infestation of crops.

NGO intervention in sustainable agriculture

In-migration due to peace negotiations and out migration for a chance to have a better job in the city

Diversification of farm production was introduced by NGOs

Crisis in trade because traders control the prices and not the farmers

(Source: Adapted from participatory workshops Malabog, 2004)

Respondents lamented the fact that in the 1960s they reaped high yields without fertilizer, in the 1970s they introduced synthetic fertilizers but found that a decade later yields were decreasing and thus they were forced to adapt their cultivation practices. It is also evident that historically, producers adapted to prevailing market conditions, be it through a process of substitution, diversification, or withdrawal. Between 1992 and 2002, Malabog farmers expanded and or shifted from planting traditional cereal and industrial crops such as corn, copra, cacao, and ramie to fruits and vegetables. Respondents highlighted and identified numerous market 'episodes' during the compilation of timelines. This awareness of market conditions and historical price trends as well as access to technical information and support for sustainable cultivation practices is interesting due to the extremely remote nature of Malabog.

All respondents had access to similar types and levels of market information due to the fact that they sold either to the same or to an equivalent buyer. Access to information in itself is not always a facilitator of supply response. As demonstrated by the timelines, this is not the first time that Malabog respondents have adapted based on prevailing conditions. Producers in Malabog historically have adapted to prevailing conditions whereas producers in Magpet have not. Therefore we need to consider further the role of livelihoods across different timescales and not just at one given point in time or as a response to a particular set of threats or shocks. Lastly, unfavourable historical contractual arrangements entered into with buyers are difficult to change overtime such as the 10 per cent 'discount' on cauliflower purchases given to buyers.

7.5 Exceptions to the rule and why exceptions

For Malabog, the results of this study do not indicate any exceptions to the rule although producers do exhibit different levels of diversification. One respondent indicated that a *sari-sari* store was their main source of income. This is an interesting finding in terms of livelihood options. Berner (1997) discusses from a study carried out in metro Manila that most of the *sari-sari* stores do not produce sufficient returns to support a family. He found that only 12.9 per cent of them make more than the official minimum daily wage. These stores provide some security for their owners, if other sources of income temporarily dry up (*e.g.* in the case of illness). In the case of the respondent in Malabog, the yearly income from the *sari-sari* store was estimated at PHP 29,600. A quick calculation based on 22 working days a month reveals the daily income to be PHP 112. This is below the current minimum wage rate that the National Wages and Productivity Commission have set at PHP 164 a day for non-plantation enterprises in Davao city.

The sustainability of a livelihood outcome largely stems from the definition of a sustainable livelihood. In this instance, diversification does not necessarily equate with an increase in the number of working days, poverty reduction, or increased wellbeing and capabilities. It does, however, provide for increased adaptation and resilience while reducing vulnerability. Diversification in theory increases the sustainability of the natural resource base. Although the ability to adjust supply does not provide a panacea in terms of livelihood options, it certainly sets a resilient foundation from which to build upon.

7.6 Conclusion

This chapter has presented the livelihood strategies and outcomes identified through research with producers in Malabog who had diversified production in response to changes in their production environment. A host of factors in the production environment similar to those identified in Magpet formed push factors in the diversification process such as access to credit and poor infrastructure. The reasons cited by respondents for diversification were largely grouped into market forces and environmental considerations.

Diversification at the community level was examined, highlighting that Malabog did not diversify as one community at a particular point in time, the role of gender in diversification was examined with results identifying in the case of Malabog gender did not form an inhibitor to diversification. Remittances were not considered to play a role in diversification in Malabog nor were access to traditional human assets such as skills and training when compared to Magpet levels.

Historical influences did influence current cropping patterns. This is significant as livelihoods change over time and therefore need to be viewed as dynamic over different timescales. Diversifying provided producers in Malabog with the opportunity to offset their losses in one crop by gaining income from more marketable produce. Banana and vegetable farming also gave them a more frequent and increased source of farm income.

This chapter has demonstrated that historical influences beyond current livelihood strategies play an important role in the ability to respond to negative changes in the production environment and overall livelihood system resilience. “The here-and-now of livelihoods (the circumspective) only becomes truly meaningful if it is informed by an appreciation of the historical circumstances and events that preceded it (the retrospective).” (Rigg, 2007:41)

Producers in Malabog faced the same constraints in terms of debt, lack of training and extension services as those in Magpet. They received lower levels of remittances but were more market aware. Malabog respondents diversified production but Magpet respondents did not. This research now turns its focus to livelihood pathways in order to unravel the complex interactions of historical livelihood strategies and resilience compared against those adopted by respondents at the time of the research, which was a

period of negative changes in small scale agricultural producers' production environments.

8 Chapter Eight: Livelihood Pathways Over Time

8.1 Introduction

In chapter two the difference between a livelihood strategy and a livelihood pathway was introduced, with a livelihood strategy being understood as “composed of the activities that generate the means of household survival” (Ellis, 2000:40) and a pathway as being “the result of a series of livelihood choices that have emerged over time” (Scoones, 1998:18). He goes on to say that such choices, “may have been the consequence of a set of conscious and planned choices or the result of the unintended consequences of other actions”. This chapter attempts to look at the livelihood strategies used by producers in Magpet and Malabog, but through a pathways lens. Pender (2004:343) writes that the concept of pathways is “dynamic since it refers to changes and not merely livelihood strategies pursued at a particular point in time.” This has been further examined by Scoones (1998) who argues that different pathways can be seen at different points in time depending on the resource endowments available and the different levels of risk involved with different livelihood options.

This notion of pathways offers some important considerations in terms of livelihood analysis. Thinking in terms of pathways can also aid the identification of appropriate interventions from a development project perspective. Scoones (1998:13) discusses the importance of livelihood pathways in the following way:

“The key for any intervention in support of sustainable livelihoods is to identify the institutional matrix which determines the major trade-offs for different groups of people and across a variety of sites and scales and so the variety of livelihood pathways available.”

Chapters six and seven examined the livelihood strategies followed by producers in Magpet and Malabog between 1992 and 2002 in response to changes in their production environment. These changes largely arose from threats based on deterioration due to the liberalisation of agricultural trade. Chapter six illustrated the rationale behind what was categorised as a ‘coping’ strategy in Magpet and chapter seven, an ‘adaptive’ strategy in Malabog.

Chapter six discussed findings which demonstrated that producers in Magpet did not adjust supply in response to declining returns, with the exception of just six producers who did. Chapter seven examined findings which identified that, producers in Malabog did adjust supply in response to declining returns. Chapters six and seven both raise questions as regards the role of non-price factors and their interactions in shaping producers' response.

Chapters six and seven dealt largely but not exclusively with contextual factors which influenced supply response decisions in Magpet and Malabog. Chapter six highlighted that both diversifiers and the six exceptions to the rule in Magpet also experienced inhibitors to diversification as recognised by the literature. This demonstrates that factors other than context played a role in response patterns. These factors which influence the ability to respond to changes in the production environment form what is termed in this and the next chapter as personal circumstances. Personal circumstances here are loosely what Krishna (2010b) terms ordinary everyday events and personal characteristics influenced by a person's style (Nooteboom, 2003) and habitus (Bourdieu, 1988, 1992).

The key point as regards personal circumstances is that they are particular to each household and even each individual within a household. They can be wide ranging in nature but not particularly important contributors to livelihood strategies and seemingly inauspicious when viewed in isolation. These personal circumstances often accumulate to provide a range of experiences which influence future livelihood decisions. As Rigg explains, "there are intervening occurrences which are episodic or periodic and which, collectively, may provide more explanation than the high level events" (Rigg, 2007:92).

This chapter, then, attempts to look beyond context and probe more deeply into the personal circumstances which influence individual supply response to changes in the production environment, and in particular declining returns. Personal circumstances are specific and are caused by a wide range of often idiosyncratic occurrences which, as this chapter will explore, can be shown (based on the research findings) to influence the ability of households to adopt strategies that might enhance livelihood resilience. The six producers who diversified in Magpet form much of the basis of this chapter.

Their context was identical to the 25 producers in Magpet who did not diversify production. This leads us to look at their circumstances. This question of 'circumstance versus context' ties into the larger debate of structure versus agency which was introduced in chapter two. Much, as with the structure and agency debate, it is difficult to divide influences on livelihoods into those caused by circumstance and those caused by context.

Firstly, this chapter examines the difference between a livelihood pathway and a livelihood strategy as revealed by this research in the Philippines. Livelihood strategies pursued by producers in Magpet and Malabog are then examined through a pathways lens in order to examine the influences that effect livelihoods over time and beyond a particular context. The rationale and patterns of livelihood response as identified through the research are also examined within a pathway framework. Livelihood pathways enable an analysis of evolving livelihood strategies, thus providing an understanding of overall resilience in changing circumstances and contexts. This examination of livelihoods takes into account the dynamic nature of livelihoods as well as the complex interactions that produce rationales of responses that, together, result in the 'strategy' that emerges at a particular point in time.

8.2 Beyond livelihood strategies and context

This section explains why it is important for this research to move beyond livelihood strategies and consider livelihoods in terms of pathways in order to capture the complexity and dynamism of livelihoods. The livelihood strategies and the rationale behind them as discussed to date in chapters six and seven provide important findings. It is necessary to revisit and summarise some key points prior to attempting to unravel the complexities of livelihood pathways.

Livelihood strategies provide a 'snapshot' of livelihoods at a given point in time. By moving beyond strategies and looking at livelihood pathways, we can unravel the underlying components that provide the platform upon which individual livelihood strategies emerge. These strategies emerge at particular points in time and are then arranged at that livelihood 'moment'.

As illustrated in chapters six and seven, historical influences play a part in the formulation of livelihood strategies; past experiences of threats contribute to the capacity to reduce the risk of future threats, such as the risk of displacement resulting in reduced expenditure on agricultural inputs. An analysis of livelihood pathways attempts to move beyond the livelihood 'moment' and capture the complexity of livelihood activities that may not always be captured through an assessment of livelihood strategies. A livelihood strategy is a short term endeavour in that its aim is to get from A to B; a pathway, on the other hand, is a longer term endeavour in that it has no clear beginning or end. A pathway is perhaps more useful when thinking about livelihoods in the true sense of the word, as discussed in chapter two; the concept of livelihoods itself stems from the French '*genre de vie*' or 'a way of life'. If we consider this, we need to look beyond issues of infrastructure and access to credit and look at the social and cultural reasons behind why people do what they do over different timescales.

Table 8.1 provides some examples of personal circumstances and context which were identified as contributing to supply response decisions during this research. For example, in Magpet respondents received remittances, which were not considered high enough on their own to prove an inhibitor or facilitator to diversification. In Malabog respondents had access to a larger number of organisations who provided extension and

support services then in Magpet, although the level of trainings received was less. Access to these agricultural organisations in this case does not in itself provide an impetus for diversification. In Magpet, holding public office or being a civil servant was identified as a factor in accessing support services. These examples demonstrate how normal everyday personal circumstances such as remittances received; employment and memberships obtained; can collectively combine to provide a facilitator or inhibitor to supply response. Krishna and Lecy, (2008) from work done in Gujarat describe that an accumulation of small events can overtake the larger events in terms of households moving in and out of poverty. They expand that:

“The events that matter most include, marriages, sicknesses, births and deaths, employment, investments in land or a business - occurrences that are very significant for the household concerned but that do not constitute, individually or collectively, some unusual or striking episode for an entire community, far less an entire region.” Krishna and Lecy, (2008: 161)

This is important for livelihood research and policy. Livelihood research and subsequent policy formulation tend to focus on the contextual rather than personal circumstances.

Table 8.1 Examples of circumstance and context identified through research

Circumstance	Context
Educational level	Infrastructure issues
Household size	Access to finance and Physical assets
Age of household	Producer terms of trade
Employment	Market
Ability to save	Conflict
Farm specific production problems such as pest attack	Policies-these are wide ranging and include agriculture, trade and regional agreements.
Illness or accident	Climate
Medical costs	Natural disaster
School fees	
Inheritance	
Skills	
Habitus	
Style	

(Source: Analysis based on Producer surveys, Decision trees, Life stories, Timelines, Participatory Farm budgets and Market chain analysis, 2003 and 2004)

Krishna (2010a:369) concluded from work in five countries looking at context specific reasons for movements in and out of poverty that, “Localized studies are required for identifying the nature of factors that matter most within each specific context.” In Magpet and Malabog broad policies, such as the AFMA, addressing inhibitors to supply response are not implemented sufficiently. Personal circumstances in the absence of policy provision appear to grow in importance. In Malabog it was personal not national level episodes that enabled supply response. This means we need to move beyond assumptions that respondents are unable to respond to changes in their production environment because of their threat context. The threat context is an important inhibitor to supply response, but, so too are personal circumstances.

In terms of livelihood pathways Kaag (2004:14) suggests that the term pathway can be more useful than strategy in that it, “points to the fact that insecure conditions often make it difficult for local actors to make strategic decisions in advance”. He goes on

to say that, “instead, their [actors’] strategies unfold as they interact with the changes in this dynamic production environment”. Research results from Magpet and Malabog highlighted that changes in strategies took place in response to changes in the production environment in Malabog, but that – surprisingly – no apparent changes took place in Magpet even though farmers in both contexts were faced with similar changes in their environment. The key is not the changes which took place in the production environment but the interactions between producers and their production environments which influenced the livelihood strategies adopted. These interactions are important in terms of understanding livelihood resilience.

Results demonstrate that strategies are more short term and temporary, and cannot be clearly equated with pathways. As a pathway does not have a clear or pre-set goal, it is therefore steered to a large extent by events as they unfold daily, seasonally and in the long term and is more susceptible to socio cultural influences. A livelihood strategy, on the other hand, has a pre-set goal in terms of immediate interactions with changes in the production environment. These changes should be the guiding focus (although the formulation of the direction will be influenced by the pathway and the particular given context). The experiences gained during the pursuit of various livelihood strategies will in turn influence the pathway, previous events predetermining subsequent choices. Even so, a pathway is not simply the accumulation of livelihood strategies.

Livelihood strategies and livelihood pathways in practice are illustrated in Figure 8.1, which attempts to also incorporate context and circumstance in order to provide a real life example, which was identified during this research. This figure is largely for demonstrative and comparative purposes as in practice the differences between strategies and pathways are complex and difficult to decipher. In the real world pathways of change are non-linear and appear non-deterministic (Ramisch, *et al.*, 2000).

The purpose is to provide an illustration, which highlights the complexity of circumstance and context and how they can possibly interact with individual livelihood strategies and pathways. As Rigg (2007:92) explains

“It is tempting to see ‘context’ being of a higher level than ‘circumstance’, which is rather more personal in its location and orientation. At the margins, however, it is often

hard to see where context ends and circumstance begins; they interpenetrate one another.”

What is interesting here is that context largely dictates the broad parameters of what is possible and within this context personal circumstances play a key role in the construction of particular livelihood strategies and pathways.

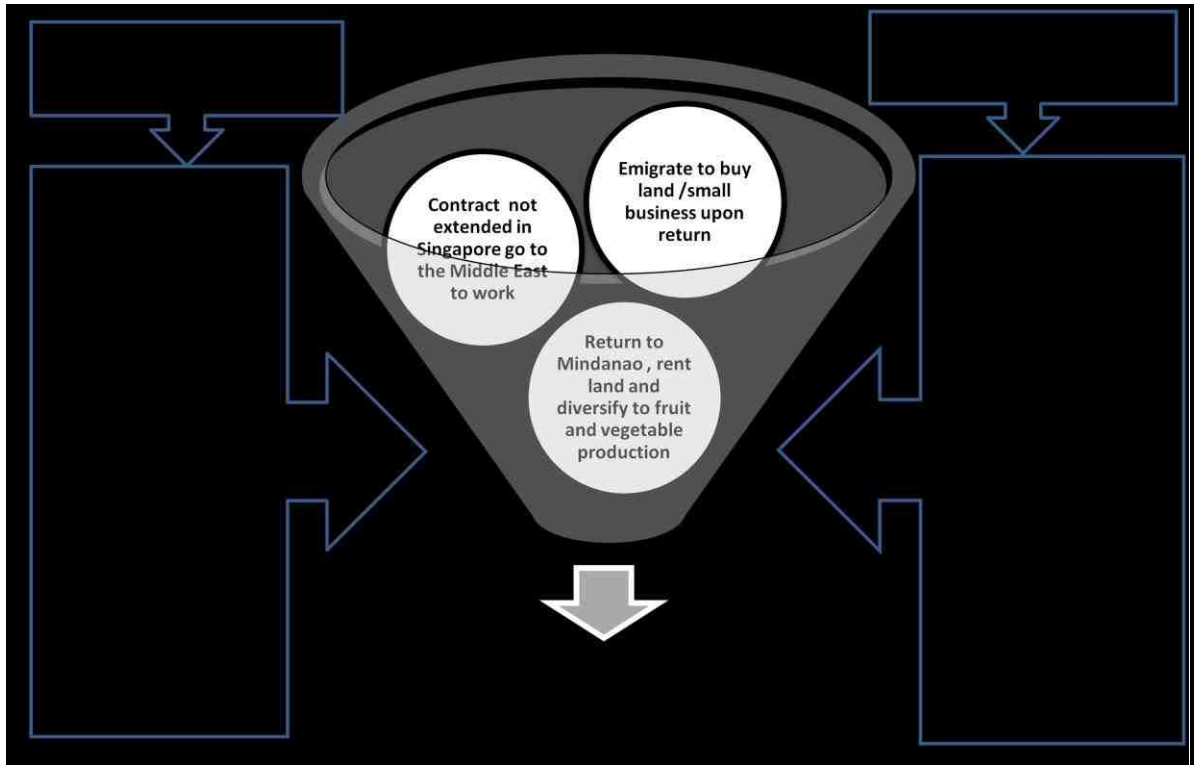


Figure 8.1 Livelihood strategies and livelihood pathways, context and circumstance

Research results demonstrate that contextual issues such as declining farm gate prices can form the initial driver for livelihood strategies. This was the case in Malabog where contextual factors were identified by respondents as the rationale for diversification (See section 7.4). The evolution of these livelihood strategies is influenced to a large extent by contextual changes intermingled with personal circumstance which in turn influences the livelihood pathway. In summary, context may form the initial thrust in livelihood strategy decisions but personal circumstance will influence the pathway and how the strategy pans out.

The steps taken which result in a particular strategy are not straightforward. As Figure 8.1 demonstrates the resulting strategies were diversified, however, there were numerous 'steps' taken in the pathway to arrive at this point or livelihood 'moment'.

Research results from Malabog highlighted the importance of human and social capital in supply response. An abundance of literature exists as regards the difficulties in defining the contribution of human assets and social assets and how they interact (Bebbington 1999, Bebbington 2004). Livelihood pathways offer one way of viewing livelihoods in order to probe more deeply into the questions as regards the interactions between social and human capital and how they link, in turn, with resilience. Livelihood pathways can be viewed as an underlying foundation upon which specific livelihood strategies take place. Migration, diversification and intensification are all relevant strategies to deal with a particular production or environmental context but these change over time and merge back into the pathway. The livelihood strategies by corn producers discussed in the previous two chapters focussed on activities at a particular point in time. Pathways goes beyond this view of a livelihood as a 'state' and instead attempts to ascertain the result of the livelihood choices which combined to create a given livelihood strategy.

In Magpet, respondents were questioned as to why there had been no change in cropping patterns in the previous ten years, bearing in mind the myriad other changes that occurred over this period. The responses given by the various participants were largely similar, centring on the notion that they had always grown corn and that was all they knew how to do.

Lack of choice and flexibility were identified as impediments to adaptation by respondents when confronted by livelihood threats. In Malabog, however, producers demonstrated resilience in terms of responding to the same changing conditions, which is the key to livelihood adaptation. The identification of the missing variables that inhibited diversification in Magpet but enabled it in Malabog provide an important insight into how small scale agricultural producers respond (or do not) to livelihood threats. At the household level, the availability of endowments and in particular labour constraints, access to inputs, credit and extension services, and institutional and structural restrictions all played a significant role in supply response.

De Janvry *et al.* (1991) discuss transaction costs from the household perspective when the cost of transaction through market exchange creates disutility greater than the utility gain that it produces, with the result that the market is not used for the transaction. Either a surrogate institution will emerge to allow the transaction to take place or the transaction simply does not occur. However, when commodities such as food and labour can be bought and sold by the household, their sale price can be a fraction of the price they purchase similar commodities for. The width of this price band depends on transportation costs to and from the market, mark-up by merchants, the opportunity cost of time involved in selling and buying, and risk associated with uncertain prices. It is expected that in the medium and long term, cropping patterns of small holders would shift to crops whose relative profitability is higher or to those crops whose prices rise if they are net sellers (Narayanan and Gulati, 2002).

Equally it is important to consider that different pathways will have different benefits for different households. Some pathways will suit those with an abundance of labour; others will suit those with labour shortages, and the same can be said for all livelihood assets. Importantly, all of these pathways will depend on institutional arrangements both within the household itself and its wider environment: “a different set of institutional arrangements will be critical for each” (Carswell, 2000:116).

The results from the 14 case studies (excluding Magpet and Malabog) which were conducted throughout the Philippines on the impact of trade liberalisation on resource poor farmers demonstrated some significant emergent livelihood 'patterns'. The livelihood strategies employed by the respondents in these case studies can be loosely classified or grouped as follows: adaptation of sustainable agricultural or organic techniques; diversification of crop production; diversifying non-farm income; increase in backyard livestock, fish and poultry farming; entering horizontal or vertical marketing arrangements such as forming cooperatives or collective production strategies; and migration to urban areas or overseas. The results from these case studies demonstrate that all producers acknowledged that trade liberalisation had occurred even if they did not fully understand the technicalities of the liberalisation. They were aware of the changes in their individual terms of trade such as increased competition resulting in decreasing prices for agricultural produce received at the farm gate level. The increasing price of inputs was also attributed by many respondents to trade liberalisation, however, as previously discussed in section 6.2.1 the increase in input prices is due to market failures. Although all producers employ some type of 'strategy' to tackle the decreasing returns from agricultural production, the strategies employed differed.

The determinants of a pathway are, like livelihood strategies, also influenced by constraints within each individual's production environment. Okali *et al.* (2001) highlight the often overlooked complexity of livelihood strategies based on a study in Nigeria, concluding that the problems faced and the strategies formulated by people vary according to economic, socio-cultural and ecological factors rather than where they are situated in terms of urban or rural livelihoods. Pender (2004: 361) explains drawing on his work in Africa that different development pathways are suited to areas of different comparative advantage depending on "access to markets and infrastructure, population density, and the presence of programmes and organizations." The underlying asset base remains important in terms of pathways analysis, although individuals may use assets in different ways. How they use assets is still dictated by the level of access to assets. The number of assets that people can access and the 'quality' of this access is important in terms of outputs.

This is discussed by Burke *et al.* (2007:37) who write that, “sustainable poverty reduction needs to be built on solid understanding of household asset positions and the contexts where assets are used as the basis for identifying livelihood strategies that leads to pathways out of poverty”.

Malabog and Magpet both had similar access to natural, physical and financial assets. The human assets of respondents in Malabog and Magpet appeared much the same based on research utilising various SL analysis tools. Although the results of SL analysis identified similar levels of human assets, it is the utilisation of human assets which is important. The utilisation of human assets may differ in practice, in particular, how human assets interact and takes advantage of the various social assets.

In terms of livelihood options and supply adjustments, in order to take advantage of new market opportunities, this issue of human and social assets is important. The ability to diversify requires more than adequate access to assets as demonstrated by an example of cauliflower production in Malabog. Cauliflower, which is identified as the most profitable alternative to traditional crops in Malabog, requires a large capital outlay.

Respondents identified through participatory market chain analysis that seeds need to be purchased from a trader which entails an increase of 33% in normal debt. The fact that producers consider debt ‘normal’ is in itself perturbing, showing that indebtedness has become normalised and part of everyday living. Since this debt does not appear in the production balance sheet, the overall profitability of these producers’ is overstated at best and non-existent at worse.

Constraints which stem from asset access are important in terms of the formulation of livelihood options. Livelihood related decisions can only be taken within the boundaries of what is possible or feasible. Pathways show that people do make their own livelihoods, but not necessarily under conditions of their own choosing. Livelihood decisions are made “within specific historical and agro-ecological conditions, and are constantly shaped by institutions and social arrangements” (Ramisch, *et al.*, 2000: 183). Looking at the livelihoods of producers in Magpet and Malabog through a pathway lens enables us to increase the authenticity by which we view non-static livelihoods in terms of history both contextual and circumstantial.

8.3 Livelihood options through a pathway lens

Looking at livelihoods through a pathway lens also enables us to refocus our examination of the livelihood options available to producers in Magpet and Malabog over different timescales. The Magpet case is unusual in that when we consider the 16 producer cases studies conducted throughout the Philippines the respondents in the Magpet case were the only small scale agricultural producers who did not diversify production in response to changes in their production environment. Although their contextual or dynamic production environment differed, in particular with the cases in the north, the context when compared to that of Malabog was similar as discussed in chapter five. The six producers in Magpet who diversified their livelihood activities faced similar contextual conditions as the non-diversifiers. Extracts from life stories presented in chapter six indicate that the six diversifiers in Magpet were all subject to various forms of conflict and displacement as were the non-diversifiers, indicating that the context of diversifiers and non-diversifiers was similar. This, therefore, raises something of a puzzle when it comes to interpreting livelihood change. Results of the 16 case studies conducted on the impact of trade liberalisation on resource poor farmers in the Philippines indicate that the very nature of pathways presents difficulties when it comes to categorising them as either 'coping' or 'adaptation'.

The previous chapter acknowledges that multiple motives prompted households and individuals to diversify assets, incomes and activities. These results demonstrate that human behaviour in terms of decision making should not always be seen as conscious or intentional. "Much of what people do cannot be classified as strategic"(De Haan, 2006:142). Whether or not smallholders act as 'rational' economic agents to price changes depends on a whole host of factors, as well as raising questions as to the basis on which 'rationality' is determined.

Both areas faced similar livelihood threats and a similar production context, even though Magpet is closer to major markets than Malabog. An array of literature indicates that on and off farm activities are more important closer to markets and roads as discussed by Pender (2004). However findings from this research do not echo this

perspective. Magpet is closer to roads and major markets but respondents have a less diversified mix of livelihood activities.

Both areas were also sites of conflict over the last fifty years resulting in forced displacements. In terms of ethnic diversity both areas are predominately Ilonggo, but with Malabog having a much greater mixture of indigenous groups. De Haan (2006 :144) however, writes that, “on the one hand, patterns in livelihood arise because persons of the same social class, gender or caste have similar dispositions and face similar life opportunities, expectations of others etc., resulting in a livelihood typical of their group”. In the case of Magpet and Malabog social class and ethnic mix were similar but supply response differed. Further analysis and explanation, therefore, is necessary.

Five SL analyses were conducted with five communities in Mindanao, the methodology of which was presented in chapter three section 3.5.6. The original research objectives aimed to ascertain if the constraints faced by producers in Malabog and Magpet were ‘typical’ in order to ascertain if Magpet faced particular barriers to supply response. The results from these five SL analyses suggested that the constraints faced by the participants were, indeed, ‘typical’ as discussed in chapter five. These results also provide some insights into the underlying rationale and objectives of both livelihood strategies and pathways. Appendix 8 depicts the five summarised SLA frameworks along with a detailed workshop design. These SLA frameworks were populated using a wide variety of PRA exercises and other livelihood analysis tools as outlined in chapter three. These results indicate that although such analysis is desirable in order to ascertain the aspirations and multi-stranded activities which comprise people’s livelihoods, they fail to capture the complexity and dynamism of livelihoods.

Livelihood strategies within a SL analysis provide a snapshot of a portfolio of livelihood activities at a given point in time. Seasonal calendars and timelines were utilised as part of this analysis; however, on reflection, they lacked depth. Whilst SLA methods are an appropriate tool for designing development interventions and contributing towards an understanding of people’s access to resources, their relationship with various institutions, the effects of policy, and people’s vulnerability context, they fail

to capture a large portion of the issues which impact on, and the factors that contribute to, people's livelihoods.

SL analysis captures well the main activities that people are employed in but it fails to capture the multiple components of livelihood strategies that contribute to pathways over time. Agricultural diversification was presented as just such a strategy by the producers in Malabog. Producers diversified agricultural production to high value crops as their main livelihood activity; beneath this headline activity were a host of other subsidiary activities that took place over different timescales and often occupied the interstitial spaces in the household economy complex. They have a hard-to-see quality and can easily be overlooked when it comes to designing policy interventions. They may be collectively, however, very important in terms of their contribution to a livelihood pathway.

Livelihood strategies may be hidden or underlying. Hidden strategies occur for a variety of reasons; however, most hidden strategies fall into two categories. Firstly, livelihood strategies may be hidden from the official gaze for a variety of reasons. This was noted by Francis (2000) from extensive research in rural Africa. Secondly, strategies may be hidden as household members may fail to realise the contribution that they make to household income. Hidden strategies may be those which households often fail to take into account or are on-going activities often not considered by respondents, without specific prompting, to be a component of any given livelihood strategy. In the case of Magpet and Malabog, these hidden strategies are often undertaken by women and are not considered part of a household's livelihood. When respondents were asked to compile income and expenditure pie charts of livelihood activities (contribution to income) hidden strategies appeared for the first time in the research. Respondents explained that these are simply things that people just do and in some cases have always done and they don't really consider them as a livelihood although they do contribute to household income. In Magpet and Malabog, these activities largely consisted of activities such as frying bananas for sale, laundry and informal *habal-habal*.

The strategies presented in chapter six and seven were influenced by a host of factors, both circumstantial and contextual, which go some way to explaining the rationale

behind these actions or strategies. Livelihood strategies do, however, fail to capture the complexity of why people make decisions over different timescales.

Numerous studies as discussed in chapter two, emphasise the shortfalls of current livelihood research and analysis methods in particular as regards capturing the complexity and dynamism of livelihoods from varying and multidisciplinary perspectives. In summary, taking a livelihood pathways approach enables the research results from Magpet and Malabog to be examined over different timescales and under different sets of influences rather than at a single point in time under similar constraints and conditions.

8.4 Unpicking pathways

This section examines the personal circumstances which influence livelihood pathways in Malabog and Magpet, as well as the composition of circumstances by examining the notion of habitus (Bourdieu, 1988, 1992) and style (Nooteboom, 2003). Patterns of pathways are assessed in order to ascertain if they can be classified in a similar manner to livelihood strategies. Social and human assets are further discussed along with household influences in the study sites. Importantly, producers in Magpet and Malabog faced similar contextual constraints, imposed by both conflict and geography (This formed part of the rationale for choosing these two areas for the research).

Research results identified that the circumstances of individuals within the two groups and each group differed based on the particular individual. Whilst it is evident from previous chapters that push and pull factors played key roles in diversification in Malabog, what is less evident is where these strategies fit into the overall livelihood pathway. A key question raised by Scoones and Wolmer as part of their work in Africa was: “what is the social fabric that has intersected with technology, ecology and socioeconomic differentiation to create particular patterns and pathways?” (Scoones and Wolmer, 2000:24).

This question provides a useful springboard from which to examine the cases of Magpet and Malabog. The analysis of research results indicates that pathways are influenced to a larger extent than strategies by an individual’s circumstance which in turn influences a person’s individual style and habitus:

“The habitus, being the product of the incorporation of objective necessity, of necessity turned into virtue, produces strategies which are objectively adjusted to the objective situation even though these strategies are neither the outcome of the explicit aiming at consciously pursued goals, nor the result of some mechanical determination by external causes. Social action is guided by a practical sense, by what we may call a 'feel for the game'.” (Bourdieu, 1988:782)

Meisenhelder (2006: 65) writes that, “habitus generates regular choices and patterned activities without itself being [a] determining psychic force formed from some deep biological drive”.

Nooteboom (2003) moves beyond habitus, and looks at what he terms 'style', which he conceptualises as including the structural, individual and the habitual dimensions of social action. These issues tie back into the SLA which offers useful insights in terms of contextual analysis but not necessarily circumstantial. However, none of this is clear cut, and therefore necessitates further exploration.

The rationale behind the formulation of livelihood strategies is influenced by push and pull factors such as supply and demand forces pertaining to agricultural markets and as revealed in chapter seven strategies can be considered either *ex post* or *ex ante*. The composition of these strategies has some acknowledgement of pre-set goals. However, results indicate that livelihood pathways are influenced to a much larger extent by socio-cultural characteristics since there is no clear guiding objective in sight. The ability of markets to adjust to economic shocks (in this case, trade liberalisation), in the short run is critical if factor markets are to function correctly. A review of research results identify that people do not always know why they made certain decisions. When respondents in Malabog were asked, "why did you diversify production?" all respondents gave essentially the same answer, even though the language may have differed slightly. They explained that they had diversified production in response to declining producer returns for agricultural produce. However, the factors that helped them to arrive at that decision remain unclear. Pathways can change direction, even reverse. Meandering livelihood pathways involve various assets and resources over different timescales.

Start and Johnson (2004) note that while neoclassical economists categorise people as rational decision makers selecting from the options and choices available, other disciplines including sociologists argue that decision making is shaped by sociological and cultural forces. These research results resonate with this perspective but also highlight that supply response is not only shaped by cultural, social and historical factors and characteristics, but also by the larger dynamic production context. This was discussed by Collins (2009b:61) who explains "There is, however, an overall uncertainty as to the balance of individually driven motivation to manage risk versus that which is motivated by institutions and external intervention."

Although circumstance plays a role in decision making, it can only shape the options which are feasible and available within any given context.

“Individual strategic behaviour is acknowledged while, at the same time, it is bounded not only by structural constraints imposed by geography or demography, but pre-conditioned (a better term is probably embedded), as it were, by the available historical repertoire.”(De Haan and Zoomers, 2005:41)

8.4.1 Patterns of pathways

The 16 cases introduced in chapter three examined the impacts of trade liberalisation on small scale producers from two perspectives: rural households as producers and rural households as consumers. Whilst the studies can be broadly grouped into producers who were utilising coping strategies or those who were embracing adaptive strategies in order to deal with declining returns, it is more difficult to classify pathways – simply because a large number of producers were employing both adaptive and coping strategies over different timescales. The World Bank (2007) suggests that in order to escape poverty, households pursue three pathways: farming, labouring, and migration. Rarely, though, is any one pathway an exclusive strategy. Households, and the men and women, who comprise households, have different opportunities to pursue these pathways.

The findings from the 16 producer case studies indicate that livelihood strategies employed in order to combat decreasing returns to agriculture, and in particular to traditional crops such as corn production in the face of trade liberalisation, can be grouped according to diversification practices. It should be noted, however, that in some cases it is difficult to isolate the impact of trade liberalisation from market failures. Of the 16 producer groups studied, 15 diversified their activities in some way. The one that did not was the Magpet case. To neatly allocate each case to one or more categories proved difficult due to the numbers of different strategies adopted within each case. In addition, each case reveals that the rationale for the overall direction of the pathway differed from one individual to the next. Bourdieu (1992) explains habitus in a similar manner to the rationale behind subconscious actions as a result of past experiences. In general, we can group pathways according to their overriding direction, but to weight each given livelihood choice in terms of its contribution to the overall ‘direction’ of the pathway would be difficult. Different pathways have different results shaped by the habitus but the pathway in itself also contributes to the shaping of the habitus. As De Haan and Zoomers (2005:41) explain, “although the result may be the same, the pathway was different, and it is the pathway that shapes the habitus”.

Nooteboom's (2003) notion of 'style' offers a useful lens by which to examine further the rationale within each individual's 'strategy' as a response to changes in the production environment, notably declining returns. He distinguishes four livelihood and social security styles, "enterprising people, money people, stingy people and village people" (Nooteboom 2003:207). These classifications, although neatly determined, offer an insight into what shapes the pathway direction by considering both habitus and other factors. The steps taken to arrive at a given livelihood strategy are not always obvious, linear or easy to decipher. One of the 16 case studies revealed that farmers in Luzon (the island where Manila is located) had responded to a change in market conditions brought about by trade liberalisation by converting to organic rice farming. Given their proximity to the Manila market this seems reasonably logical. However, a further perusal of how this change took place reveals that initially respondents reported organic farming as relatively more expensive and therefore more difficult to market than rice derived from conventional farming. Because of this, 75 per cent of initial converts to organic rice farming soon reverted back to inorganic farming. A year later, a local NGO provided some seed capital and assistance with marketing and these farmers converted back again to organic farming. This finding is a useful illustration of a non-linear pathway but also one where actions take place as part of a group. Thus we should not view action and response as negotiated purely at the atomistic level of the individual (or household) but as embedded in wider groupings where actions may resonate through society.

Nooteboom (2003) from his work in East Java explained that he often witnessed villagers' reaction to events in a customary manner where they observed closely how other villagers reacted or dealt with the same event. They did not have to think about each minor decision in life, but could fall back on the repertoire offered by this style. He contends that people have a certain style "because they were raised in a particular fashion, share a cultural repertoire, or because neighbours expect them to conform to their style" (Nooteboom, 2003:55). In the case of Malabog as previously articulated in section 7.4.1 at no stage was a decision taken by 'the community' to diversify; this was something they just did.

Numerous key informants and respondents, when questioned as regards the lack of producer response to changes in the production environment in Magpet, referred to a Filipino state of mind known as '*Bahala na*'. This can be roughly translated as 'fatalism'. Although in most cases this was discussed in a light hearted manner it was offered by so many respondents as the rationale behind Magpet's non response that it should not be merely ignored as a light-hearted interjection but rather an approach to living which is part of habitus or style. Victoria and Hellman (2005) have suggested that limited opportunities and options in the Philippines and limited incomes have bred negative attitudes such as '*bahala na*' (fatalism), '*kapit sa patalim*' (living on the edge), and 'crab mentality' (pulling others down in an effort to go ahead). This idea of fatalism contributes towards an understanding of the situation in Magpet. That said, although fatalism alone would not pose a complete barrier to diversification activities, combined with other inhibitors to diversification it could provide momentum or contribute towards issues that cause uncertainty.

8.4.2 Circumstances, videoke and pathways

Pender *et al.* (2001:9) explains: "Household level factors such as households' endowments of physical assets (farm size, and quality, livestock, savings), 'human capital' (education, training, farming experience), and 'social capital' (cultural norms, family and ethnic relations) may also determine the development pathway and land management practices pursued by particular households". In the case of Magpet, further investigations of the personal circumstances of households who did diversify agricultural production reveals that although the household head was middle aged in all six cases there was a 'young' influence on the household in terms of an older male child who participated in decisions regarding the farm. Dietz *et al.* (2001:130) suggest that, "a major institutional change that has had a great impact on the construction of pathways concerns social relations, especially relations between generations". From their research they note that younger generations have different ideas and make different use of the opportunities offered by the outside world. Days spent toiling in the fields is not for them, and they have wider ambitions. They look beyond farm income, and have different aspirations in terms of consumption and wider social relations.

The young are influenced to a large extent by television and mass globalised media. The six diversifiers' families had regular access to a television. A perusal of their participatory pie charts in terms of expenditure indicates that male members of the family frequented the local videoke 'bar'. The bar in this case is some stools and old soft drink crates outside the local *sari sari* store which had a videoke machine and sold red horse beer, a very strong (it has added gin) and cheap local beer compared to other local brands such as San Miguel. Normal activities in the videoke bar include videoke (a version of karaoke with music videos) and watching television.

All of the diversifiers were exposed to the outside world to a greater extent than the non-diversifiers, and not just in terms of their frequenting this bar. One diversifier had worked in Saudi Arabia for a considerable period of time and the other three held elected positions at various levels in the local government, as discussed below. The Income from these positions would not in itself be high enough to facilitate diversification although it would offer some level of security or a buffer which would reduce risk aversion.

These positions in the context of Mindanao would normally attract other benefits, perhaps not in cash but in kind and perhaps most importantly would increase access to and knowledge of a range of services. Finally one diversifier held a Masters degree which provided her with a steady income. In Magpet and Malabog a host of factors come into play when considering supply response. These include historical influences as discussed above but also elements of social capital and present day interactions with organisations and institutions that can facilitate livelihood diversification. How all of these elements interact is particular to each producer. **Nelfa**, a Magpet diversifier and ISF scheme beneficiary, observed in an interview in Kidapawan (12/10/2004) that: *“My being a barangay councillor also contributed to our family income. The government and non-government funded projects such as infrastructure, electricity, and water systems were also beneficial to my family and our community.”* This extract illustrates the importance of power relations and thus knowledge in terms of institutional processes. **Vic**, another Magpet diversifier who also held a local public position as well as being an ISF scheme beneficiary, said in an interview in Kidapawan (12/10/2004): *“Nowadays, things are better off because the community has access to the benefits and developmental programmes implemented by LGUs, NGOs, POs.”* Vic perceives that the community as a whole has access to development programmes. This access is not evident from other life stories where respondents stated that a lack of access to government or other programmes dealing with production issues was a problem. Vic in this case has knowledge of programmes due to his position which in turn gives him a degree of access not available to other farmers.

Rey, a landowner in Magpet, explains in an interview in Kidapawan (12/10/2004) that he also held public office which enabled him to access extension programmes; *“In December 1975, I ran for chairman in a local Kabataan barangay (barangay captain) election as a Kabataan barangay and won. This was during the Marcos regime and from then on, I earned the respect of the Debalid family (local landowners) and they started to see my potentials. Little by little, we were able to overcome our economic difficulty and we were able to acquire a parcel of land in that barangay. I also won the Sangguniang*

Kabataan election and became the head of eight barangays. In 1994, I won as Barangay Kagawad.

I worked hard for the barangay to avail itself of the government projects and development programmes. We managed to access the water system project of the UNDP mainly because the manager, Mr. Bonnie Durasan, was my friend. Among the projects I helped implement were the barangay hall and health centre buildings and electric generator. Barangay Temporan never had any electricity until my term. We also initiated, through the help of Governor Piñol, the construction of the farm to market road which I believed was vital to livelihood development in our community. By 2001, the road construction was finally completed. In 2003, a 24 hour electricity service was fully operational. Until now, I still remain a public servant in our community. For my family livelihood, the rubber trees I planted during 1997 finally generated enough to add to our income. Now we are also enjoying our harvest of lakatan banana that I planted last 2003.”

Rey has successfully accessed UNDP and government programmes, and access to one programme can often facilitate access to another because of the way networks of association proliferate. Participant lists are regularly shared between programme providers in order to disseminate information as regards new programmes. Extracts from the three life stories above indicate the importance of social capital in terms of the knowledge that their positions give them as regards accessing government and NGO programmes. Interestingly many of the problems highlighted by the non-diversifiers in their life stories such as a lack of roads are viewed as sufficient by those who held public positions. Respondents who held public positions have a more positive view of the perceived benefits from different initiatives compared to other respondents.

All diversifiers utilized or placed a heavy emphasis on skills training delivered by NGOs or the local government. However, as previously discussed, a review of PRA outputs identified that diversifiers received the same level of training and in some cases less than non-diversifiers on similar areas such as technology training, cropping rotations and post-harvest technology. These findings raise questions as regards the transfer of skills and knowledge through capacity development exercises without the provision of the enabling

mechanisms such as access to credit to support diversification efforts. This is significant as regards technology transfer and the uptake of new or improved production techniques. This is important in terms of the identification of development interventions aimed at improving livelihoods through asset enhancement. Scoones and Wolmer (2000) suggest that the identification of such constraints is in itself important as it allows for a range of other entry points to be identified for development interventions aimed at livelihood enhancement.

Roselyn, a Magpet diversifier and ISF scheme beneficiary, is very much the exception to the rule in terms of human capital and transferable skills. In an interview in Kidapawan (12/10/2004) she explains that: *“I am the youngest among the 10 children of Mr Mateo Canja and Mrs. I graduated college here in Notre Dame of Kidapawan on March 1987 with a degree in Bachelor of Arts majoring in Economics then i graduated with a Masters of Arts in Education. I started working as a parish secretary in Magpet Parish on April 1987 until August 1990. From 1990 to 1992, I worked in Notre Dame of Magpet as an accounting clerk. Because I wanted to work in the government, I applied and was accepted as a school teacher in Magpet High School- Makongkog Campus from June 2002 until March 2004 then I became a provincial teacher. “*

In Roselyn’s case her knowledge of economics and relatively large disposable income facilitated diversification of the household farm. The last Magpet diversifier, Ron, worked in Saudi Arabia for eight years, although as he discusses below, the remittances he sent home were not saved by his wife so therefore did not provide investment capital for diversification. Ron, an ISF scheme beneficiary, accessed NGO trainings which aided his diversification. Unlike the other three diversifiers who by their positions of power and influence had access to training opportunities, Ron did not hold such a position. It is interesting to consider what factors enabled him to diversify: **Ron:** *“From 1992 to 2000, I worked abroad in Saudi Arabia. My family rented a house in Sasa, Davao city. We also had a farm in Cabayanan, Dujali. In March 2003, I went to Saudi again. I sent my salary back home and later, I quit because my employer sold my contract to another employer who treated me unjustly. “*

“Back in Davao, my wife did not have any savings from the money I sent her. Our farm also suffered because of pests. I went back to rehabilitate our farm. As if the pest tragedy was not enough, our farm was once again destroyed by floods. That is why I decided to finally go back to Temporan because it already had a new and better road and electricity. I had a share of land from my family and I noticed also that the local governance was good and there were co-operatives who were willing to help the farmers. The presence of NGOs was also significant as they taught us the proper ways of farming and using fertilizers. Nowadays, the farming system in Temporan is very good as the farmers have other alternative crops and fruit trees aside from corn.”(Interview in Kidapawan, 12/10/2004)

Did Ron’s experiences in dealing with government and administrative procedures in order to work in Saudi Arabia enable him to acquire the necessary skills to access available resources? Did his experiences in Saudi Arabia awaken his ambitions (like the videoke videos), revealing that there is more to life than just subsistence level living and thus pushing him to access whatever was available that might eventually lead to a better livelihood for him and his family? People often know they are poor but the extent to which (and how) they perceive their poverty is relative to the non-poor around them. Exposure to, for example MTV and other market outcomes of globalisation, heighten how poor people think they are as their reference points for wealth move beyond the ‘village’ boundaries. People may consider themselves to be poor in comparison to their neighbours who may be wealthier because they own a cow, a refrigerator or a car, depending on their reference point. In the case of Ron it is useful to consider if his time in Saudi Arabia demonstrated how poor he was in comparison to those people he came in contact with or worked for in Saudi Arabia. His experience in Saudi Arabia will have exposed him to comfortable life styles that wealth can provide but also to the necessity to take risks and invest in the future. Ron studied at night before he went to work in Saudi Arabia indicating a deeper rooted desire to be socially upwardly mobile. The other diversifiers held public positions which again indicate some level of motivation to ‘get on’ in life.

Ron, discusses in an Interview in Kidapawan (12/10/2004):*"After high school, I did not proceed to college because people we knew said that it was useless since we did not have enough resources for me to finish my college degree. They said that it was better if I got married. I did spend quite some time to help my family in the farm. After a while, I went to look for a job in Davao so I could proceed to college. I had a hard time looking for a job since I was only high school graduate. I got a job as a construction worker. I worked during the day and studied at night. I did not mind the adjustment that I had to make. I was determined to finish my college education. If I had stayed in Temporan and worked as a farmer, I could not go to school. Temporan was far from local colleges. To get to the town, you had to ride a carabao because the road was rough. No public vehicle was servicing from Temporan to the town. In Davao, I worked with the city engineer's office as road maintenance. I took up my degree in Bachelor of Science in Elementary Education from 1983 to 1988 in the University of Mindanao. I did not take up the board examinations for financial reasons. I went back to my wife in Davao and worked with Mindanao Trucking Corporation. "*

Ron's interview above illustrates that although he faces the same livelihood constraints as other producers in Magpet he views the situation in a much more positive manner focusing on the livelihood opportunities available. Although his context is similar his outlook is not as he chooses to interact with changes in his production environment. As illustrated through the example of Ron, it is difficult to ascertain what historical circumstances impact on future livelihood decisions, which historical circumstances will affect future decisions and which will have the strongest influence on the future decision making process. These are complicated to interpret when viewed in conjunction with institutional processes and social interactions. As highlighted through life stories, the interconnections between people and institutions are important in providing access to a range of opportunities. In the case of the six diversifiers who were the exceptions to the rule in Magpet it is accumulated circumstances which are leading to diversification. A combination of contact with and the influence of 'youth', access to television and either a position of power or an overseas experience can lead to diversification.

Although non-diversifiers in Magpet have regular access to television (10), a young influence in the household (5), have worked overseas (2) or have held an elected position locally (6), the six diversifiers had a higher level of a combination of these categories than the non-diversifiers. Interestingly all of those who held elected positions had regular access to television.

In the Philippines, all professional relationships are built on personal relationships. These personal relationships therefore play an important role in gaining access to institutions as demonstrated through these life stories. As De Bruijn & Van Dijk writes: "Actors co-ordinate their actions with other actors. In this co-ordination process regularities arise which pre-structure subsequent decisions" (2003: 1-2). Does the ability to form personal relationships depend on a person's style or habitus or is it something that can be learnt? This section highlighted the importance of social and human assets in the formation of livelihood strategies and pathways. Further examination of historical influences as a component of habitus and style is necessary. This permits an examination of the extent to which producers in Malabog and Magpet are ensnared by their individual and collective histories.

8.5 Historical influences on livelihood Pathways

Whilst it would be analytically convenient if the conditions that influenced strategies and those that influenced pathways could be divided up and addressed separately, this is not possible as these influences are fluid and dynamic and interconnect at various levels. If context was the only influence on strategy, and circumstance the only influence on pathways, it would provide a neat approach to analysis. However, in reality although strategies may be influenced to a large extent by context and pathways by circumstance, the overall influences include both context and personal circumstances. Attempts at dividing historical episodes in people's lives in order to ascertain which particular episodes influenced pathways and which influenced strategies indicated that this is not clear cut. In fact, historical experiences influence how people respond or not, to a range of contexts in many given ways. This is explained by De Haan and Zoomers (2005:43) who describe livelihood pathways as "arising from individuals' strategic behaviours embedded in a historical repertoire and in social differentiation, including power relations and institutional processes, both of which play a role in subsequent decision making". In order to draw out and explain this further it is useful to note the assumptions made by De Bruijn & Van Dijk (2003:346) regarding the underlying assumptions of pathways, who note that amongst other factors that "decisions are made within a specific context by decision makers with a specific history".

Chapter six and seven explored the rationale behind adaptation and coping livelihood strategies in the study sites as well as the factors which influenced or determined which type of strategy was employed by producers. This analysis also demonstrated how current livelihood strategies are influenced by historical events which influenced past livelihood strategies and contributed towards present day risk aversion, and producer uncertainty. In Malabog, notable from cauliflower production figures is the 10 per cent discount given to buyers. This is in fact not a discount in the true sense of the word as it is a standard arrangement; it is in fact a reduction in selling price. This 'discount' illustrates the prevailing buyer power that exists within the supply chain.

Ramisch, *et al.* (2000:178) contend that:

“Due to historical legacies, power relations and the social and cultural setting, some actors are better able to negotiate access to resources via institutional arrangements. It follows that different actors are better able to follow certain paths of agricultural change than others, as following a particular pathway of change depends on access to crucial resources and thus particular forms of institutional involvement.”

Research findings indicate that historical influences can manifest themselves in various ways to influence supply response. Past selling conditions and arrangements with buyers or others in the supply chain are difficult to change even post diversification. As there are not a large number of buyers who buy in Malabog, it is difficult for producers to negotiate or adjust historical contractual arrangements especially when the buyer will be obliged to absorb a 10 per cent price increase. Findings from this analysis indicate that the direct and indirect impacts of trade liberalisation are significantly influenced by a host of other factors. In particular, historical policies and the current paucity of enabling and coping mechanisms at the regional and local level have been identified as important. Importantly a change in cropping patterns in Malabog as a result of an attempt to reduce mono-cropping by an NGO impacted (unintentionally) on future cropping patterns. In Malabog producers did diversify in order to ‘reap’ the opportunities offered by new markets. Their livelihoods remained influenced to a large extent by power relations within and outside the supply chain and institutional arrangements as well as historical episodes in the shape of a change in land use patterns. History has influenced the style and habitus of producers in Magpet and Malabog but it also influences current cropping patterns and marketing arrangements.

8.6 Conclusion

This chapter looked at the livelihood strategies of producers in Magpet and Malabog through a livelihood pathway lens in order to look at what factors influence the direction of livelihoods over time. Scoones and Wolmer (2000) explain that the range of contextual and institutional factors is highly particular. Findings demonstrated that contextual factors provide a broad frame for what is or is not a feasible livelihood strategy, the actual decisions to pursue a particular strategy within this frame is influenced by personal circumstances. This was illustrated through the six diversifiers in Magpet who operated in a similar contextual setting to the non-diversifiers but their personal circumstances differed. The research results found that personal circumstance plays an important role in the direction of the overall pathway as do historical considerations which influence circumstance and the livelihood pathway. The notion of habitus and style were introduced as elements of personal circumstances as were issues of social and human assets, household composition and historical influences.

Results indicated that a combination of very minor everyday events such as a particular job, experiences of migration and even the videoke bar can influence how producers adopt to changes in their production environment which enables them (or does not) to benefit from any opportunities presented by changes in their production environment. As highlighted by Rigg (2007:35)

“the term ‘pathways’ is rather too constricting. Experience shows that people ‘jump’ pathways: serendipity and simple bad luck can cause livelihoods to be re-worked in such a way that the latitude offered by the notion of a pathway is simply insufficient to accommodate the degree of change that can arise.”

In this case, it is possible to take these results and work backwards to look for common patterns in circumstance. This hindsight approach would not be feasible in terms of research aimed at identifying livelihood choices at a practical level. However, in order to understand livelihoods it is important to not only understand who and how livelihoods are constructed but, as discussed by Bebbington (2000), to understand the ways by which people have themselves found livelihood opportunities that enable livelihood security as well as those factors which inhibit these opportunities.

This has important implications for assumptions about livelihoods and what influences them. Research findings did not find any startling or obvious differences between diversifiers and non-diversifiers. In order to understand what facilitates diversification we need to go beyond the obvious reasons for choosing one particular strategy and consider what makes one pathway successful over another. This is not straightforward as it is not “easy to disentangle why households chose a particular strategy from what made the pathway successful” (World Bank 2007:75). The next chapter discusses the results to date as identified through this research drawing together the main themes and arguments put forward.

9 Chapter Nine: Unpicking Livelihood Threats and Responses in the Rural Philippines

9.1 Introduction

This thesis attempts to answer the following question: When confronted by livelihood threats arising from market integration, what patterns of livelihood response are used by affected small scale agricultural producers? While numerous difficulties existed in attributing specific livelihood threats to the process of trade liberalisation itself, specific livelihood threats rooted in particular changes in the production environment due to deteriorating producer terms of trade of farmer respondents were observed.

A case study approach was utilised in order to identify the pattern of response used by producers in Magpet and Malabog using the SLA as an organizing framework. When the findings from the case studies of Magpet and Malabog were viewed in conjunction with the findings of the other 14 case studies conducted throughout the Philippines on the impact of trade liberalisation on resource poor farmers, a number of interesting and significant livelihood patterns began to emerge. Corn producers in Malabog and producers in the other 14 case studies diversified away from traditional crops such as corn and rice towards vegetable production. Producers in Magpet did not, however, diversify their agricultural production regimes. Given that the production contexts in Malabog and Magpet are similar, it is useful to consider further the difference in response patterns. The missing variables that inhibited diversification in Magpet but enabled it in Malabog are important in terms of how small scale agricultural producers respond to livelihood threats based on deterioration.

This research found that at the household level, the availability of and access to financial assets, labour resources, inputs, credit and extension services, infrastructure and institutional and structural restrictions all played a significant role in shaping supply responses.

The current paucity of enabling and coping mechanisms at the regional and local level have been identified as important. The contribution of these factors to supply response is well documented in the literature. Research found that a lack of access to one asset did impact on access to other assets. This was particularly true as regards credit and inputs which formed significant barriers to diversification.

This research also established that factors other than those normally associated with supply response can play an equally important role in shaping, perhaps even determining the overall direction of livelihood pathways and livelihood resilience over time. Producers in Malabog identified a host of pull factors as part of their rationale for diversification. These pull factors included higher appraisal values against loans, lower input requirements, lower maintenance costs, food security, a more regular and continuous harvest, reduced risks associated with mono-cropping and lower labour costs due to a higher labour contribution of household females. Contextual issues laid the foundation that provided the initial economic drivers for diversification, however, Malabog producers' cropping patterns changed initially due to NGO intervention in the crop rotation.

In Magpet, the six producers who diversified production and were exceptions to the rule did so largely due to personal circumstances such as employment and access to information. Livelihood pathways were found to be influenced by a host of factors both personal and contextual. In Magpet, issues contributing to risk and uncertainty were also identified as important in particular issues relating to conflict and displacement. Historical agricultural and trade policies also played a role in formulating current supply response. A key finding of this research was that although producers recognised declining real farm gate prices of corn and increasing costs of inputs, there had been no significant change in cropping patterns in the ten years prior to the fieldwork in Magpet, with the exception of six respondents.

In order to draw together the essence of these findings, this chapter firstly attempts to answer the research questions set out in chapter one. The implications of these findings are then considered in terms of the contribution of this research to knowledge, policy and practice. Areas for further research are then identified which would contribute to and enhance the findings of this study. Having identified where further research would illuminate these findings, the final part of this chapter discusses the main limitations of this research.

9.2 Summary of research findings

This section presents the findings of the research, linking them to the research questions posed in chapter one. The research questions are not answered in the scientific sense but are illuminated based on the findings of the particular case studies. They may not provide generalised findings, but I argue that we can use the results of the research to reflect on wider issues of concern in the livelihood field.

9.2.1 Does current livelihood and disaster theory adequately account for and explain the diverse livelihood options pursued by small scale agricultural producers facing threats based on deterioration?

Chapter two presented an overview of the evolution of livelihood and disaster theory as well as presenting some of the models of each currently utilised by practitioners and researchers at the field level. In particular, the SL framework was presented as one such model which is multi-disciplinary in tenor. SL analysis is utilised by academic researchers, action orientated researchers and those attempting to identify, design and deliver livelihood projects. This study found that current livelihood and disaster theory fails to capture the complexity of livelihood options pursued by small scale agricultural producers when faced with threats based on deterioration. While, this research demonstrates that the SLA is a useful starting point for any analysis of vulnerability and livelihoods and that DRR thinking and theory does significantly contribute to how we view vulnerability and resilience, livelihood options faced by people are governed by many and often conflicting variables. These variables which are related to contextual factors and others – which are much more difficult to capture – are associated with the circumstances in which producers find themselves.

Livelihood models which build upon theory and attempt to convert theory into practice at the field level are normally known as 'frameworks' or 'toolkits'. SL analysis is overly structured and necessitates those variables, which impact on livelihoods, are categorised and assigned to a certain box within the SLA framework. The SLA does provide a useful framework and checklist for analysing livelihoods quickly, by non-specialists; but it over simplifies livelihoods and tends to gloss over the dynamism and contingency inherent in the building of livelihoods. SL analysis has many merits as a tool for analysing contextual influences, but fails to capture circumstantial issues, nor, it should be added, was the SLA designed to do so. This divide also ties into wider debates as regards structure versus agency.

Both livelihood and disaster theory emphasise the need to reduce vulnerability and increase capacity thus reducing risk and increasing resilience. Both approaches highlight diversification as an important means to protect existing assets and capacities and create new ones. Specialisation is considered less desirable than diversification as a livelihood strategy where market conditions are volatile and subject to change. In terms of trade reform, how small scale agricultural producers respond to price changes is crucial to whether they benefit or not from changes in the production environment. Current theory does not capture the full complexity of vulnerability and capacity and how they interact. The role of style, habitus and everyday ordinary events in shaping how producers respond to livelihood threats lacks clarity based on current livelihood and disaster theory.

In Malabog, producers diversified agricultural production in order to adapt to the livelihood threats they faced, whereas 25 out of 31 respondents in Magpet did not change their agricultural production in response to livelihood threats. Theory stipulates that access to assets will dictate the livelihood options available to people "vulnerability is very much dependent on assets, and the possession of or access to liquid assets are particularly important to avoid impoverishment" (Hulme and Shepherd, 2003:409). The vulnerability context faced by producers in this research was heightened due to numerous factors such as a lack of access to assets in particular infrastructure, limited enabling mechanisms in general and high transaction costs.

Research demonstrates that access to assets plays a role in response patterns to changes in the production environment. However, results did not provide significant evidence to suggest a relationship between household endowments and response to a livelihood threat.

High respondent access to the asset base did not equate to a given response to a livelihood threat or vice versa. Research results established that responses are also influenced by factors other than asset access. These influences are largely based in context and particular individual personal circumstances. This goes some way towards explaining why responses differed in Malabog and Magpet even though producers in the two sites had similar access to assets as identified through research.

Ellis' (2000) livelihood framework and Blaikie *et al.*'s (1994) access model make links between the assets people possess and the livelihood options available to them. They also highlight that the level of risk associated with each option will influence the degree of specialisation or diversification. Aspects of DRR theory, which are important when considering livelihood resilience, are not new to livelihood practitioners. As demonstrated in chapter two, there are numerous overlaps between the two approaches. DRR thinking takes elements of 'good' livelihoods analysis and programming, making them explicit in DRR programming. Key to this study, both models also place livelihood strategies at the centre of livelihood resilience. Both models do attempt to capture the complexity of various influences on the options available. A finding of this study is that while vulnerability limits livelihood options, capacity which is a component of vulnerability and resilience can greatly enhance the options available. In particular, capacities can change over time influencing how risk is dealt with. Research results found that livelihood pathways are influenced to a greater extent by personal circumstances in comparison to the influence of personal circumstances on livelihood strategies. Livelihood strategies have a loosely defined pre-set goal in sight thus reducing the scope of the role of outside influences.

The second key finding in terms of current theory is that vulnerability is heightened by poor policy implementation and enabling mechanisms coupled with a lack of safety nets. Importantly, when such policy deficits exist, personal circumstances have the ability to enable producers to diversify, or can prevent them from doing so. This focus on the personal brings into question how we look at vulnerability over time and the role of capacity as a component of vulnerability. Personal circumstances can influence capacity to respond to livelihood threats even amongst households that have similar access to assets and embrace similar livelihood strategies in terms of the production mix. Analysis of the workshop outputs identified that households have different levels of resilience even when they have similar livelihood strategies. Findings demonstrate that households are unequally vulnerable due to other factors such as household composition, household size, education levels and even the age of those involved in the household decision making process.

The research findings show that whilst the translation of theory into concrete models enables the identification of livelihood threats as presented in chapter five, these models fail to account for and explain the diverse livelihood activities taken up by small scale agricultural producers facing these threats. Current livelihood theory fails to capture the division between context and circumstance and how they interact with inhibitors, risk and uncertainty. For example, livelihood asset use can be governed by both personal and contextual circumstances. Livelihood pentagons do capture asset use at the head line level but asset analysis tools such as livelihood pentagons do not adequately account for the different roles of assets. Personal circumstances and contextual factors play very different roles in supply response. DRR theory and the evolution of thinking on vulnerability do consider personal and contextual aspects of vulnerability. Gaps remain in the marriage and subsequent utilisation of the two approaches.

This research demonstrates that SLA and DRR theory have enabled a fuller understanding in accounting for how small scale producers respond to livelihood threats. However current theory does not adequately capture the diversity of the options used or explain why small scale producers choose these particular options over others available.

9.2.2 Are current distinctions between different patterns of responses and rationale of such response appropriate?

As discussed in the previous section, in theory diversification of livelihood options is important for dealing with a host of threats and supports resilience of the overall livelihood system. There is a tendency in the academic literature, and even more so in policy analyses, to expect farmers to respond in a fairly simple manner to economic incentives. Chapter two introduced the different classifications of livelihood strategies, namely coping and adaptation. Within these two classifications it was noted that there are many individual strategies. These strategies can also be ex-ante risk management and ex-post coping with crisis. This study found that distinctions in response such as adaptation and coping are not always clear. The rationale of response such as push and pull factors is not, in practice, neatly demarcated, and the interaction between rationale and response is not linear or obvious. Existing distinctions between patterns of response – namely adaptation, coping, and ex ante and ex post responses – fail to capture changes over time and space, overlook overlap, while the language utilised also creates confusion. As the discussion showed, there are a myriad of reasons why producers respond the way they do to livelihood threats. This was demonstrated in chapter six where the question arose regarding ‘no response’ as a strategy in itself, as a conscious decision grounded in risk aversion to maintain livelihoods in a ‘fall-back position’ until changes in the production environment improve. In chapter six, producers in Magpet who did not diversify also limited their exposure to volatile markets and therefore could be said to be acting in a risk adverse manner.

Chapters six and seven classified responses as either coping or adaptive which were identified in order to deal with the livelihood threats which resulted from trade liberalisation. These distinctions offer useful classifications, but, as attested by the other 14 case studies, it is often difficult to classify a response into one category or another. Producers often have several elements to a livelihood strategy, some of which can be seen to be coping strategies and some adaptive. In many cases a short term coping strategy is

in fact contributing towards a longer term adaptive strategy in the overall livelihood pathway. Migration and the resulting remittances are one such example. In Magpet there is no evidence to suggest this, but in practice it is hard to disentangle such response types.

The relationship between the pattern of response and the rationale of response is also not linear or obvious. Respondents in Malabog discussed numerous pull factors which made them choose the livelihood option of diversification. However, in Magpet, producers discussed only inhibitors to response. These factors which were considered push factors in Malabog, such as low returns and access to credit and inputs, became inhibitors to diversification in Magpet. In Malabog producers recognised that vegetables had a higher appraisal value for credit than corn and would therefore improve future access to credit. In Magpet a lack of access to credit provided an inhibitor to diversification. Low returns for corn in terms of the farm gate price pushed Malabog producers to produce a more profitable alternative. In Magpet the lack of returns provided an inhibitor to diversification in terms of finances available to diversify. Malabog respondents viewed vegetables as requiring less inputs and maintenance in the future but in Magpet a lack of access to inputs was viewed as an inhibitor to diversification. These examples illustrate that patterns of supply response can differ for producers operating in the same context. The same contextual factors can be viewed by and acted upon by producers in different ways. Current distinctions of rationales of response fail to capture this complex relationship. The personal circumstances which enabled the exceptions to the rule to diversify in Magpet do not fall under any of the current classifications for rationale and patterns of response. Results demonstrated that contextual factors can provide the initial economic driver for diversification but the actual and specific patterns of response are shaped by a blend of personnel and contextual influences.

Furthermore, it is less challenging to ascertain the rationale for a specific livelihood strategy than for a livelihood pathway. As pathways develop over time and geographical space, distinctions between patterns of response often fail to capture the entire livelihood portfolio. Current distinctions also fail to grasp the significance of mixed responses within

the portfolio or *bricolage* of responses and the relationships between the different livelihood activities within the portfolio.

Even though strategies may be short term coping arrangements they are contributing to longer term adaptation. Current methods also fail to adequately capture the role of history in patterns of response, a point which is returned to in section 9.2.4 below. Pender *et al.* (1999) discuss some of the factors that contribute towards which pathway is followed, using an example of increased access to markets increasing the likelihood of producers diversifying into high value vegetables. This increased market access “may increase use of modern inputs directly by reducing farm level costs of inputs or increasing farmers’ awareness of such inputs” (Pender *et al.*,1999:4). Results reveal that this is not the case in Magpet and Malabog. Whilst both suffer from an infrastructure deficit, access to markets is significantly higher in Magpet but they have not diversified into high value vegetables and their inputs do not cost less than in Malabog which is an extremely remote area. The findings also demonstrate that contrary to much of what is suggested in the literature, gender does not seem to pose an inhibitor to diversification and the role of human and social capital and their interactions in providing a rationale of response is unclear.

Krishna (2010b) argues that ordinary events can push people into poverty. In this study where relevant policies such as safety nets are missing or not implemented thoroughly, personal circumstances can facilitate diversification creating the exception to the rule, as was the case in Magpet. These personal circumstances also contribute towards aggregate patterns of response.

What is clear from these results is that patterns of response and rationales of response are not necessarily linked. It is important that the various stakeholders involved with livelihoods at different levels do not presume that people behave in a certain way under particular conditions.

9.2.3 Are current research methods adequate to the task of picking out individualized patterns and rationales of response?

Current research methods contribute significantly to our understanding of livelihood systems. In particular, PRA tools and livelihood frameworks enable us to consider aspects of a livelihood system that we might not otherwise incorporate into our analysis.

Livelihood research is multidisciplinary with numerous studies acknowledging gaps in how livelihoods are analysed. The livelihood framework in particular is the subject of some debate. The lack of understanding as regards the influence of the specific components of the framework on livelihoods has received some attention. In chapter two, these gaps were discussed in relation to politics, power and networks. Multi-disciplinary approaches can lead to a strong emphasis on the specific aspects of livelihoods whereas these results demonstrate that the 'answer' can be found in the general. The research findings illustrate that it is often ordinary level everyday events based in circumstance rather than context, which govern individual patterns of response. Current research methods do not always capture the multifarious nature of livelihoods. In order to identify and ascertain the influence of individual discreet events, explorative qualitative research is necessary to capture elements of the agency versus structure debate.

The research methods utilised as part of this study included surveys and PRA tools which were used to populate the various boxes of the livelihoods framework as well as life story methods which contributed to picking out livelihood pathways. PRA tools are also used to compile CVA and other DRR tools. Although these methods provided a large amount of data as regards what responses occurred (see chapters six and seven) it was sometimes difficult to ascertain from the findings why respondents were responding to changes in their production environment in the way that they were. The methods yielded a large amount of data which was valuable in ascertaining income and expenditure patterns and to a lesser extent the combination of the assets used. However these raw data did not, in themselves, provide an insight into how these outcomes were generated. The results also failed to capture information on why respondents made decisions which led to the resulting income and consumption patterns, and how these changed over time.

Changes to household income due to non-farm diversification were often even harder to capture. Aggregate results were less problematic to identify than individual patterns of response, indicating that a problem of aggregation exists, with generalised interpretations hiding a complexity of individual outcomes. Respondents failed to take account of all the activities that they were involved in, which contributed to the overall livelihood and many of the strategies can be said to be hidden. Findings have illustrated that there are two main areas for consideration when attempting to capture personal circumstances. Firstly the level of analysis required is quite detailed. One example of a detailed household economic analysis, which tries to capture this, is the Household Economy Analysis used by Save The Children²⁸. The Household Economic Analysis is particularly useful as it enables the uncovering of the inside workings of a household, in so doing identifying the constraints faced by the poor and the opportunities open to them within the wider economy.

The second issue concerns what elements of livelihoods to capture. Even rigorous research which incorporates a good measure of data triangulation will experience difficulties in attempting to capture personal circumstances. Key informants were utilised during this study in order to guide and formulate subsequent detailed research and survey design. However, it is difficult for key informants to know the ordinary everyday events which are important at the household level and how if at all they influence patterns of response. Therefore, it is difficult to create data collection instruments which capture these events.

PRA tools are participatory by nature but for purposes of livelihood analysis, few tools are truly participatory. During the course of this study, numerous participatory exercises were conducted utilising both standard PRA tools such as seasonal calendars and subject specific PRA tools such as market chain analysis. Prior to data gathering events the tools were (re)designed in order to collect pre-determined data. Collected data was in

²⁸ See HEA in detail http://www.savethechildren.org.uk/en/54_6781.htm. Where greater analytic depth is required the Individual Household Method a derivative of HEA that uses the same basic principles, can be used.

this case dictated by the key informants and the outputs of the survey research but not designed or determined by the participants. The resultant tools may, therefore, not capture everyday events and personal attributes if they are not specifically designed to do so and their capture therefore is by 'chance'. One of the strengths of life story research, as noted earlier, is the importance attached to what participants choose to tell researchers. The results from the life story research illustrated the importance of higher level events and processes, such as Mindanao's wider conflict. However, we need to also consider the personal circumstances that participants do not mention. Participants may not mention events because they do not want to (and think it is none of our business) or because they do not deem it important or do not realise the impact it has on their decision making process. As discussed by Law and Urry (2004:393) research methods, "enact realities; and they can help to bring into being what they also discover". This is further discussed in section 9.5 which looks at the limitations of this research.

During this study a process of data triangulation did enable events to be captured that were not mentioned by participants such as farm related debt, remittances and hidden livelihood strategies such as frying bananas. However, it must be considered that there were other events that were not captured. It is difficult to know if there are any and what they might be. If this research had captured different events it would influence the future directions of the research and data collection tools and subsequent research findings. As discussed by Law and Urry (2004: 396), "social investigators know perfectly well that different methods produce different and often inconsistent results".

This study reveals that one of the shortcomings of current methods is that they tend to be 'one-off', and are adopted at a particular point in time thus giving just a snapshot of livelihoods. Therefore, in order to track livelihoods over time we need to adopt longitudinal approaches. Livelihood pathways do attempt to capture livelihoods over time but specific research methods to do this on a grand scale are not readily available or currently utilised by major development agencies. Numerous development agencies use the rhetoric of pathways in strategic plans and other higher level programme documents but, as a search of the literature reveals, there are very few methodologies or tools available to capture livelihood pathways at the field level. One example is the

International Centre for Agricultural Research in the Dry Areas under the OASIS project²⁹ who have enunciated in broad programme directives that their approach is a livelihood development pathway framework. However, a methodology of how this would be achieved at a practical level is not provided. Further personal communication with bilateral, UN agencies and INGO livelihood development departments reinforced this perception. Even organisations with more advanced approaches to livelihood analysis such as Oxfam, that do take into consideration livelihood pathways in their work based on SLA do not have any specific methodologies or tools for pathway analysis at the field level. De Haan (2006:144) contends that, “these days, the term ‘pathway’ is used more often in livelihood studies, but unfortunately without much agreement on its precise meaning”. Pathways offer an adequate approach in theory to pick out individual patterns of response but they are difficult to utilise with large numbers of respondents or beneficiaries. Pathways do offer insights into livelihood change that strategies fail to capture. However numerous difficulties arise in attempting to capture pathways themselves. In practice SL analysis is subject to security (access), time, cost and capacity constraints which make large scale in depth research difficult.

²⁹ See <http://www.oasisglobal.net/activity.htm>

9.2.4 What is the role of historical factors (institutional and personal) of past events – in moulding patterns of response?

This study demonstrates that the role of historical factors in influencing patterns of response is not always (or easily) observable. In terms of agricultural producers this role is heightened as land is a fixed asset and past land use patterns dictate future land use patterns. Historical agriculture and trade policies influence the current status of the agricultural industry which can increase vulnerability and undermine resilience. In the case of Malabog, producers have a history of adapting to changing market conditions and originally diversified away from corn production as an alternative to mono-cropping which reduced the ability to fit corn into the overall crop rotation. Historical contractual arrangements such as discounts given to buyers dictate present trading arrangements, and the cycle of 'charge to crop' purchasing and selling arrangements is extremely difficult for producers to escape. Past events and in particular displacements contribute to current land use patterns and degrees of risk, but to varying degrees. Trust in government reform attempts, based on past reform attempts are also a factor. Market signals will influence supply response to current market reforms.

Past experiences and idiosyncratic events influence habitus and style which in turn influence current pathways which will influence habitus and style, again influencing future pathways. Historical events influence behaviour but not necessarily in a planned manner or consciously. Households do plan for the future, for example, by sending home remittances which may play a role in current patterns of response or contribute towards longer term livelihood goals. It is difficult to capture what and how historical occurrences can influence present supply response decisions. Some components of history, such as conflict, have reasonably obvious implications on current response patterns but the influence of other historical occurrences on risk aversion, for example, is not as straight forward. The role of personal circumstances and how they are shaped by personal historical experiences versus the role of higher level historical events is difficult to measure. Again this comes back to wider debates on structure versus agency.

Cultural considerations such as *Bahla na* have a function in contributing towards supply response decisions and culture, as discussed in chapter two, is a building block for

resilience. The extent of the contribution of culture in forming the habitus and in turn moulding patterns of response is again difficult to ascertain. Finally indigenous knowledge as regards coping mechanisms will mould patterns of response and contribute towards resilience but as previously discussed this contribution is also difficult to capture. What is clear is that history plays a role at different levels in moulding patterns of response and in shaping contextual and personal circumstances. How exactly to best capture and represent this remains unanswered.

9.3 Contribution of this thesis to knowledge, policy and practice

A review of the relevant livelihood and DRR literatures highlighted the importance of livelihood strategies as a key component of resilience in the face of hazards or threats. The literature also highlighted that resilience is central to the definition of sustainable livelihoods. Resilience in transformation or the ability to adapt to change were highlighted as crucial if small scale agricultural producers are to gain any of the perceived benefits from agricultural trade liberalisation. Diversification was highlighted as one risk mitigating mechanism. That said existing literature on how small scale agricultural producers react to threats or shocks focuses mostly on conflict, natural hazards and food insecurity. Where literature does look at trade liberalisation the focus is mainly on economic and price data.

This ability to diversify is flagged as crucial under trade liberalisation theory if small scale agricultural producers are to reap any of the perceived opportunities offered through liberalised markets. As this study outlined, the literature on livelihood diversification attempts to compartmentalise the types of response by farmers. In particular, those who diversify agricultural production in response to declining returns and those who do not. Both the academic literature and policy analysis expect farmers to respond in a fairly simple homogenous manner to economic incentives. The evidence from Magpet and Malabog, however, reveals that we can rarely 'read-off' livelihood strategies from a simple reading of assets set against economic 'drivers'. This research identified that there are a host of non-price factors which influence supply response. These non-price factors stem from both the contextual setting and the particular circumstances of the individual household.

This research found that although existing tools can capture the specifics of livelihood response in terms of what people do, current methods fail to capture why people do what they do. The role of policies at the national level which accompany trade liberalisation are important in terms of supply response. In order for small holders to reap any of the perceived benefits of trade liberalisation, both enabling and coping factors need to be implemented and, therefore, resources need to be made available to make this possible.

In the case of the Philippines, mismanagement of funds prevented this from happening. Even within stratifications of producers there are winners and losers, depending on the household status as a net buyer or seller. The success of any change will be thwarted (as in the case in Malabog) if certain provisions are not established at the national level. All of the findings of this research from the most general baseline data to the most detailed ethnographic narrative accounts indicate that efforts to cope with trade liberalisation are undermined by the insufficient coverage of policies and programmes which comprise these enabling and coping mechanisms.

There is an important role for complementary policies accompanying trade reform in order to facilitate a positive supply response. Policy mechanisms need to be in place, which would enable appropriate interventions to remove the bottlenecks in a timely fashion. Effective systems are needed to enable producers to cope with income fluctuations and mitigate risk. These should entail crop insurance schemes, savings and credit schemes, and agricultural inputs discount schemes. More importantly, these systems must be implemented with sufficient geographic coverage and a long enough time scale to make a significant difference to producers' terms of trade. Extension services and their dissemination mechanisms require improvements reaching beyond technology transfer mechanisms. Extension services need to be modified in order to be demand driven incorporating elements of market analysis. Small scale agricultural producers need training and access to finance, as well as technical inputs so that they can respond to changes in their production environment. This would facilitate a response which would enable them to reap any opportunities offered by liberalised markets. In terms of the provision of enabling mechanisms the most important and simplest recommendation of this study, is the provision and maintenance of sufficient infrastructure without which all other initiatives will be undermined.

The impact of liberalisation on small holders will be mediated in several different ways, most of which may be affected by additional government policies or the actions of economic operators. In terms of a sustainable livelihood these would fall under policies, institutions and processes. Policy makers need to carefully determine who will be the winners and losers from liberalisation and what will be the impact on each group in terms

of livelihoods. What measures should be put into place to protect vulnerable groups upon whom liberalisation will have the most adverse impact? The findings from this research indicate that these questions were not addressed sufficiently by policy makers at the national level in the Philippines. Evidence of attempts to mitigate the adverse impacts of liberalisation stem from either enlightened local government units who are geographically sporadic or NGOs which have inadequate mandates and funding mechanisms to tackle large geographical areas and numerous production systems. Since small holders are not a homogenous group and are vulnerable for different reasons and to different extents, enabling and coping mechanisms will impact to varying degrees on households and with varying levels of success. However a lack of enabling and coping mechanisms will have adverse effects on all households.

As Krishna (2010b) points out, policies targeted at social mobility need to be diverse. During the course of this study both diversifiers and non-diversifiers discussed problems associated with inadequate infrastructure, in particular roads and the negative impact of deficient infrastructure on the purchasing of inputs and marketing of produce. Infrastructure construction is therefore important and has many benefits for the rural poor. Road construction however will have varied benefits on households and individuals depending on the household's status as a net buyer or seller and its level of resilience. Jacoby (2000) discusses issues as regards the benefits of road projects at the household level and the distribution of these benefits across income classes. The benefits of roads will then vary depending on the livelihood strategies of individual households in Malabog and Magpet.

Chapter four provided an overview of the general complementary policies and measures put in place in order ease the process of trade liberalisation, however like roads it is difficult to ascertain the relevance and benefits of national policies to the individual household. In the case of trade liberalisation, national complementary policies which are administered by local government units do not take into account the local context. What might work well in an area with sufficient roads and security is not necessarily appropriate for Mindanao. Or as Krishna and Shariff (2011:541) note from their study of

rural poverty dynamics in India, where no variable was significant or not significant across states, “no standardized policy can be uniformly effective”.

When considering the contribution of this thesis to development policy and practice it is necessary to acknowledge the major developments that have taken place in bringing together livelihood and DRR theory over the period of this study. Although they are too numerous to review in detail here, it is useful to note some of the key developments. The model presented below in Figure 9.1 is taken from Practical Action (Formerly the Intermediate Technology Development Group (ITDG)), and offers some useful insights into the practicalities of tying together the two approaches from a programmatic perspective. The framework termed, ‘Disaster resistant Sustainable livelihoods’ was one of the first to attempt to marry DRR and livelihood thinking is useful as it highlights the need to either protect assets where they exist or create entitlements where they do not. Both scenarios present a similar outcome, namely the need to diversify livelihood options in order to adapt to livelihood threats or hazards.

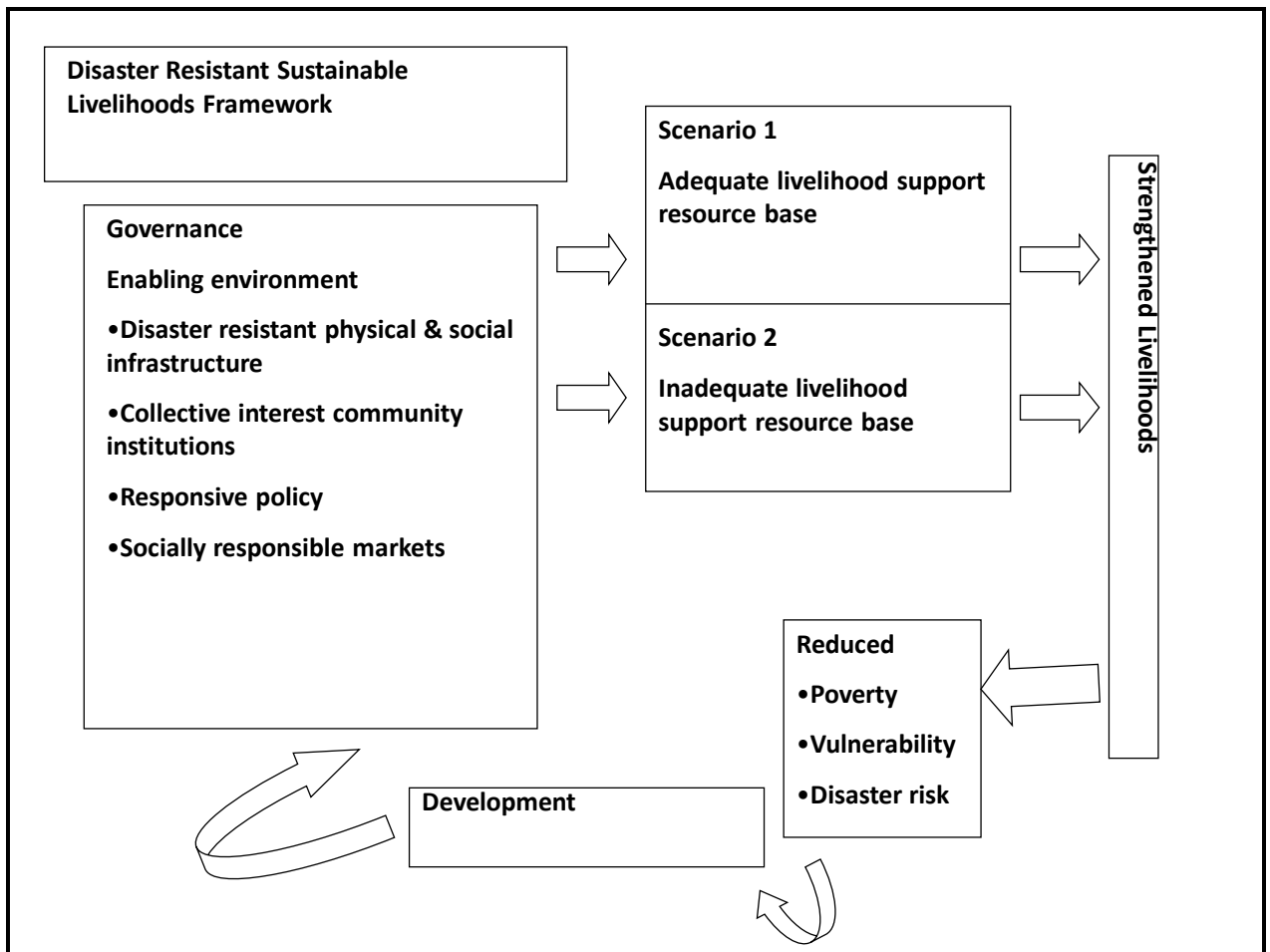


Figure 9.1 Disaster Resistant Sustainable livelihoods (Source: ITDG South Asia, 2005)

Other notable contributions include Oxfam’s risk mapping and local capacities approach (Trujillo *et al.*, 2000) which is significant in that it begins with an analysis of threats (the hazards), followed by a risk analysis (the human ‘sectors and elements’ exposed to the threats) and then an analysis of vulnerability (‘defined as the relationship between the level of risk, local capacities, and the living conditions of the threatened community’). Although these models are useful in bringing together livelihood and disaster theory there are many issues surrounding their use from an analytical perspective. Twigg (2001) explains that if CVA were to be used for livelihoods, specific indicators would have to be developed as inequalities of power are not sufficiently acknowledged in both livelihood and disaster theory models.

In the years since the Indian Ocean tsunami in 2004, many further developments have been made in this area. It is now commonplace for DRR and livelihoods programmes to be managed and funded by one department in development agencies and considered best practice to do so. Livelihoods still tends to form the link between relief rehabilitation and development activities. During the length of time it took to complete this study, Practical Action have developed the Vulnerability to Resilience (V2R) framework. This framework sets out analysis and action to reduce vulnerability and strengthen the resilience of individuals, households and communities. Perhaps, the most notable advance in this area is the recent R4 rural resilience initiative of the World Food Programme and Oxfam America which “ attempts to develop a comprehensive approach to address the issues of availability and access to food, disaster risk reduction, risk transfer and capacity building in rural communities” (IFRC, 2011:114).

Findings from this research highlight the need to invest significant resources for identifying livelihood response patterns and the rationale of livelihood response, prior to the identification of livelihood interventions. These new methods and initiatives are certainly steps in the right direction. Results indicate that households respond differently to economic policy changes based on a host of factors including individual style and habitus, everyday ordinary events and access to assets. Therefore in order to improve people’s wellbeing we need to look beyond blanket livelihood programmes and design projects particular to the household level. Households have different levels of resilience which becomes important when a hazard such as war or an earthquake strikes; low levels of resilience will translate vulnerability into ‘disaster’.

In order to strengthen resilience prior to the occurrence of hazards and thus avoid disaster, programming needs to take into account individual household circumstances and everything that shapes them and how these factors interact and link together. Such an approach would be costly and time consuming and poses many challenges in linking household needs to larger programmes. Individual livelihood projects will need to be varied in line with the varying needs of households.

This is a significant task and not feasible at the field level under current funding mechanisms and the pressure to implement projects in terms of the methods necessary to achieve this. "However if we are to understand everyday living then the scope of view must extend from the cultural to the economic, from the social to the political, from the present to the past, and from the local to the global." (Rigg, 2007:42)

This study has contributed to academic knowledge in two key ways. Firstly, the results have exposed that we need to reconsider how we look at livelihoods and, in particular, over time. Livelihood pathways can contribute to our understanding of this. But this study also found that pathways are influenced by a host of personal circumstances. Pathways can change course and capacity which influences pathways can change over time.

Secondly, if we reconsider how we look at livelihoods, then we need to reconsider how they are measured in terms of livelihood research and methods. The ability of producers to respond to changes in the production environment is taken as key to livelihood resilience. Given the importance of ability to respond to change we need to be able to account for contributions towards this type of resilience. How much personal circumstances and asset access contribute towards livelihood resilience is important. These contributions can illuminate our understanding of how and why people accumulate assets (or not) through specific livelihood strategies. This accumulation can enable people to switch from one livelihood pathway to another. The existing literature on inhibitors to agricultural diversification focuses largely on issues based in context. This is correct broadly speaking as context does dictate largely what is and what is not a feasible livelihood strategy. However this research has demonstrated that within the broad parameters laid out by a particular context livelihood decisions are largely a result of personal circumstances. Livelihood and diversification work needs to further consider the contribution of personal circumstances and how best to capture them.

Pathways are more complex to unpick than strategies as they are influenced by a host of contextual and personal circumstances, even so they are still too constricting in terms of covering the depth and dynamics which constitute people's livelihoods. Current methods fail to capture the full contribution of history to livelihood response. We need to refocus on events particular to each household in a systematic manner.

Therefore the challenge lies in attempting to capture the diversity of livelihood options used by people and the rationale behind responses while at the same time trying to capture similarities. This will enable a deeper appreciation of factors that contribute towards response capacity and thus resilience. However, in order to be able to make generalisations, research needs to move beyond particular case studies.

"More emphasis should be placed on comparative research, or a systematic comparison of livelihood decisions in different geographical, socio-economic, cultural or temporal contexts, so that patterns can be recognized as pathways which go beyond the specific case." (De Haan and Zoomers, 2005:44).

However this is multi-layered. Firstly the diverse livelihood options utilised by people need to be identified. Following this, the rationale of livelihood response and their linkages needs to be ascertained. Finally the multiple influences on the rationale of response require identification, such as context versus circumstance. This is clearly not straightforward and requires considerable resources.

It is important that any attempts to capture the role of personal circumstances are user friendly. In depth methodologies requiring large amounts of data, are not always useful or appropriate for livelihood recovery projects in a post humanitarian crisis context where speed is important. This analysis has offered some modest insights into how livelihood choices unfold. However, it took a considerable amount of time and was not subject to the time pressure that a real life project demands. Simply, this analysis had the luxury of time whereas in many practical settings that would not be the case due to the 'haste to implement' and funding proposal deadlines.

It is difficult to analyse and make coherent connections between such large amounts of data at the field level where aid workers are not specialists in the various technical fields. The language of existing toolkits can be difficult for non-native English speakers and toolkits also do sometimes oversimplify. DRR toolkits are often hazard specific and therefore look at vulnerability in relation to a specific hazard. On the positive side, since the Indian Ocean tsunami funding mechanisms have emerged that enable funds to be sought for disaster prevention and preparedness activities. These funds are mostly targeted towards hazard specific early warning systems, contingency planning and disaster education rather than strengthening the resilience of livelihoods. That said, the *World Disaster Report 2011* (IFRC, 2011) focuses on hunger and malnutrition with particular emphasis on the resilience of small scale agricultural producers, so it would appear thinking on the subject is gaining momentum.

The cases of Magpet and Malabog highlight the difficulties faced by researchers in terms of capturing the results of the actions by producers and the livelihood outcomes achieved. It raises challenges in terms of how livelihood analysis and development interventions are researched, identified and appropriately implemented. If livelihood research and analysis fail to capture the complexity of people's lives, projects are likely to fail to address key areas of importance. Trajectories and life stories have been put forward as a method by which to analyse and capture the complexity of livelihood pathways (De Haan and Zoomers, 2005). Murray (2002:496) provides an explanation of livelihood trajectories: "A livelihood trajectory is a path through time, and refers to, 'the consequences of the changing ways in which individuals construct a livelihood over time'". It can, "illuminate the process of change by revealing the ways in which negotiation, bargaining and struggle can alter circumstances". Perhaps what is needed is a mixture of methods: De Haan (2006:144) proposes "to use the concept of pathway for the observed regularities or patterns in livelihood among particular social groups and to use trajectories for individual actor's life paths".

Trajectories go some way towards capturing the personal elements of rationale of livelihood response: “livelihood trajectories try to penetrate into a deeper layer of beliefs, needs, aspirations and limitations and especially need to be put into the context of power and institutions” (De Haan and Zoomers, 2005:43). Krishna (2010b:14) recently discussed the collection of household ‘event histories’ where no large scale or momentous event formed part of the histories. But, he notes, “ordinary events occurring routinely and unremarkably at the household level [and resulted] in producing different trajectories”. These are all important contributions as it is necessary to draw together methods of capturing complex personal circumstances in order to analyse livelihoods and design appropriate tools and policies that facilitate the development and maintenance of livelihood resilience.

This study has highlighted the importance of livelihood research and analysis. Effective livelihood programming needs to focus on untangling livelihood responses and thus resilience. An increased focus on such analysis would lead to the improved implementation of livelihood projects. This study has identified the role played by personal circumstances in moulding patterns of response and highlighted the need for research methods to be expanded in order to capture, internalise and unpick these personal circumstances. In order to build and develop existing resilience, additional information is needed on what circumstances promote resilience and the ability to adapt and what personal circumstances undermine or restrict resilience. This incorporates elements of capturing resilience in both existing SLA and DRR models.

9.4 Areas for further research

Scoones and Wolmer (2000) discussed over a decade ago the constraints of increasing the depth of livelihood research and analysis at the field level still. This research has found that many of these issues remain to be addressed. It is therefore useful to identify the areas where further research is necessary in order to increase the depth of livelihood research and analysis.

Livelihood and disaster theory have provided considerable advances in our understanding of poverty, resilience and vulnerability. However, caution should be exercised in their utilisation. Despite our improved knowledge, there are still many shortfalls and limits to our understanding. It is important that methodologies exist that can capture the diversity of livelihoods while at the same time providing a mechanism by which to draw together similarities in patterns of livelihood response. Such methodologies would need to encompass a mixed method approach. Because this research was not based on a large sample from which statistical inferences can be drawn, it would be useful to establish the re-occurrence of particular personal circumstances over a larger sample. While this might run the risk of adding yet another checklist to current tools it would certainly allow for deeper understanding of the construction of livelihood options. Any attempts to capture personal circumstances needs to start with the beneficiaries of livelihood endeavours.

Further research needs to examine the patterns and rationale of response. Current distinctions are numerous, they overlap, and they add confusion. Specific areas that this research has highlighted as requiring further research in order to build upon and enhance the work carried out as part of this study include the role of personal circumstances under different policy scenarios. It would be advantageous to carry out such research under contrasting conditions where sufficient safety nets are established, and where they are not. Such research would therefore provide insights into the role of personal circumstances in shaping livelihood responses under conditions where safety nets of varying forms and other policy provisions exist.

The role of history, culture and indigenous knowledge or coping mechanisms in supply response would also benefit from further focused research. It would be worthwhile to consider if response to a threat is different from normal livelihood change influenced by the 'everyday'. Is response to a threat just an accelerated form of livelihood change or is it something qualitatively different? In other words, how context and circumstance specific is livelihood change? Krishna (2010b:124) summarizes the problem by saying that, "the task of explaining social mobility patterns and understanding how they can be purposively influenced remains as yet incomplete". Identification of what personal circumstances are important in formulating a rationale of response and the role of these personal circumstances under different policy and context scenarios would go some way towards explaining livelihood resilience. This understanding is necessary in order to inform attempts at strengthening livelihood resilience and increasing social mobility.

9.5 Limitations of this research

My learning from this research has influenced how I look at the research process and therefore some aspects of the research methodology adopted for this study could be further enhanced for future studies. Firstly, from both a safety and an access perspective different geographical areas could have yielded greater results, with less personal risk and fewer practical impediments. The prevailing security situation limited access to research subjects in both range and scope. A greater amount of data could have been obtained from a 'deeper' ethnographic study or a longitudinal study that was not interrupted by evacuation. Research was stretched out over a long period as it was necessary to either stop research or use a different approach on numerous occasions.

A major limitation of this research assessing the impact of trade liberalisation is arriving at a point at which the country – in this case, the Philippines – was deemed to have liberalized. As discussed in chapter four, numerous liberalisation episodes have taken place in the Philippines. In light of this, attempting to isolate the impact of individual liberalisation interventions is extremely difficult. Liberalisation is a process with periods of advance (some faster than others) and periods of retrenchment. There are eddies and reversals. This problem has been noted in a number of studies (e.g. Dean et al 1994, Sachs and Warner 1995, Summer and Heston 1991). As a result, and for the purpose of this research, a period of ten years from 1992 to 2002 was examined rather than a particular liberalisation episode. The justification for using this 'periodization approach' lies in the difficulties surrounding the isolation of the phenomenon itself. Theory stipulates that it is the reduction of official barriers to trade that distorts the relative prices of tradable and non-tradable goods, as well as those between different tradables. However, in practice, it is extremely difficult to identify all distortionary policies and influences or how the policy changes have been implemented and interrelate at numerous levels. This relationship is further influenced by the impact of the real versus nominal exchange rates.

Nadal's study (2000) on the liberalisation of the corn sector in Mexico identified that trade liberalisation was part of a policy mix which included elements such as fiscal balance, anti-inflationary monetary policies, exchange rate management, deregulation of

the financial/banking sector, large-scale privatization, and deregulation of markets for agricultural inputs (e.g. fertilizers, pesticides, seeds). Failure to recognize the combined effects of these policies leads to serious misunderstanding of the process of economic restructuring underlying trade liberalisation. Greenway et al. (2002) further discuss the difficulties which arise when trying to ascertain the impact of trade liberalisation on a country's growth. Clearly, such a process does not happen instantaneously, but it is possible to suggest when moves toward greater market freedoms occurred. The simplest option is to use a statement of intent, such as the date when a World Bank structural adjustment loan is agreed, for example, on the grounds that this signals the beginning of reform.

The specific limitations of using SL analysis, life stories and PRA tools were discussed in section 9.2.3. as was the idea of 'enacting realities'. In terms of the overall research approach the methods utilised during the course of this research influenced not only the results obtained but the future directions of the research process. A different methodology would have highlighted different issues and concerns and also different areas for further investigation. Law and Urry (2004) argue that social science methods do not just describe social realities but are also involved in creating these realities. They suggest that research methods are in themselves performative, in that they have effects which can bring into reality what they discover. Research on the impacts of trade liberalisation on small scale farmers therefore made links to negative aspects of livelihood threats and liberalisation that individuals had, in some instances, not linked before. The act of being researched led the research subjects to reflect on their conditions and the reasons for their conditions in new ways. For example, the compilation of market chains resulted in a lengthy discussion as regards the functions carried out by traders. Respondents discussed that the profit received by traders was very high for the provision of these functions by traders.

At the commencement of this research the Philippines was still a strategic country for many international funding agencies (which is currently not the case) and with limited effort I could have sought and secured larger amounts of funding in order to broaden the study in terms of the number of households covered. However, I did not see the benefits

of doing that at the time. A combination of greater funds and access would have enabled an increase in both the number of households covered and the level of detail obtained. It would also have been advantageous to seek another case of non-diversifiers in order for useful comparisons to be made. In particular useful comparisons could have been researched if more exceptions to the rule had been found in cases where the majority of producers did not diversify. This research had a limited number of exceptions to the rule in a non-diversification case study context. Of course this is easy to see ex post facto; at the time these issues were not apparent.

A larger number of respondents would also have been advantageous for examining if similarities and patterns exist in personal circumstances which influence livelihood choices. The organising framework which guided this research namely the SLA itself has limitations as discussed in chapter two. Two different producer surveys were utilised in Magpet and Malabog, while the same producer survey would have been more useful for comparative analysis purposes. As regards secondary sources, a number of issues arose during the course of this research. The figures for white and yellow corn are in many data sources not segregated; therefore, they are presented together in certain instances within this paper. Many of the information sources are not as up to date as I would have wanted. Different government sources yield different figures for the same variable. To counter this, through a process of data triangulation the figures utilised were those considered the most accurate by key informants.

Finally the length of time that it took to complete this study was in itself a limitation. Attempts to juggle the compilation of this study with full time humanitarian response work did not work out well.

9.6 Conclusion

This research has attempted to answer the question: When confronted by livelihood threats arising from market integration, what patterns of livelihood response are used by affected small scale agricultural producers? In order to address this question, a case study approach was adopted with research focusing primarily on the study sites of Magpet and Malabog. At the outset it was noted that resilience and the ability to adapt to changes in the production environment in this case brought about by trade liberalisation were of central importance if small scale agricultural producers were to reap any of the reputed benefits that arise from trade liberalisation. Resilience was considered important both in terms of current livelihood strategies and the overall livelihood pathway. Resilience, it was highlighted, goes far beyond livelihood strategies. That said, livelihood strategies were key to resilience. Research results illustrated that safety nets and enabling mechanisms play a critical role in enabling patterns of response by individuals to livelihood threats and thus increase resilience. When these are not in place major inhibitors to livelihood response occur such as the inhibitors caused by deficient infrastructure in Mindanao.

Personal circumstance interacts at various levels with contextual factors. This study has demonstrated that they all play important roles in livelihood response. The role of circumstance and context in a particular livelihood strategy is difficult to capture using existing methodologies. Personal circumstances and ordinary every day events are often the key factors in choosing successful livelihood options as demonstrated by the six diversifiers in Magpet.

Whilst it is obvious that ordinary events occur every day in households all over the world, what is harder to ascertain is their role in livelihood response. Rather than attempting to capture everything, it is important that we acknowledge the role of personal circumstances in livelihood resilience over time. Current research methods allow the identification of response patterns in terms of what people do in response to changes in their production environment. What is much more difficult to capture and analyse, and therefore how they might inform policy and practice, is the many different elements that provide the rationale of response.

The role of historical factors in contributing to both circumstance and context was identified as important. In some instances, components of historical episodes were relatively straight forward to capture, such as cropping rotations and contractual arrangements but current methods fail to capture the role of historical experiences at the personal level and their role in current resilience and the ability to respond to change. Further research is needed in this area as historical episodes – both personal and institutional – influence livelihood response by small scale agricultural producers to livelihood threats resulting from market integration.

"He who does not know how to look back at where he came from will never get to his destination." (in Tagalog: "Ang hindi marunong lumingon sa pinangalingan ay hindi makakarating sa paroroonan.") Jose Rizal (Philippine National Hero, 1861-1896)

Appendices

Appendix 1 Corn industry key informant email survey questionnaire and participants by affiliation

1. Corn Industry key informant email survey questionnaire

Name and nature of organization/business:

What is your understanding of the term agricultural “trade liberalization”?	
Has there been any impact from TL to date on your activities/business?	
	Have there been any impacts to date on your supply chain (if involved in food/agriculture)?
	Do you think that any mechanisms/institutions/regulations can influence the impact of trade liberalization on agricultural producers? If yes which ones and how?
	Will TL provide opportunities for your industry?
	What is the basis for these answers?
	Further comments/thought about the future impacts of TL.

Would you be interested in participating in a detailed interview at a later stage?

2. Corn Industry key informant participant list by affiliation

Affiliation	Number surveyed	Number of respondents
University of the Philippines	3	3
Agricultural economists NGO	5	5
Corn Industry	8	7
Feed millers associations	2	2
Government departments National/regional and provincial	5	4
Chamber of Commerce	6	6
Producers associations	4	4
Development authorities	4	4
Agricultural transport	3	3
Total	40	38

Appendix 2 Corn industry key informant semi structured questionnaire, participants by affiliation and location

1. Corn Industry Key Informant Semi Structured questionnaire

Name:

Organization:

Position/area:

- 1) What is your understanding of the term agricultural ‘trade liberalization’
- 2) Has there been any impact to date on your activities/business?
- 3) Future impacts?
- 4) Has there been an impact on your supply chain?
- 5) Will there be an impact of TL on agricultural producers?
- 6) Regional differences?
- 7) Production systems?
- 8) Class of farmer?
- 9) Will there be impacts on livelihoods, production, crop types and cultivation methods.
- 10) What is the basis for these answers?
- 11) Do you think that any mechanisms/institutions/regulations can influence the impact of trade liberalization on agricultural producers? If yes which ones?
- 12) Will TL provide opportunities for your industry?
- 13) Will TL impose constraints on your Industry?
- 14) Further questions/comments.
- 15) Further Interview-detailed-email-time?-get email address
- 16) Thank you

2. Corn industry key informant semi structured questionnaire participants by affiliation and location

Affiliation	Number Interviewed	Location
University of the Philippines, Mindanao	2	Davao
Agricultural economists NGO	3	Manila
Corn Industry	4	Manila (2),Davao (1),Kidapawan(1)
Feed millers associations	1	Davao
Government departments National/regional and provincial	4	Manila(1), Davao(2), Kidapawan(1)
Chamber of Commerce (Mindanao Business council)	1	Davao
Producers associations	2	Davao (1) , Kidapawan
Development authorities,	2	Davao(1), Cotabato City(1)
Agricultural transport	1	Davao
Total	20	

Appendix 3 Magpet producer household survey

Magpet producer household survey

Name: Age: SEX: Organizational membership:

No.	Question	Answer
1	Size of holding	Hectares
2	How was this divided between the various enterprises last	Crop /type/Livestock
3	Has this division changed in the last five years, if yes why?	
4	Current Land Tenure Arrangement	
5	Age of household head?	
6	Level of education of household head	
7	Assets (sharing arrangements).	
8	Access to credit	
9	Rank 3 highest sources of income last year in order of importance	
10	Rank 3 highest sources of expenditure last year in order of importance	
11	Have these rankings changed in the last 10 years?	
12	What percentage of produce is sold?	
13	Unsold produce –where does it go?	
14	What are the current marketing arrangements for produce?	
15	What are current price trends for produce (last 10 years)?	
16	Where do you buy your inputs from?	
17	Do you know if your inputs are imported? Where from?	
18	3 major changes in the farm system in the last 10 years	
19	What are the top 5 problems you face as a producer?	
20	Do you access extension services /safety net programme?	
21	In the absence of the household head who takes responsibility for decision making of financial matters?	
22	Average yearly income.	
23	Do you have financial savings in case of emergency?	

Appendix 4 Malabog producer household survey
Malabog producer household survey

BASIC INFORMATION

Name: _____

Age: / SEX: Ethnic group: Level of Education:

ADDRESS: _____

Household Members	SEX		Age	Membership of organizations	Year Joined
	M	F			

FARM INFORMATION

LAND SIZE? ha Type of land : Flat Rolling

MODE OF OWNERSHIP:

CROP	VARIETY	SIZE	Harvest area	Harvest Kilo
LIVESTOCK	QUANTITY		INCOME	

Source of capital: COOP TRADER

other _____

EXPENSES CROP:		Cost
LAND		
PREPARATION		
INPUT		
MAINTENANCE		
HARVEST		
TRANSPORT		
OTHERS		
TOTAL		
BUYER		

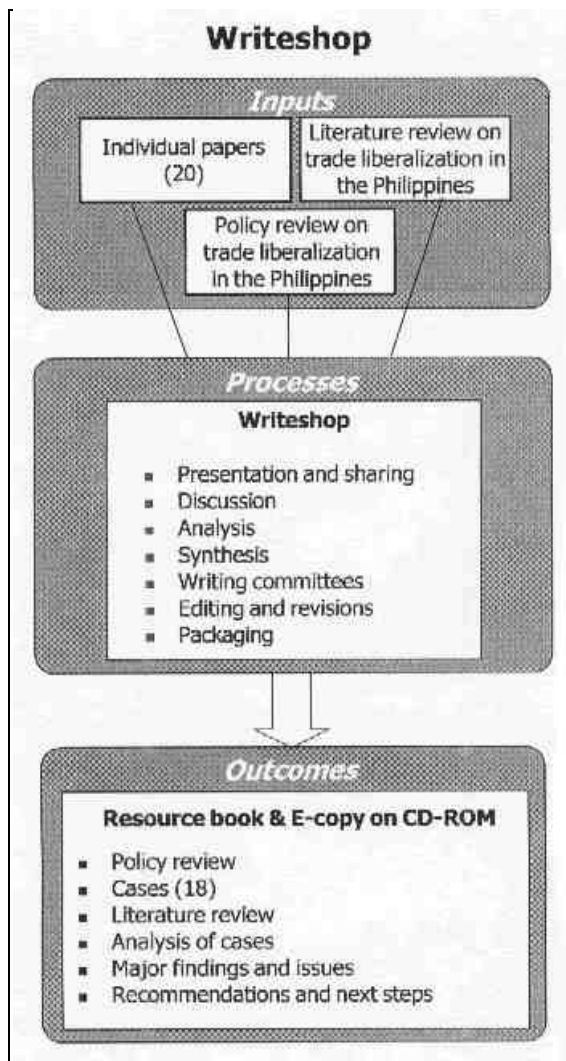
Income:									
1993	1994	1995	1996	1997	1998	1999	2000	2001	2002

OTHER SOURCES OF INCOME	ANNUAL INCOME
Changes in quality of life in the last ten years? Thankyou	

Appendix 5 List of NGOs who conducted case studies throughout the Philippines

- 1) Alternate Forum for Research in Mindanao (AFRIM)
- 2) Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC)
- 3) Barangay Scholars Multipurpose Cooperative, Inc. (BSMCI)
- 4) Cotabato Agribusiness Development Technology Center (CADTEC)
- 5) Cavite Farmers' Feed Milling and Marketing Cooperative (CAFFMACO)
- 6) Center for Agrarian Reform and Rural Development (CARRD)
- 7) Dizon Farm Workers Cooperative (DFWC)
- 8) Infanta Integrated Community Development Assistance, Inc. (ICDAI)
- 9) Institute for Philippine Culture (IPC)
- 10) Kaanib Foundation
- 11) Lingap Para Sa Kalusugan Ng Sambayanan, Inc. (LIKAS)
- 12) Landan Peoples Multipurpose Cooperative, Inc. (LPMPC)
- 13) Matalingkas na Agraryong Grupong Sararo para sa Kauswagan kan Camarines Sur (MAGSAKA -CA)
- 14) Malabog Integrated Enterprises Development Cooperative (MIEDECO)
- 15) National Agribusiness Development Center Foundation, Inc. (NADC Foundation)
- 16) Pagduso sang Agrikultura sang Tingub nga Aksyon sang Mangunguma, Inc. (PATANOM)
- 17) Philippine Development Assistance Programme (PDAP)
- 18) Philippine Partnership for Development of Human Resources in Rural Areas regional offices (Luzon, Visayans, and Mindanao) (PhilDHRRA)
- 19) Philippine German Development Foundation, Inc. (PhilGerFund)
- 20) Siargao Overseas Contract Workers Multipurpose Cooperative (SOCOWOCO)
- 21) TRICORD Multi-Purpose Cooperative Inc. (TMPCI)
- 22) TriPARRD Federation of Agrarian Reform Cooperatives (TriFED-ARBC)
- 23) Xavier Agricultural Extension Service (XAES)

Appendix 6 Overview of case study research process



(Source: Lutheran World Relief, *et al.*, 2004: IX)

Appendix 7 First PRA workshop (March 2004) design

Task: Map their community

Map 1 is a natural resource map

Map 2 is a farm map of the community

Included:

Crop types, farm size and yields.

Output: 2 maps drawn on Manila paper per group (4 maps in total)

Task: Calendar

Included:

Cultivation practices. Technology levels. Seasonal Availability of labor: migration patterns . Non-NR / off-farm activities. Seasonal dietary changes

Output: 2 Calendars on manila paper.

Task: Income and Expenditure pie charts

Included:

Pluriactivity of households. Percentage contribution of vegetables to overall income generating activities.

Portfolio of income generating activities available.

Livelihood matrix e.g. income from sari-sari stores

Livelihood system may not be local-remittances from OFWs.

Output: 2 Charts Per Participant on manila paper.

Task: Flow Diagram

Included:

Input/output price margins and trends

Input costs and trend data

Trader relationship

Transport Costs

Sales volumes and value trends

Breakdown of commodity chain mark-ups.

Distribution channels

Quality issues.

Output:

One Flow diagram and process chart for each commodity on manila paper

Task: Preference Ranking:

Problems identified as a result of the Flow diagram and Process Chart Exercise should be ranked.

Output: A list on Manila paper of ranked problems.

Task :

What outcomes do producers aspire to? Ask if I gave you \$100 to spend what would you spend it on:

Then ask if I gave you a \$100 to spend on the farm what would you spend it on.

Output: List on Manila paper responses.

(Please list both responses for each participant side by side so I can see if the answer changes between the two questions).

Task: Decision Tree**Included:**

Why do small holders diversify to non-farm activities?is it push or pull factors??

This switches the risk, which could obviously increase depending on the trading domain of the cash crops.

Higher financial gains equates to higher risk??

Can farmers take greater advantage of export opportunities, and what are the supply-side and market-access constraints that need to be lifted?

What factors are inhibiting or enabling responses?

Technology levels.

Appraisal of extension services. Received and Required.

Detail of current extension providers.

Output: Decision tree as regards cropping decisions on manila paper.

Task Venn Diagrams**Included:**

Detailed investigation of extension services.

Implementation of safety nets as outlined in the Agricultural and Fisheries Modernization Act (AFMA).

Implementation of complimentary policies/pre-requisites

Level of participation in the formulation of agricultural policy?

Level of accessibility, affordability and existence of assets?

Are there innovative approach's or initiatives that can be identified as "good practice" and further encouraged through enabling policies?

Output: One set of Venn diagrams stuck on Manila paper (please ensure they are safely secured)

Appendix 8 SLA workshop guide and summarized findings

1. Workshop guide

Monday 11th October Day 1	
9. a.m.	Session 1. Introduction of Participants and Workshop Purpose.
9.15-10.15 (1 hour)	<p>Session 2.1 Understanding our own livelihoods</p> <p>Process: Participants will be asked to break into groups based on gender (male and female). Each member of the group needs to answer the following questions below. They will be given 30 minutes for the discussion.</p> <p>Guide questions:</p> <ol style="list-style-type: none"> 1. What is your livelihood? 2. What are the resources to sustain your livelihoods? <p>What makes you vulnerable?</p> <p>What influences your livelihoods (+ or -)?</p> <p>What influences do you control and what are beyond your control?</p> <p>Each group will be given 5 minutes to share the results of their discussion to the plenary.</p>
10.15-10.45 (30 mins)	<p>Session 2.2 Processing and Analyzing of Session 2.1</p> <p>Process: From this discussion, the facilitator will introduce the livelihoods framework.</p>
11.00-2.00 (2 hours)	<p>Session 3.1 Understanding and Analyzing Capital and Assets</p> <p>Process: Participants will be divided into 6 area groups. To draw the answer to the questions below, each group will be requested to prepare a <u>resource map</u> and <u>wealth ranking</u> of the households in the barangay using the available information?</p> <p>What resources are available in the barangay?</p> <p>Human, Finance, Physical ,Social ,Natural</p> <p>Who have access to these resources?</p> <p>Who controls the use of the resources?</p>
Lunch Break 12.00-1.00	

2-2.45	<p>Session 3.2 Processing and Analyzing of Session 3.1</p> <p>Process: Discussions will be done in plenary.</p>
2.45-4.45 (2 hours)	<p>Session 4.1 Understanding and Analyzing Vulnerabilities</p> <p>Process: Participants will be divided into the 6 area groups. Using available information, each group will make a barangay <u>seasonality calendar</u> and <u>timeline</u> also indicating the following information:</p> <p>What are events and trend that causes stress to the barangay?</p> <p>What is the extent to which the barangay are exposed to particular trends/shocks/seasonality?</p> <p>How sensitive are their livelihoods to these factors?</p> <p>1 hour 30 minutes group discussion; 30 minutes presentation of results</p>
4.45-5.30	<p>Session 4.2 Processing and Analyzing of Session 4.1</p> <p>Process: Discussions will be done in plenary.</p>
October 12th Tuesday Day 2	
9am-11 am (2 hours)	<p>Session 5.1 Understanding and Analyzing Policies, Institutions and Process</p> <p>Process: Participants will be divided into the 6 area groups. To draw answer to the questions below, each group will do a <u>Venn diagram of institutions and groups in the barangay</u> and <u>policy matrix</u></p> <p>What are the policies and process that affect the men and women in the barangay? Why?</p> <p>What are the structures that affect them? Why?</p> <p>1 hour 30 minutes group discussion; 30 minutes presentation of results</p>
11.00-11.30 (30 mins)	<p>Session 5.2 Processing and Analyzing of Session 5.1</p> <p>Process: Discussions will be done in plenary.</p>

<p>11.30-2.30pm (2 hours)</p> <p>Lunch Break 12.00-1.00</p>	<p>Session 6.1 Understanding and Analyzing Livelihoods Strategies</p> <p>Process: Participants will be divided into the 6 area groups. To draw the answer to the questions below, each group will be requested to make a <u>resource map</u> (re use the map from session 3.1), <u>social map</u> and <u>income pie</u> using available information.</p> <p>What are the livelihood strategies in the barangay? What are their livelihood priorities? What are their sources of income? What is their biggest source of income?</p> <p>1 hour and 30 minutes workshop discussion; 30 minutes presentation of results.</p>
<p>2.30-3.15pm (45 minutes)</p>	<p>Session 6.2 Processing and Analyzing of Session 6.1</p> <p>Process: Discussions will be done in plenary.</p>
<p>3.15-5.15pm (2 hours)</p>	<p>Session 7 .1 Understanding and Analyzing Livelihood Outcomes</p> <p>Process: Participants will be divided into the 6 area groups. To draw the answer to the questions below, each group will use the outputs of session 3.1 and session 6.1.</p> <p>What are men and women in the barangay seeking to achieve through their livelihood strategies? What are the key activities that make up that strategy? What are the key types of livelihood capital and assets that contribute to the household strategy? What are the changes in strategy caused by different factors in the vulnerability context? What are the policies, institutions and processes, including local institutions that influence and are influenced by different livelihood activities?</p> <p>1 hour workshop discussion; 30 minutes presentation of results.</p>
<p>5.15-6.00pm</p>	<p>Session 7.2 Processing and Analyzing of Session 7.1</p> <p>Process: Discussions will be done in plenary.</p>

October 13th Wednesday Day 3	
9am –10.00am (1 hour)	<p>Session 8.1 Recap and Sustainable livelihood Analysis Activity</p> <p>Process: Participants will be divided into the 6 area groups.</p> <p>Each group will use the output of session 7.1 to draw their sustainable livelihood framework.</p>
10.00am-11.00 (1hour)	<p>Session 8.2 Processing and Analyzing of Session 8.1</p> <p>Process: Discussions will be done in plenary.</p>
11.00 -11.30am (half hour)	<p>Session 9.1 The Sustainable Livelihood Framework and its uses in project/programme planning</p>
11.30-2.30pm (2 hours) Lunch Break 12.00-1.00	<p>Session 10.1 Identification of Problems and Opportunities/Projects and Options</p> <p>Process: Participants will be divided into the 6 area groups. To draw the answer to the questions below, each group will be requested to firstly conduct a <u>pair wise ranking matrix</u> and secondly a <u>problem analysis chart</u> .</p> <p>What resources are necessary to turn these opportunities' in to project interventions and market options?</p> <p>Which two opportunities provide the best market options and why?</p> <p>Which two opportunities provide the worst market options and why?</p> <p>1-hour workshop discussion; 30 minutes presentation of results.</p>
2.00-3.00 pm (1 hour)	<p>Session 10.2 Processing and Analyzing of Session 10.1</p> <p>Process: Discussions will be done in plenary.</p> <p>Workshop Evaluation (After coffee 3.30-4.30)</p>

Summarized processing questions

Vulnerability context:

- What are the current conditions which impact +/- on vulnerability of livelihoods considering the political, economic, social and ecological dimension?

Capital assets:

- What are the main resources the livelihood can rely on considering its financial, human, natural, physical, social and political capital?

Policies, Institutions and Processes:

- Which organizations at the barangay and regional level, laws and rules, institutions (including markets) do you identify as important in the livelihood?
- How do they directly/indirectly determine the access to resources?

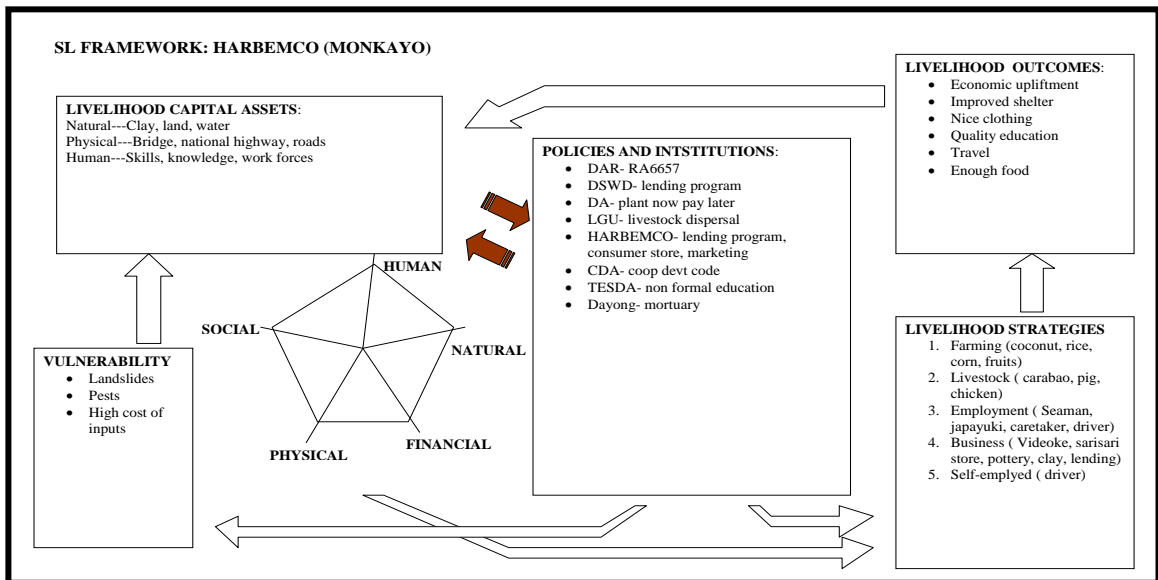
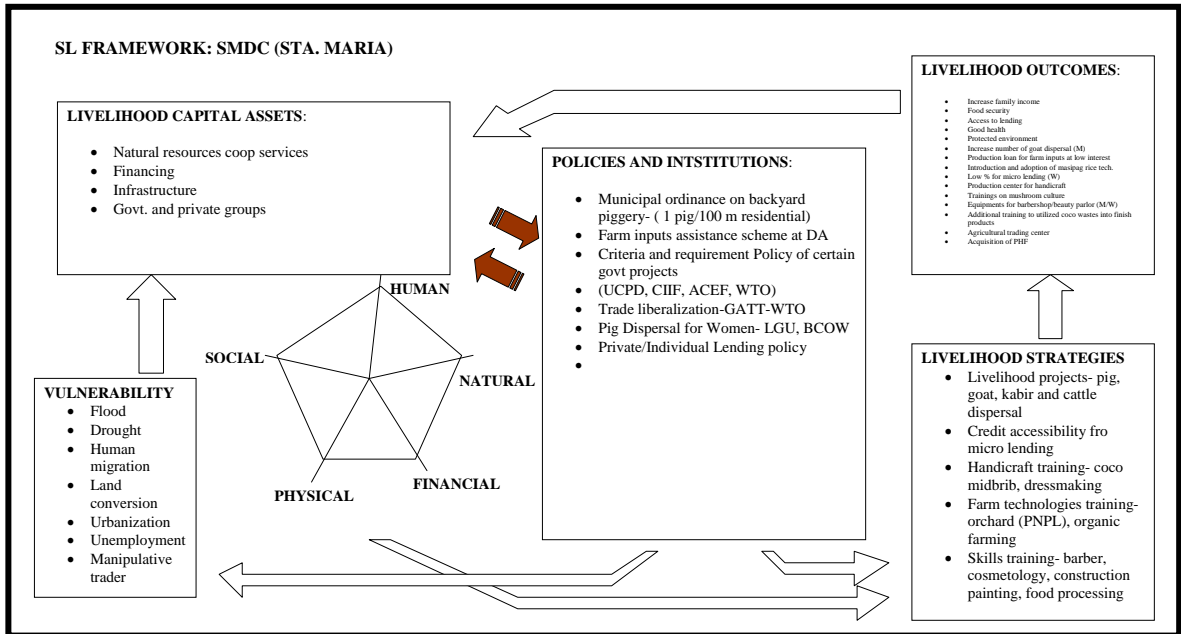
Strategies:

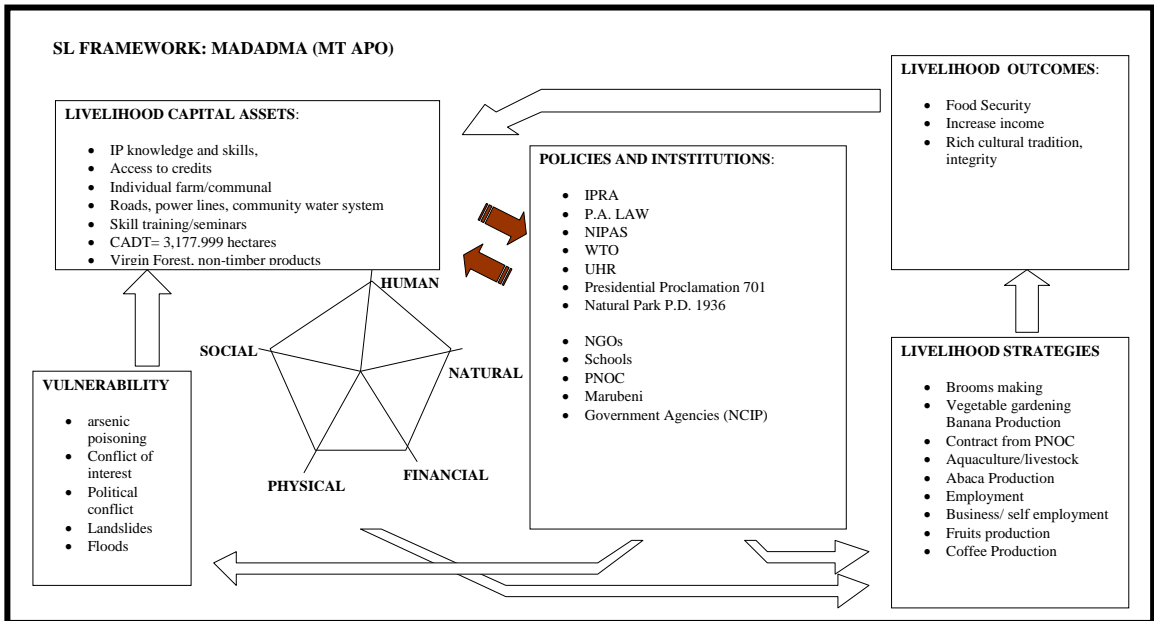
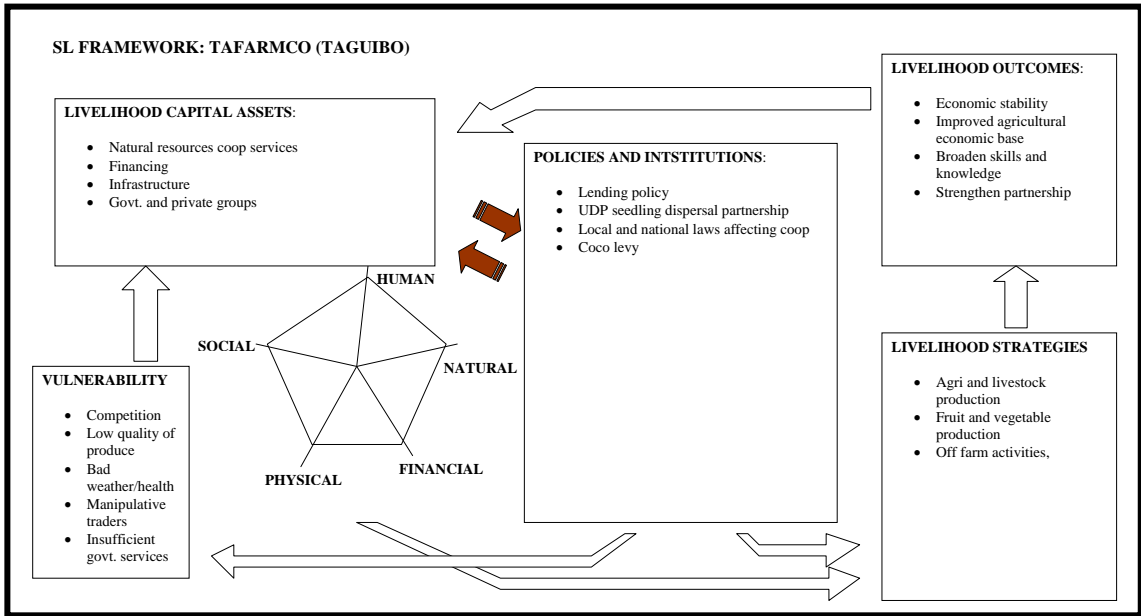
- Which activities are required for a means of living in the livelihood?
- Which activities are short term reactions to shocks and stress (coping)?
- Which activities can be considered as long-term responses to gradual negative trends? (adaptive)

Outcomes:

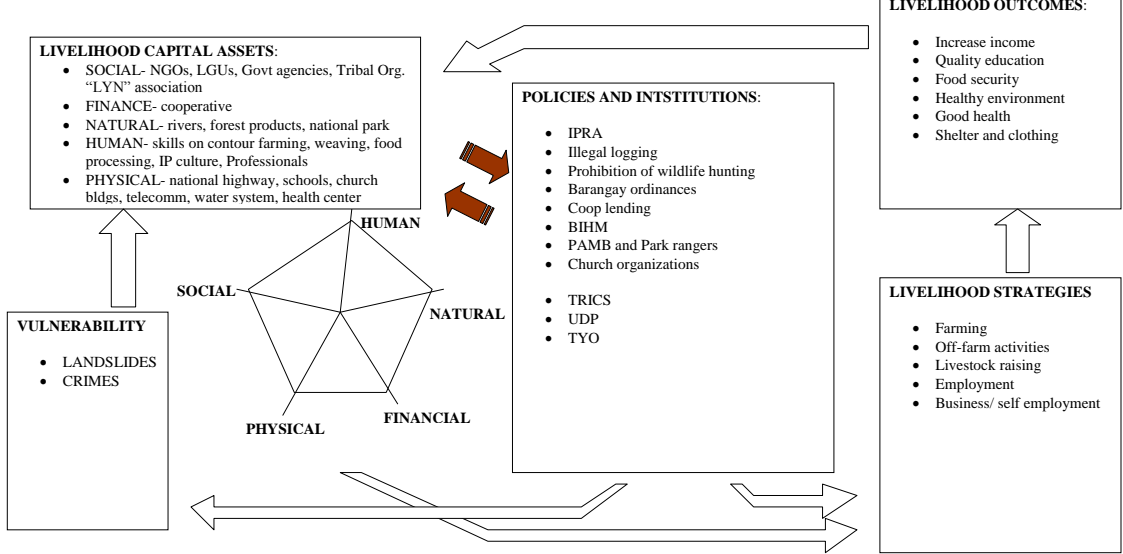
- What impacts can we observe by the required activities and its outcomes?
- Do the activities improve or decrease the financial assets? (Income, means of production, reproduction)?
- Do the activities support the social relationships, status, and roles?

SLA framework outputs:





SL FRAMEWORK: TRICS (STA. CRUZ)



Appendix 9 Second PRA workshop (November 2004) design

TIMETABLE/ACTIVITIES: (guidelines only -Please do activities in the order below however time allocation is up to you) All tasks must be completed.

Date/Time	<u>Activity</u>
Workshop 1-Nov 10th and Nov 11th Non diversifiers -11 participants from previous research (corn farmers-non diversifiers)	
Wednesday the 10th 9am-3pm	Introductions, Participatory Budget
Wednesday 3-5pm	Life story/Family story
Thursday 1-5pm	Life story/Family story & Conclusions
Workshop 2- Nov 12th and Nov 13th - Livelihood diversifiers -includes withdrawal from agriculture-6 diversifiers.	
Friday 9am-12 pm	Introductions, Income and Expenditure Pie Charts Participatory Budget
Thursday 1-5pm	Life story/Family story
Saturday 1-3pm	Life story/Family story, Conclusions etc

Task: Participatory Budget

Expected Output: Two participatory budgets as compiled by respondents on paper. Current and 10 years ago (aprox).

Task : Life story -17 participants

Expected Output: Life story incorporating family story as compiled by respondents on paper. (Please incorporate family story with life story plus a family tree detailing members area of residence, sources of income etc.)

Household information-This should be detailed at top of the life story.

Household members, sex, age, religion, ethnic group, health status (disabilities, etc.), dependency status, residency status, roles in different livelihood activities. Detail whether they are a core/offspring or migrant household.

Appendix 10 Selected SPSS outputs from producer surveys

Do you have financial savings in case of emergency? * What percentage of produce is sold? Cross tabulation

Count

		What percentage of produce is sold?									Total
		0	53	60	70	75	80	90	95	100	
Do you have financial savings in case of emergency?	yes/livestock to sell	0	0	0	1	2	2	0	2	7	14
	no	1	1	1	1	0	1	1	2	9	17
Total		1	1	1	2	2	3	1	4	16	31

Level of education of household head

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	primary	17	54.8	54.8	54.8
	secondary	12	38.7	38.7	93.5
	university	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Do you know if your inputs are imported? Where from? * Level of education of household head

Cross tabulation

Count

		Level of education of household head			Total
		primary	secondary	university	
Do you know if your inputs are imported? Where from?	Japan	3	2	0	5
	don't know	6	2	1	9
	Indonesia	0	1	0	1
	Philippines-leyte	3	3	0	6
	imported but don't know where from	4	1	1	6
	Kuwait	1	2	0	3
	USA	0	1	0	1
Total		17	12	2	31

Bibliography

Bamberger, M. 1986. *The Role of Community Participation in Development Planning and Project Management-An EDI Policy Seminar Report no. 13.* Washington D.C.: Economic Development Institute of the World Bank.

Jennings, D. and Wattam, S. 1994. *Decision Making-An Integrated Approach.* London: Pitman Publishing. 0 273 60397 3

Moonen, C.P.M. 1996. Scientific Insights Into Farmer Behaviour as Required by Policy-Makers. *Farmers in Small Scale Farming in a New Perspective, Objectives, Decision Making & Information Requirements.* **143**, 108-115.

Yusuf, S. and Stiglitz, J.E. 2001. Development Issues: Settled and Open. In: **G. M. Meier and J.E. Stiglitz eds.** *Frontiers of Development Economics-the future in Perspective.* Oxford: Oxford University Press. 0-19-521592-3

Reference List

Adams, R. and Page, J. 2003. *The impact of international migration and remittances on poverty: Paper prepared for DFID/ World Bank conference on Migrant Remittances, London October 9-10, 2003.* Washington, DC: World Bank: Poverty Reduction Group.

Adams, W. M. and Megaw, C. 1997. Researchers and the rural poor: Asking questions in the Third World. *Journal of Geography in Higher Education.* **21** (2), 215 - 229.

Adato, M. and Menzien-Dick, R. 2002. *Assessing the Impact of Agricultural Research on Poverty Using the Sustainable Livelihood Framework. International Food Policy Research Institute Food Consumption and Nutrition Division discussion paper 128/ Environment and Production Technology Division discussion paper 89.* Washington: International Food Policy Research Institute.

African Centre for the Constructive Resolution of Disputes. 2000. *Gender-sensitive programme design and planning in conflict-affected situations.* Proceedings of the Timbuktu Guidelines on Oral Testimony Developed in Timbuktu, Mali 7 - 11 May, 2000.

Ahmed, I. and Lipton, M. 1997. *Impact of structural adjustment on sustainable rural livelihoods: A review of the literature. IDS-Working Paper 62.* Sussex: Institute of development studies.

Alburo, F. A. 1991. Sustaining trade liberalization and reforms in the Philippines. *Philippine review of economics and business.* **XXVIII** (2), 154-170.

Ali, I. and Pernia, E. 2003. Infrastructure and poverty reduction. What is the connection? *ERD -Economics and Research Department Policy Brief Series No. 13.* Manila: Asian Development Bank.

Alwang, J., Siegal, P.B. and Jorgensen, S. L. 2001. *Vulnerability: A View from Different Disciplines. Social Protection Discussion Paper Series No. 0115.* Washington: Social Protection Unit Human Development Network of the World Bank.

Anderson, M.B. and Woodrow, P.J. 1998. *Rising from the Ashes: Development Strategies in Times of Disaster.* London: Intermediate Technology Publications/Lynne Rienner Publishers. 1-85339-439-4.

- Aquino, C.** 2003. What the government's money can't buy: The failure of expenditures to modernize agriculture and reduce rural poverty? *Farm News and Views*. Philippine Peasant Institute.
- Aquino, C.** 1998. *When tariffs rule-Philippine smallholder agriculture under the GATT/WTO Tariff and Trade Liberalization Regime*. Quezon City: Philippine Peasant Institute. 971 525 018 1
- Arifin, S.L. and Dale R.** 2005. Housing needs of migrant women industrial workers Surabaya: Insight from a life story approach. *Habitat International*. **29** (2), 215-226.
- Ashley, C. and Carney, D.** 1999. *Sustainable Livelihoods: Lessons from early experience*. London: Department for International Development (DFID). 0 85003 419 1
- Atkinson, P. and Hammersley, M.** 1994. Ethnography and participant observation. In: **N. Denzin and Y. Lincoln eds.** *Handbook of Qualitative Research*. Thousand Oaks: Sage. pp. 249-261.
- Aydin, Z.** 1986. *Underdevelopment and rural structures in South-eastern Turkey: The household economy in Gisgis and Kalhana*. London: Itacha Press for the Centre for Middle Eastern & Islamic Studies, University of Durham. 0-86372-034-X
- Aysan, Y.** 1993. Keynote Paper: Vulnerability assessment. In: **P. Merriman and C. Bowitt eds.** *Natural Disasters: Protecting Vulnerable Communities* London: Thomas Telford. pp. 1-15.
- Bailey, C., White, C. and Pain, R.** 1999. Evaluating qualitative research: dealing with the tension between 'science' and 'creativity'. *Area*. **31** (2), 169-1 83.
- Balisacan, A. and Pernia, E.** 2002. *Probing beneath cross-national averages: Poverty, inequality, and growth in the Philippines: ERD Working Paper Series No. 7*. Manila: Economics and Research Department Asian Development Bank.
- Bankoff, G.** 2001. Rendering the World Unsafe: 'Vulnerability' as Western Discourse. *Disasters*. **25** (1), 19-35.

Bankoff, G. 2003a. *Cultures of Disaster: Society and Natural Hazards in the Philippines*. London: Routledge. 978-0700717613

Bankoff, G. 2003b. Constructing Vulnerability: The Historical, Natural and Social Generation of Flooding in Metropolitan Manila. *Disasters*. **27**(3,) 224-238.

Bankoff, G. 2007. Dangers to going it alone: social capital and the origins of community resilience in the Philippines. *Continuity and Change*. **22** (2), 327-355.

Bannister, G. J. and Thugge, K. 2001. *International Trade and Poverty Alleviation*. IMF Working Paper No. 01/54. Washington: International Monetary Fund.

Batterbury, S.P.J. 1997. Alternative affiliations and the personal politics of overseas field research: some reflections. In **E. Robson and K. Willis.** eds. *Postgraduate fieldwork in developing areas: a rough guide*. Developing Areas Research Group Monograph N^o 9. Second edition. London: Institute of British Geographers. pp 85-112.

Bautista, R.M. and Thomas, M. 1997. *Income effects of alternative policy adjustments on Philippine rural households: A general equilibrium analysis: Trade and Macroeconomics Division Discussion Paper No. 22*. Washington: International Food Policy Research Institute.

Bebbington, A. 1999. Capitals and Capabilities: A Framework for Analysing Peasant Viability, Rural Livelihoods and Poverty. *World Development* **2** (12), 2021-2044.

Bebbington, A. 2000. Reencountering Development: Livelihood Transitions and Place Transformations in the Andes. *Annals of the Association of American Geographers*. **90** (3), 495 - 520.

Bebbington, A. 2004. Social capital and development studies 1: critique, debate, progress? *Progress in Development Studies*. **4** (4), 343–49.

Bell, J. 1999. *Doing your research project-a guide for first time researchers in education and social sciences*. Third edition. Open University Press. Buckingham: 0 335 20388 4

Berg, A. and Kruegar, A. 2002. Lifting All Boats: Why openness helps curb poverty. *Finance and Development*. **39** (3), No page number given.

Bergsten, C. F. 1999. *The global trading system and the developing countries in 2000: Working paper 99-6-May*. Washington: Institute for International Economics.

Berner, E. 1997. *Defending a place in the city: Localities and the struggle for urban land in Metro Manila*. Quezon City: Ateneo de manila University Press. 971-55-270-9

Berner, E. 2000. Poverty alleviation and the eviction of the poorest: Towards urban land reform in the Philippines. *International Journal of Urban and Regional Research*. **24** (3), 554-566.

Bioco, R. 2004. *The need to rationalize and adopt tariff reforms on corn substitutes to maintain the viability of the Philippine corn industry*. Prepared by Roderico R. Bioco Chairman of Philippine Maize Federation, Inc. (PhilMaize). Position Paper Submitted To the Tariffs Commission of the Philippines. "Unpublished"

Birkmann, J. 2006. Measuring vulnerability to promote disaster-resilient societies: Conceptual frameworks and definitions. In: **J. Birkmann ed.** *Measuring Vulnerability to Natural Hazards - Towards Disaster Resilient Societies*. Hong Kong: United Nations University Press. pp. 9-54.

Blaikie, P., Davis, I., Cannon, T. and Wisner, B. 1994. *At Risk: natural hazards, peoples' vulnerability and disasters*. London: Routledge. 0415252164

Black, R., Bennett, S., Thomas, S. and Beddington, J. 2011. Migration as adaptation. *Nature*. **478**, 447-449.

Bourdieu, P. 1988. Vive la crise! For heterodoxy in social science. *Theory and Society*. **17**,773-787.

Bourdieu, P. 1992. *The logic of practice*. (Translated by Richard Nice). Cambridge: Cambridge Policy Press. 0-7456-1015-3

Borras, S.M. 2000. *The Philippine Agrarian Reform: relatively Vibrant Land Redistribution Amidst Less-Than-Dynamic Agricultural transformation*. A paper presented at the International Conference on Agrarian Reform and Rural Development held in Development Academy of the Philippines, Tagaytay City, Philippines, December 5-8, 2000.

Boyd, C., Turton, C., Hatibu, N., Mahoo, H.F., Lazaro, E., Rwehumbiza, F., B., Okubal, A., P. and Makumbib, M. 2000. *The contribution of soil and water conservation to sustainable livelihoods in semi-arid areas of Sub-Saharan Africa: Agricultural Research and Extension Network Paper no. 102*. London: Overseas development Institute.

Briones, R. 2008. *Addressing policy issues and constraints in agricultural diversification: The potential contribution of the fruits and vegetables subsector: Philippine Institute of Development Studies Policy Notes, No. 2008-12*. Quezon City: Philippine Institute of Development Studies.

Brookfield, H. 2001. Intensification and alternative approaches to agricultural change. *Asia Pacific Viewpoint*. **42** (2/3), 181-192.

Bureau of Agricultural Statistics. 2001. *Selected Statistics on Agriculture 13th edition*. Quezon City: Department of Agriculture - Bureau of Agricultural Statistics.

Bureau of Agricultural Statistics. 2003. *The agricultural foreign trade development 2002 annual report*. Quezon City: Bureau of Agricultural Statistics Agricultural Marketing Statistics Analysis Division.

Bureau of Agricultural Statistics. 2004. *Rice and corn situation and outlook 18 (1)*. Quezon City: BAS Crop Statistics Division.

Bureau of Agricultural Statistics. 2011. *Palay and Corn: Volume of Production by Cereal Type, Geolocation, Period and Year. Country Stat Philippines*. [On-line]. Quezon City: Bureau of Agricultural Statistics. Available from: <http://countrystat.bas.gov.ph/index.asp?cont=selection&pageid=pxweb/dialog/varval.asp&ma=A10PNVCP&path=pxweb/database/main/MEGA/&lang=1> [Accessed 12 December 2011].

Burke, W., Jayne, T.S., Freeman, A.H. and Kristjanson, P. 2007. *Factors Associated with Farm Households' Movement Into and Out of Poverty in Kenya: The Rising Importance of Livestock*. A paper prepared for the international workshop "Understanding and addressing spatial poverty traps: an international workshop" 29 March 2007, Spier Estate, Stellenbosch, South Africa. Hosted by the Chronic Poverty Research Centre and the Overseas Development Institute.

Cannon, T., Twigg, J. and Rowell, J. 2003. *Social Vulnerability, Sustainable Livelihoods and Disasters. Report to DFID Conflict and Humanitarian Assistance Department (CHAD) and Sustainable Livelihoods Support Office*. Livelihoods and Institutions Group Natural Resources Institute. London : University of Greenwich.

Cardona, O. 2004. The need for rethinking the concepts of vulnerability and risk from a holistic perspective / A necessary Review and criticism for Effective Risk Management. In: **G. Bankoff, G. Frerks, D. Hilhorst.** eds. *Mapping Vulnerability. Disasters, Development and People*. London: Earthscan. pp. 37-51.

Carney, D. ed. 1998. *Sustainable Rural Livelihoods: What contribution can we make?* London: DFID.

Carney, D. 2002. *Sustainable Livelihoods Approaches: Progress and Possibilities for Change*. London: Department for International Development. 1 86192 491 7

Carswell, G. 1997. *Agricultural intensification and rural Sustainable Livelihoods: A 'Think Piece'*. Sussex: IDS publications. 1 85864 2124

Carswell, G. 2000. Complexity, change and continuity: The case of crop-livestock integration in southern Ethiopia. In: **I. Scoones, W. Wolmer.** eds. 2000. *Pathways of change: Crops, livestock and Livelihoods in Africa. Lessons from Ethiopia, Mali and Zimbabwe*. Brighton: Institute of Development Studies. pp. 81-122.

Catre, J. 2008. *Malabog Road*. [Photograph]. "Unpublished"

Central Intelligence Agency. 2011. *The World Factbook. Map of the Philippines*. [On-line]. Available from: <http://www.cia.gov/library/publications/the-world-factbook/geos/rp.html> [Accessed 22 October 2011].

- Chambers, R.** 1983. *Rural Development-Putting the Last First*. Essex: Longman Group UK Limited. 0-582-64443-7
- Chambers, R.** 1989. Editorial introduction: Vulnerability, coping and policy. *Institute of Development Studies Bulletin*. **20** (2), 1-7.
- Chambers, R.** 1997. Responsible well-being-A personal agenda for development. *World Development*, **25** (11), 1743-1754.
- Chambers, R.** 2006. Editorial introduction: Vulnerability, coping and policy. *Institute of Development Studies Bulletin*. **37** (4), 33-40.
- Chambers, R. and Conway, G.R.** 1992. *Sustainable rural livelihoods: Practical concepts for the 21st century*. Sussex: Institute for Development Studies. 0 903715 58 9
- Charmez, K. and Henwood, K.** 2008. Grounded Theory. In: **C. Willig and W. Stainton Rogers.** eds. *The SAGE Handbook of Qualitative Research in Psychology*. London: Sage Publications Ltd. pp. 240-260.
- Chupungco, A.R.** 2001. Impact of trade liberalization on Philippine corn prices. *UP Working Paper No. 03-01*. Laguna: Institute of Strategic Planning and Policy Studies, University of the Philippines Los Baños.
- Clarete, R. L.** 1999. Trade related problems and policy issues in Philippine agriculture. *Philippine Review of Economics and Business*. **XXXVI** (1), 127-158.
- Clarke, J. and Carney, D.** 2008. *Sustainable livelihoods approaches – what have we learned?* Background paper, ESRC Livelihoods Seminar, 13 October. Livelihoods Connect. Brighton: Institute of Development Studies.
- Collins, A. E.** 2009a. *Disaster and Development: Volume 8 of Routledge perspectives on development*. Routledge: London /New York. 0415426685

Collins, A. E. 2009b. The people centred approach to early warning systems and the Last Mile. In: **L. Knight.** ed. *World Disaster Report 2009: Focus on early warning, early action.* Geneva: International Federation of the Red Cross and Red Crescent Societies. pp. 38-67.

Congressional Commission on Agricultural Modernization. 2001. *Modernizing agriculture.* Manila: Senate of the Philippines. 971 91949 0 1

Constantino, N. 2001. DA notes RP productivity stagnant, poverty high despite WTO entry. *Business World.* 12/10/01

Conway, G. R. 1985. Agroecosystem Analysis. *Agricultural Administration.* **20**, 31-35.

Conway, T., Moser, C., Norton, A. and Farrington, J. 2002. Rights and livelihood approaches: Exploring Policy Dimensions. *Overseas Development Institute: Natural Resource Perspectives.* **78**, May 2002.

Cooke, B. and Kothari, U. eds. 2001. *Participation: the new tyranny?* London: Zed Books. 1856497941

Cook, I. and Crang, M. 1995. *Doing Ethnographies-concepts and techniques in modern geography.* London: Sage Publications. 1 872464 08 4

Cope, M. 2010 a. Coding transcripts and diaries. In: **N. Clifford and G. Valentine.** ed. *Key Methods in Geography.* Revised second edition. London: Sage Publications. pp. 440-452.

Cope, M. 2010b. Coding qualitative data. In: **I. Hay.** ed. *Qualitative Research Methods in Human Geography.* Third edition. Ontario: Oxford University Press Canada. pp. 281-293.

Corbett, J. 1988. Famine and Household Coping Strategies. *World Development* **16** (9), 1099–1112.

Corbin, J. and Strauss, A. 1990. Grounded theory research: Procedures, canons, and evaluative criteria. *Zeitschrift für Soziologie.* **19**(6), 418-427.

Cornia, G.A. and Court, J. 2001. *Inequality, growth and poverty in the era of liberalization and globalization*. Helsinki: UNU World Institute for Development Economics Research. 92-9190-012-5

Cororaton, C. B. 1997. Simulating the effects of GATT-UR / WTO on the Philippine economy. *Journal of Philippine Development*. **XXIV** (2), 191-222.

Corpuz, O.D. 1997. *An economic history of the Philippines*. Quezon City: University of the Philippines Press. 971 542 094 X

Cowen, M.P. and Shenton, R.W. 1996. *Doctrines of development*. London: Routledge 0-415-12516-2

Coxhead, I. 2000. Consequences of a food security strategy for economic welfare, income distribution and land degradation: The Philippine case. *World Development*. **28** (1), 111-128.

Coxhead, I. and Jayasuirya, S. 2003. Environment and Natural Resources. In: **A. Baliscan and H. Hill.** ed. *The Philippine economy-development policies, and challenges*. Quezon City: Ateneo de Manila University Press/Oxford University Press. pp. 381-418.

Crang, M. 2005. Analysing Qualitative Materials. In: **R. Flowerdew and D. Martin.** ed. *Methods in Human Geography: A Guide for Students Doing a Research Project*. Harlow, England: Prentice Hall. pp. 218-232.

David, C. 1994. GATT-UR and Philippine agriculture: Facts and fallacies. *Journal of Philippine Development*. **XXI** (38), 141-178.

David, C. 2003. Agriculture. In: **A. Baliscan and H. Hill.** ed. *The Philippine economy-development policies, and challenges*. Quezon City: Ateneo de Manila University Press/Oxford University Press. pp. 175-218.

David, D., Nordstrom, H., and Winters, L. 1999. *Trade income disparity and poverty*. Geneva: World Trade Organisation. 92-870-1211-3

Davies, S. 1996. *Adaptable Livelihoods. Coping with Food Insecurity in the Malian Sahel.* London: Macmillan. 0333633865

Davies, S. and Hossain, N. 1997. *Livelihood Adaptation, Public Action and Civil Society: A review of literature, IDS Working Paper, No. 57.* Brighton: Institute of Development studies.

Dean, J., Desai, S., Riedel, J. 1994. *Trade policy reform in developing countries since 1985: A review of the evidence.* World Bank Development Policy Group mimeo. Washington: The World Bank.

De Bruijn, M. & Van Dijk, H. 2003. *Pathways and habitus: a framework for the analysis of decision making in high-risk environments.* Leiden: African Studies Centre. "Unpublished"

De Dios, E. S. 2000. From Sancianco to Encarnacion-Footnotes to a genealogy of Economics in the Philippines. *Philippine Review of Economics.* **35**(7), 26-67.

De Haan, L. 2006. How to research the changing outlines of African livelihoods. *African Development.* **31** (4), 121-150.

De Haan, A. and Rogaly B. 2002. Introduction: Migrant workers and their role in rural change. *The Journal of Development Studies.* **38**, (5) 1-14.

De Haan, L. and Zoomers A. 2003. Development Geography at the Crossroads of livelihood and Globalisation. *Tijdschrift voor Economische en Sociale Geografie.* **94** (3), 350-362.

De Haan, L., and Zoomers A., 2005. Exploring the Frontiers of Livelihood Research. *Development and Change.* **36** (1), 27-47.

De Janvry, A., Fafchamps, M. and Sadoulet, E. 1991. Peasant household behaviour with missing markets: Some paradoxes explained. *The Economic Journal.* **101** (409), 1400-1417.

De la Cruz, L., Paderon, M., and Bautista, G. 2004. Trade liberalization and agricultural policy in the Philippines. In: **Lutheran World Relief , Heffier Project International, Catholic Relief Services, Philippine German Development Foundation Inc, Philippine Partnership for Development of Human Resources in Rural Areas, International Institute Rural Reconstruction, Asian Non Governmental Organisation Coalition and Alternate Forum for Research in Mindanao.** eds. *Trade liberalization, agriculture and small farm households in the Philippines: Proactive responses to the threats and opportunities of globalization.* Cavite, The Philippines: International Institute of Rural Reconstruction. pp. 6-13.

Delgado, C.L., and Siamwalla, A. 1999. Rural economy and farm income diversification in developing countries . In: **G.H. Peters and Joachim Von Braun,** eds. *In Food security, diversification and resource management: refocusing the role of agriculture. Proceedings of twenty-third International Conference of Agricultural Economists.* Brookfield, Vermont, USA: Ashgate Publishing Company. pp. 126-143.

Department for International Development. 1999. *Key sheets for Sustainable livelihoods-Overview.* [On-line].DFID. Available from: <http://www.dfid.gov.uk> [Accessed 22 April 2006].

Department for International Development. 2001. *Sustainable livelihoods guidance sheets.* London: DFID.

Department for International Development. 2002. *Making connections: Infrastructure for poverty reduction.* London: DFID. 1 86192 506 9.

Department of Agriculture. 2002a. *History of Philippine agriculture.* [On-line].DA. Available from: <http://www.da.gov.ph/welcome.html> [Accessed 15 December 2002].

Department of Agriculture. 2002b. *Profile of Philippine Agriculture.* [On-line].DA. Available from: <http://www.da.gov.ph/welcome1.html> [Accessed 15 December 2002].

Department of Agriculture. 2002c. *Da Makamasa Programme for Corn.* [On-line].DA. Available from: <http://www.da.gov.ph/programs/corn/corn1.html> [Accessed 12 December 2002].

The Department of Environment and Natural Resources Davao City. 2011. *Map of Barangay Malabog, Paquibato District, Davao City (Aerial view)*. Compiled by The Department of Environment and Natural Resources Davao City for this study. "Unpublished"

Devereux, S. 2001. Livelihood Insecurity and Social Protection: A re-emerging issue in rural development. *Development Policy Review*. **19**(4), 507-519.

Dietz, T., Verhagen, J. and Ruben, R. 2001. *Impact of climate change on water availability, agriculture and food security in semi-arid regions, with special focus on West Africa*. Report for Dutch research programme 410 200 076. Wageningen: University of Wageningen.

Digal, L. 2004. Are regional markets in the Philippines efficient? *SOM–Economics Discussion Paper 2004-02*. Davao: School of Management, University of the Philippines, Mindanao.

Diley, M., Chen, R., Deichmann, U., Lerner-Lam, A. and Arnold, M., 2005. *Natural Disaster Hotspots: A Global Risk Analysis: DR Management series number 5*. Washington: The World Bank Hazard Management Unit. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank and Columbia University. 978-0-8213-5930-3

Dornbusch, R. 1992. The case for trade liberalization in developing countries. *The Journal of Economic Perspectives*. **6** (1), 69-85.

Drummond, H. 1996. *Effective decision making-clarifying objectives, Evaluating alternatives, Making the right decision*. Second edition. London: Kogan Page. 0 7494 8779 6

Drysdale, P. and Huang, Y. 1995. Technological catch-up and economic growth in East Asia. *Economic Record*. **73** (222), 201-211.

Dudley, E. 1993. *The critical villager-beyond community participation*. London: Routledge. 0-415-07344-8

Dy, R.T. ed. 2000. *Food and agribusiness yearbook and directory*. Millennium edition. Manila: University of Asia and the Pacific.

Eder, J.F. 1993. Family farming and household enterprise in a Philippine community, 1971-1988: Persistence or proletarianization? *The Journal of Asian Studies*. **52** (3), 647-671.

Ellis, F. 1988. *Peasant Economics-Farm Households and agrarian development*. Cambridge University Press: Cambridge. 0 521 31008 3

Ellis, F. 2000. *Rural Livelihoods and Diversity in Developing Countries*. Oxford University Press: New York. 0-19-829695-9

Ellis, F. 2003. *Human Vulnerability and Food Insecurity: Policy Implications*. Forum for Food Security in Southern Africa. Overseas Development Group. August 2003.

Ellis-Jones, J. 1999. Poverty, land care, and sustainable livelihoods in hillside and mountain regions. *Mountain Research and Development*. **19** (3), 179-190.

Centre for Research on the Epidemiology of Disasters (EM-DAT). 2010. *Summarized Table of Natural Disasters in Philippines from 1900 to 2010*. The Centre for Research on the Epidemiology of Disasters International Disaster Database, Université catholique de Louvain - Brussels - Belgium". Available from: <http://www.emdat.be/result-country-profile>. [Accessed 2 February 2010]. Created on: Feb-2-2010. Data version: v 12.07.

Erikson, S. and Silva, J. 2009. The vulnerability context of a savannah area in Mozambique: household drought coping strategies and responses to economic change. *Environmental science and policy*. **12**, 33 -52.

Faber, N., Jorna, R. and Van Engelen, J. 2005. The sustainability of "sustainability": A study into the conceptual foundations. *Journal of Environmental Assessment Policy and Management*. **7** (1), 1-33.

Fabre, R. C. 1998. Perspectives on growth and structural change. In: **R.T. Dy ed.** *The Food and Agriculture Centennial Book-100 years of Philippine Agriculture*. Manila: University of Asia and the Pacific. pp. 203-229.

Farrington, J. Carney, D. Ashley, C. and Turton, C. 1999. Sustainable livelihoods in practice: Early applications of concepts in rural areas. *Overseas Development Institute: Natural Resource Perspectives*. 42.

Food and Agricultural Organisation of the United Nations. 2003. *WTO Agreement on Agriculture: The implementation experience - developing country case studies*. Rome: Food and agricultural Organization of the United Nations: Commodity Policy and Projections Service, Commodities and Trade Division.

Food and Agricultural Organisation of the United Nations. 2007. *Selected indicators of food and agricultural development in the Asia-Pacific region 1996-2006*. Bangkok FAO Regional office for Asia and the Pacific, Bangkok. October 2007. RAP Publication 2007/15.

FAO-STAT. 2011a. *FAOSTAT database*. FAOSTAT. | © FAO Statistics Division 2011 | December 20th 2011. Available from:
<http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancoraccessed>
[Accessed 2 December 2011].

FAO-STAT.2011b. *TradeSTAT database*. FAOSTAT | © FAO Statistics Division 2011 | 05 July 2011. Available from:
<http://faostat.fao.org/site/535/DesktopDefault.aspx?PageID=535#ancor> [Accessed 5 July 2011].

Fardon, R. ed. 1990. *Localising strategies: regional traditions of ethnographic writing*. Edinburgh: Washington: Smithsonian Institution Press. 0707305497

Fetterman, D., 1998. *Ethnography-step by step*. 2nd edition. United Kingdom: Sage: 0-7619-1385-8.

Francis, E. 1992. Qualitative research: Collecting life histories. In **S. Devereux and J. Hoddinott.** eds. *Fieldwork in Developing Countries*. London: Boulder. pp. 86-101.

Francis, E. 2000. *Making a Living: Changing livelihoods in rural Africa*. London and New York: Routledge. 0415144965

Folbre, N. 1985. Cleaning house-New Perspectives on Households and Economic Development. *Journal of Development Economics* **22**(1), 5–40.

Garcia, M, P. 1996. Gearing agricultural development for Philippines 2000. *Philippine Technology Journal*. **XXI** (1), 19-25.

Garforth, C. 1982. Reaching the Rural Poor: A review of Extension Strategies and Methods. In: **G.E. Jones and M.J. Rolls.** eds. *Progress in Rural Extension and Community Development-Volume 1*. Chichester: John Wiley and Sons. pp. 43-70.

Gerring, J. 2007. *Case Study Research: Principles and Practices*. [On-line]. Cambridge University Press. Available from: <http://lib.myilibrary.com?ID=75055> [Accessed 21 May 2011].

Gerson, P.R. 1993. *Popular Participation in economic Theory and Practice-Human Resources Development and Operations Policy-Working Paper 18*. Washington: World Bank.

Gonzaga, R. 2009. Overseas Filipinos' Remittances: Regulatory Framework and Policy Directions. *Bangko Sentral ng Pilipinas Economic Newsletter*. **09-08**, December 2009.

Gonzales, L.A. 1999. *The global competitiveness of the livestock and poultry sub-sectors before and after the GATT-WTO*. Final Report. Laguna, Philippines: the Society Towards Reinforcing Inherent Viability for Enrichment Foundation.

Gonzales, L.A. 2000. *Philippine agriculture in the next millennium: Strategic issues and directions*. Paper presented to the Crop Protection Association of the Philippines, February 2000.

Gonzalez-Velos, C. 2011. The Effects of Emigration and Remittances on Agriculture: Evidence from the Philippines. *Job market paper*. Department of Economics, University of Maryland at College Park.

Gore, C. 2000. The Rise and fall of the Washington Consensus as a paradigm for Developing Countries. *World Development*. **28** (5), 789-804.

Greeley, M. 1994. Measurement of Poverty or the Poverty of Measurement. *Institute of Development Studies Bulletin*. **25** (2), 50-58.

Greenway, D., Morgan, W. and Wright, P. 2002. Trade liberalization and growth in Developing Countries. *Journal of Development Economics*. **67**, 229-244.

Guijt, I. and Shah, M. 1998. *The myth of community: gender issues in participatory development*. London: Intermediate Technology Publications. 1-85339-421-1

Guzman, R.B. 1999. *The GATT Agreement on Agriculture: Its impact on the Philippine livestock and poultry industry*. Manila: Institute of Political Economy. 971-8707-44-1

Guzman, R.B. 2000. The WTO agreement on agriculture: Final blow to Philippine farms? In: **A. Tujon ed.** *The Impact of the WTO Agreement on Agriculture*. Manila: IBON Foundation books. pp. 27-64.

Hanlon, J. 2000. Power without Responsibility: The World Bank & Mozambican Cashew Nuts. *Review of African Political Economy*. **27** (83), 29-45.

Hart, G. 1995. Gender and household dynamics: Recent Theories and Their Implications. In: **M.G. Quibria. ed.** *Critical issues in Asian development: theories, experiences, and policies*. Hong Kong; Oxford: Published for the Asian Development Bank by Oxford University Press. pp. 39-74.

Hart, G. 1997. From 'Rotten Wives' to 'Good Mothers' Household Models and the Limits of Economism. *Institute of Development Studies Bulletin*. **28** (3), 14-25.

Hart, G. 1998. Regional linkages in the era of liberalization: A critique of the new agrarian optimism. *Development and Change*. **29**(1), 27-54.

Hartley, J. 2004. Case study research. In: **C. Cassell & G. Symon Eds.** *Essential guide to qualitative methods in organizational research*. London: Sage Publications. pp. 323-333.

Hay, I. 2002 Ethical practice in geographical research In: **N. Clifford and G. Valentine. ed.** *Key Methods in Geography*. Revised second edition. London: Sage publications. pp. 37-54.

Hayami, Y. and Otsuka, K. 1994. Beyond the green revolution: Agricultural development strategy into new century. In: **J. R. Anderson.** ed. *Agricultural technology: policy issues for the international community*. Wallingford UK: Cab International. pp. 15-42.

Hearne, D. 2005. *Jeepney* . [Photograph]. “Unpublished”

Hearne, D. 2006. *Habal- Habal*. [Photograph]. “Unpublished”

Heltberg, R. and Tarp F. 2002. Agricultural supply response and poverty in Mozambique. *Food Policy*. **27**(2), 103–124.

Hendriks, M. 1994. *Trade arrangements and interlinked credit in the Philippines*. In: **F. J. A. Bouman and O. Hospes.** ed. *Financial Landscapes Reconstructed: The Fine Art of Mapping Development*. Available from: <http://www.gew.nl/kiosk/microfinanace> [Accessed 12 December 2002].

Henninger, N. 1998 *Mapping and Geographic Analysis of Human Welfare and Poverty – Review and Assessment*. Washington DC: World Resources Institute. Available from: <http://www.povertymap.net/publications/doc/henninger/> [Accessed 10 August 2007].

Hoon, P., Singh, N. and Wanmali, S. 1997. *Sustainable livelihoods: Concepts, Principles and Approaches to Indicator Development*. Paper presented at the workshop sustainable livelihood indicators, Social Development and Poverty Eradication Division. New York: United Nations Development Programme.

Hopkins, H. 2007. Thinking critically and creatively about focus groups. *Area*. **39** (4), 528–535.

Hossain, M. 1996. Economic development in the Philippines: A frustrated take-off? *Philippine Review of Economics and Business*. **33**, (1) 88-118.

Hulme, D. 1995. Projects, Politics and Professionals: Alternative Approaches for Project Identification and Project Planning. *Agricultural Systems*. **47**, 211-233.

Hulme, D. and Shepherd, A. 2003. Conceptualizing Chronic Poverty. *World Development* **31** (3), 403–423.

Human Development Network. 2009. *Philippine Human Development Report. 2008/2009.* Manila: Human Development Network, United Nations Development Programme and New Zealand Agency for International Development. 0118-6361

Hussein, K. 2002. *Livelihood approaches Compared: A multi-Agency Review of Current Practice.* London: Department for International development / Overseas Development Institute.

Huvio, T. Kola, J. And Linstrom, T. ed. 2005. *Small Scale Farmers in liberalised Trade Environment.* Proceedings of the Seminar on October 2004 in Haikko Finland. University of Helsinki. Department of Economics and management. Publications no 38. Agricultural policy. Helsinki 2005. 952-102425-9

Institute of Development Studies Workshop (IDS). 1989. Farmers groups and workshops. In: **R. Chambers, A. Pacey and L. A. Thrupp. ed** *Farmer first-farmer innovation and agricultural research.* London: Intermediate Technology Publications. pp 31-38.

Intermediate Technology Development Group. 2005. *Livelihood Centred Approach to Disaster Management. A policy Framework for South Asia.* Islamabad: Intermediate Technology Development Group and Rural Development Policy Institute (RDPI). 955 9417 207.

International Federation of Red Cross and Red Crescent Societies (IFRC). 1996. *Vulnerability and Capacity assessment Toolbox-2nd Draft.* Geneva: International Federation of Red Cross and Red Crescent Societies.

International Federation of Red Cross and Red Crescent Societies (IFRC). 2011. *World Disaster Report 2011: Focus on Hunger and Malnutrition.* IFRC: Geneva. 978-92-9139-165

International Fund for Agricultural Development (IFAD). 2001. *Rural Poverty Report 2001-The Challenge of Ending Rural Poverty.* New York: Oxford University Press. 0-19-924507-X

International Fund for Agricultural Development (IFAD). 2008. *Rural poverty in the Philippines*. Rome: International Fund For Agricultural Development. Available from: <http://www.ruralpovertyportal.org/web/guest/country/home/tags/philippines> [Accessed 15 January 2010].

International Fund for Agricultural Development (IFAD). 2010. *Rural Poverty Report 2011. New realities, new challenges: new opportunities for tomorrow's generation*. Rome: IFAD. 978-92-9072-200-7

Iredale, R., Turpin, T. and Hawksley, C. 2004. Migration research and migration policy making: a study of Australia, the Philippines, and Thailand. *International Social Science Journal*. **56**, 115–134.

Islam, S. 1998. The Islamic Independence Movements in Patani of Thailand and Mindanao of the Philippines. *Asian Survey*. **38** (5), 441-456.

Jacoby, H. 2000. Access to markets and the benefits of rural roads. *The Economic Journal*. **110** , 713-737.

James, H. 1999. Is liberalization reversible? *Finance and Development*. **36** (4).

Jensen, H.T. and Tarp, F. 2002. CGE Modeling and trade policy: Reassessing the agricultural bias. *Journal of Agricultural Economics*. **53** (2) 383-405.

Jordan, G. 2003. Agricultural commodity trade liberalization and corn production in Mindanao. *Bantaaw*. **16** (10-11).

Joshi, P.K., Gulati, A. Birthal, P.S. and Tewari L. 2003. *Agriculture Diversification in South Asia: Patterns, Determinants, and Policy Implications. Markets and Structural Studies Division - discussion paper no. 57. Washington: International Food Policy Research Institute.*

Kaag, M. 2004. Ways Forward in Livelihood Research in: **D. Kalb, W. Pansters and H. Siebers.** eds. *Globalization and Development: Themes and Concepts in Current research*: Dordrecht: Kluwer academic. pp 49-74.

Kawai, H. 1994. International comparative analysis of economic growth: Trade liberalization and productivity. *The Developing Economies*. **32** (4), 373-397.

Kelly, P.F. 1999. Rethinking the “local “in labour markets: The consequences of cultural embedness in a Philippine growth zone. *Singapore Journal of Tropical Geography*. **20** (1), 56-75.

Khorr, M. 2000. *Globalization and the South: Some Critical Issues*. United Nations Conference on Trade and Development discussion paper no. 147. UNCTAD: Geneva.

Kinncar, T.C. and Taylor, J.R. 1996. *Marketing research-An applied approach*. Fifth international edition. London: Mcgraw-Hill inc. 0-07-912252-3

Krishna , A. 2010a. Who Became Poor, Who Escaped Poverty, and Why? Developing and Using a Retrospective Methodology in Five Countries. *Journal of Policy Analysis and Management*. **29** (2), 351–372.

Krishna, A. 2010b. *One illness away Why People Become Poor and How They Escape Poverty*. Oxford: Oxford University Press. 978-0199693191

Krishna, A. and Lecy, J. 2008. The balance of all things: Explaining household poverty dynamics in 50 villages of Gujarat, India. *International Journal of Multiple Research Methods*. **2**, 160–175.

Krishna, A. and Shariff, A. 2011. The Irrelevance of National Strategies? Rural Poverty Dynamics in States and Regions of India, 1993–2005. *World Development*. **39** (4),533-549.

Kuban, R. and MacKeinze-Carey, H. 2001. *Community-wide Vulnerability and Capacity Assessment*. Government of Canada - Office of critical infrastructure protection and emergency preparedness. Toronto: Her Majesty in right of Canada.

Lapina, G. 1999. *Impact of tariff rate reduction on the Philippine corn sector*. A thesis submitted to the University of the Philippines for the award of Bachelor of Science. University of the Philippines Los Baños, Laguna: The University of the Philippines

Law, J. and Urry, J. 2004. Enacting the Social. *Economy and Society*. **33** (3), 390-410.

Leurs, R. 1998. Current challenges facing participatory rural appraisal. In: **J. Blackburn and J. Holland.** ed. *Who Changes ? Institutionalizing participation in development.* London: Intermediate Technology Publications. pp. 124-133

Li. Reyes, M.A. 1998. Agriculture still faces an uphill battle. *The Philippine Star.* July 28, 40.

Lim, J. 1996. Issues concerning the three major agricultural crops and GATT. In: **J.Reyes.** ed. *The General Agreement on Tariffs and Trade-Philippine Issues and Perspectives.* Quezon City: Philippine Peasant Institute. pp. 29-86.

Lipton, M. 1987. Limits of price policy for agriculture: Which way for the World Bank? *Development Policy Review.* **5**, 197-215.

Llorito, D. L. 2001. Corn industry gradually losing farms to other agri and non-agri uses. *The Manila Times.* August 20.

Long, N. 1997. Agency and Constraint, Perceptions and Practices: A Theoretical Position. In: **H. De Haan and N. Long.** eds. *Images and Reality of Rural Life: wageningen perspectives on rural transformations.* The Netherlands: Uitgeverij Van Gorcum. pp.1-20.

Longley,C., Christoplos,I. and Slaymaker,T. 2006. *Agricultural rehabilitation Mapping the linkages between humanitarian relief, social protection and development.* London: Humanitarian Policy Group, Overseas Development Institute. 0 85003 785 9

Longley, C. and Maxwell, D. 2003. Livelihoods, Chronic Conflict and Humanitarian Response: A Review of Current Approaches. *Overseas Development Institute: Natural Resource Perspectives.* **89.**

Luna, E. M. 2001. Disaster Mitigation and Preparedness: The Case of NGOs in the Philippines. *Disasters.* **25** (3), 216-226.

Lutheran World Relief , Heifer Project International, Catholic Relief Services, Philippine German Development Foundation Inc, Philippine Partnership for Development of Human Resources in Rural Areas, International Institute Rural Reconstruction, Asian Non Governmental Organisation Coalition and Alternate Forum for Research in Mindanao. 2004. eds. *Trade liberalization, agriculture and small farm households in the Philippines: Proactive responses to the threats and opportunities of globalization.* Cavite, The Philippines: International Institute of Rural Reconstruction. 1-930261-08-x

Mackie, A. 2008. *IDP camp Mindanao.* [Photograph]. "Unpublished"

Maguire, B. and Cartwright, S. 2008. *Assessing a community's capacity to manage change: A resilience approach to social assessment.* Canberra: Bureau of Rural Sciences, Commonwealth of Australia.

Mamingi, N. 1997. The impact of prices and macroeconomic policies on agricultural supply: a synthesis of available results. *Agricultural Economics.* **16**, 17-34.

Manyena, S.B. 2006. The concept of resilience revisited. *Disasters.* 30 (4), 433–450.

Maresko, D. 2004. Development, Relief Aid, and Creating Peace: Humanitarian Aid in Liberia's War of the 1990s. *The On-line Journal of Peace and Conflict Resolution.* **6** (1), 94-120.

Mariano, A. 1996. Threatening food self-sufficiency: GATT's impact on the grains industry. In: **J. Reyes** ed. *The general agreement on tariffs and trade: Philippines issues and perspectives.* Quezon City: Philippine Peasant Institute. pp. 87-116.

Masten, A. and Obradovic, J. 2006. Competence and Resilience in Development. *ANNALS NEW YORK ACADEMY OF SCIENCES.* **1094**, 13–27

Mayoux,L. 2006. Quantitative, Qualitative or Participatory? Which Method, for What and When? In: **V. Desai and R. Potter.** eds. *Doing development research.* London: Sage Publications Ltd. pp. 115-129.

McCoy, A.W. 1982. Introduction: The social history of an archipelago. In: **A.W. McCoy and Ed.C. de Jesus.** ed. *Philippine social history-global trade and local transformations*. Manila: Ateneo de Manila University Press. pp. 1-56.

McCulloch, N., Winters, L. and Cirera, X. 2001. *Trade liberalization and poverty; A Handbook*. London: centre for Economic Policy Research/DFID. 1 898128 62 6

McDowell, L. 1992. Doing Gender: Feminism, Feminists and Research Methods in Human Geography. *Transactions of the Institute of British Geographers*. **17** (4), 399-416.

McGregor, A. 2008. *Southeast Asian Development*. New York: Routledge. 0-415-38152-5.

McGregor, J. 2006. Diaries and Case Studies. In: **V. Desai and R. Potter** ed. *Doing development research*. London: Sage Publications Ltd. pp. 200-206.

McGuirk, P. and O'Neil, P. 2010. Using Questionnaires in Qualitative Human Geography. In: **I.Hay.** ed. *Qualitative Research Methods in Human Geography*. Third edition. Ontario: Oxford University Press. pp. 191-215.

Medalla, E.M., Tecson, G., Bautista, R. and Power, J. 1996. *Philippine trade and industrial policies-catching up with Asia's tigers-Volume I*. Makati: Philippine Institute for Development Studies. 971 564 022 2

Melamed, C. 1999. Trade Renegotiations in the WTO Millennium Round-Options for the Poor. *Vikalp Alternatives*. **V11** (4), 135-141.

Mendoza, M.S. and Rosegrant, M.W. 1995. *Pricing behaviour in Philippine corn markets: Implications for market efficiency: Research Report 101*. Washington: International Food Policy Research Institute.

Meisenhelder, T. 2006. From character to habitus in sociology. *The Social Science Journal*. **43**, 55-66.

Messer, N. and Townsley, P. 2003. *Local Institutions and Livelihoods: Guidelines for Analysis*. Rome: Rural Development Division: Food and Agricultural Organisation of the United Nations. 92-5-105049-X

- Michalopoulos, C., Schiff, M. and Tarr, D.** 2002. Rules of thumb for trade policy. In: **B. Hoekman, A. Mattoo, and P. English.** ed. *Development, trade, and the WTO-A handbook*. Washington: The World Bank. pp. 519-525.
- Mindanao Grains Forum.** 2003. *The Proceedings of the 1st Mindanao Grains Forum*. 11-12 April 2003, Davao City.
- Mindanaomaps.** 2010. *Mindanao Regions*. [On-line]. Available from: <http://www.mindanaomaps.com/category/maps-updates> [Accessed 22 October 2011].
- Miranda, C.** 1999. Globalisation and Inefficiency in Less Developed Countries. *Philippine Review of Economics and Business*. **XXXVI** (2), 257-278.
- Mittelman, J.H.** 2001. Mapping Globalisation. *Singapore Journal of Tropical Geography*, **22** (3), 212-218.
- Montemayor, L.Q.** 1998. We must support farmers if agriculture sector is solution to recession. *The Philippine Star*. Sep 1, 11.
- Morris, S.S., Neidecker-Gonzales, O., Carletto, C., Munguia, M., Medina, J.M., Wodon, Q.** 2002. Hurricane Mitch and the Livelihoods of the Rural Poor in Honduras. *World Development*. **30** (1), 49-60.
- Moser, C.O.N.** 1989. Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs. *World Development*. **17**(11), 1799-1825.
- Moser, C.O.N.** 1998. The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies. *World Development*. **26** (1), 1-19.
- Murray, C.** 2001. *Livelihoods research: some conceptual and methodological issues. Background paper 5*. Manchester: Chronic Poverty Research Centre. 1-904049-05-2
- Murray, C.** 2002. Livelihoods Research: Transcending Boundaries of Time and Space. *Journal of Southern African Studies*. **28** (3), 489 -509.

- Nadal, A.** 2000. *Liberalization on corn production in Mexico*. Oxford and Gland: Oxfam Great Britain and The World Wildlife Fund.
- Narayan, D., Chambers, R., Shah, M. K. and Petesch, P.** 2000. *Voices Of The Poor Crying Out For Change*. New York: Oxford University Press / The International Bank for Reconstruction and Development / The World Bank. 1 2 3 4 03 02 01 00
- Narayanan, S. and Gulati, A.** 2002. *Globalization and the smallholders: A review of issues, approaches, and implications Discussion Paper no .50*. International Food Policy Research Institute. Markets and Structural Studies Division. Washington: IFPRI/World Bank.
- Nelson, R.A., Dimes, J. P., Silburn, D. M., Paningbatan, E.P. and Cramb, R.A.** 1998. Erosion/productivity modelling of maize farming in the Philippine uplands Part II: simulation of alternative farming methods. *Agricultural Systems*. **58** (2), 147-163.
- Nix, J.** 2004. *Farm Management Pocketbook*. 35th edition. Imperial College at Wye: The Andersons Centre. 978-0954120139.
- Nooteboom, G.** 2003. *A matter of style: Social Security and Livelihoods in Upland East Java*. Amsterdam: Rozenberg. 90-6734-315-3
- Nordhaus, S.** 1998. *Economics*. Sixth International edition. Boston: Irwin/McGraw-Hill. 0-07-115542-2
- Norman, D.W., Worman, F.D., Siebert, J.D. and Modiakgotla, E. ed.** 1995. *The farming systems approach to development and appropriate technology generation*. Rome: The food and Agricultural Organisation of the United Nations. 92-5-103644-6
- Norton, A. and Foster, F.** 2001. *The Potential of Using Sustainable Livelihoods Approaches in Poverty Reduction Strategy Papers: ODI working paper number 148*. London: Overseas Development Institute. 0 85003 528 7
- Oakley, P.** 1991. *Projects with people: The practice of participation in rural development*. Geneva: International Labour Office. 92-2-10782-7

- O'Brien, K., Quinlan, T. and Ziervogel, G.** 2009. Vulnerability interventions in the context of multiple stressors: lessons from the Southern Africa Vulnerability Initiative (SAVI). *Environmental Science and Policy*. **12**, 23 -32.
- O'Brien, G., O'Keefe, P., Rose J. and Wisner, B.** 2006. Climate change and disaster management. *Disasters*. **30** (1), 64-80.
- Okali, D., Okpara, E. and Olawoye J.** 2001. *Rural-urban interactions and livelihood strategies series -The case of aba and its region, southeastern Nigeria- Working paper 4*. London: International Institute for Environment and Development (IIED). 1-84369-037-3
- O'Laughlin, B.** 2004. Book reviews. *Development and Change*. **35**(2), 385–403.
- Oliver-Smith, A.** 1996. Anthropological Research on Hazards and Disasters. *Annual Review of Anthropology*. **25**, 303-328.
- Oliver-Smith, A.** 1999. "What is a disaster?": Anthropological perspectives on a persistent question. In: **A. Oliver-Smith and S. M. Hoffman. eds.** *The Angry Earth: Disaster in Anthropological Perspective*. New York: Routledge. pp 18-34
- Olson, M.** 1971. *The logic of collective action*. Cambridge: Harvard University Press. 0-674-53751-3
- Organisation for Economic Cooperation and Development.** 2007. *Glossary of statistical terms*. Paris: OECD.
- Paerregaard, K.** 1998. In Search of alternatives: Poverty, the poor and local organizations. CDR Working Paper 98. 10 November 1998. In: **Webster, ed.** *Revised papers from the workshop on the CDR research programme: Local organizations and rural poverty alleviation (LORPA) Tune, Denmark, 28-30 August 1996*.
- Panganiban, D.F.** 1998. The political crops. In: **R.T. Dy. ed.** *The Food and Agriculture Centennial Book-100 years of Philippine Agriculture*. Manila: University of Asia and the Pacific. pp. 65-98.

Paris, T., Rorla-Ruzben, A., Luis, j., Ngoc-Chi, T., Wongsamum, C., and Villanueva, D. 2010. *Interrelationships between labour outmigration, livelihoods, rice productivity and gender roles. Occasional papers 11: Knowledge for development effectiveness.* Rome: International Fund for Agricultural Development. 978-92-9072-212-0

Parnwell, M. And Rigg, J. 2001. Editorial Note. *Singapore Journal of Tropical Geography.* **22** (3),205–211.

Parsons, T. and Knight, P.G. 1996. *How to do your dissertation in geography and related disciplines.* London: Chapman and Hall. 0 412 55950

Pasteur, K. 2001. *Tools for Sustainable Livelihoods: Policy analysis.* Brighton: Institute of Development Studies.

Patton, M.Q. 1987. *How to use qualitative methods in evaluation.* London: Sage Publications. 0-8039-3129-8

Payne, P. and Lipton, M. 1994. How third world households adapt to dietary energy stress. The evidence and the issues. *Food Policy Review 2.* Washington: International Food Policy Research Institute.

Pender, J. 2004. Development pathways for hillsides and highlands: some lessons from Central America and East Africa. *Food Policy.* **29**, 339-367.

Pender, J., Jagger, P., Nkonya, E. and Sserunkuuma, D. 2001. Development pathways and land management in Uganda: causes and implications: *Environment and Production Technology Division discussion paper no.85.* Washington: International Food Policy Research Institute.

Pender, J., Scherr, S. and Guadalupe, D. 1999. Pathways of development in the hillsides of Honduras: causes and implications for agricultural production, poverty, and sustainable resource use: *Environment and Production Technology Division discussion paper no.45.* Washington: International Food Policy Research Institute.

Philippines institute of Development Studies. 2011. *Economic and Social Database. Poverty Incidence Among Population, by Region, 2000, 2003, 2006, Per cent.* [On-line]. Makati: Philippine Institute of Development studies. Available at: <http://econdb.pids.gov.ph/tablelists/table/263> [Accessed 8 October 2011].

Picciotto, R. 1992. *Participatory development: Myths and dilemmas-Working Paper no .930.* Washington D.C.: The World Bank.

Plummer, K. 1996. Life story research. In: **A. Jonathan, R. H. Smith, & V. L. Luk. eds.** *Rethinking methods in psychology.* Great Britain: Sage Publications Ltd. pp. 50-63.

Prabhu, L., Pingali, M. and. Rosegrant, W. 1995. Agricultural commercialization and diversification: processes and policies. *Food Policy.* **20** (3), 171-185.

Pretty, J. N. 1995. Participatory learning for sustainable agriculture. *World Development.* **23** (8), 1247-1263.

Provincial Government of Cotabato. 2010. *Map of the Municipality of Magpet.* [On-line]. Available from: <http://www.cotabatoprov.gov.ph/lgus/magpet> [Accessed 21 October 2010].

Prowse, M. 2003. *Towards a clearer understanding of 'vulnerability' in relation to chronic poverty: CPRC Working Paper No 24.* Manchester: Chronic Poverty Research Centre. 1-904049-23-0

Prowse, M. 2010. Integrating reflexivity into livelihoods research. *Progress in Development Studies.* **10** (3), 211–31.

Quiroz, J.A. and Alberto, V. 1995. Agricultural diversification and policy reform. *Food Policy.* **20** (3), 245-255.

Ramisch, J., Keeley, J., Scoones, I. And Wolmer, W. 2000. Crop-Livestock Policy in Africa: What is to be done? In: **I. Scoones, W. Wolmer. eds.** 2000. *Pathways of change: Crops, livestock and Livelihoods in Africa. Lessons from Ethiopia, Mali and Zimbabwe.* Brighton: Institute of Development Studies. pp. 162-188.

Ravallion, M. 1992. *Poverty Comparisons: A Guide to Concepts and Methods*. Washington: The World Bank. 0-8213-2036-X

Reardon, T., Berdegúe, J., Barrett, C. B. and Stamoulis, K. 2007. Household Income Diversification into Rural Nonfarm Activities. In: **S. Haggblade, P. Hazell and T. Reardon.** eds. *Transforming the Rural Nonfarm Economy*. Baltimore: Johns Hopkins University Press. pp. 115-140.

Reimer, J. 2002. *Estimating the poverty impacts of trade liberalization*. Indiana: Centre for Global Trade Analysis and Department of Agricultural Economics, Purdue University.

Reyes, C and Tabuga, A. 2011. *A Note on Economic Growth, Inequality, and Poverty in the Philippines: Pids discussion paper series no. 2011-30*. Quezon City: Philippine Institute for Development Studies.

Rigg, J. 2001. *More than soil: rural change in Southeast Asia*. Harlow: Prentice Hall. 0582382114

Rigg, J. 2007. *An everyday geography of the global south*. London: Newyork: Routledge. 9780415376099

Rodrik, D. 1998. Globalisation, social conflict and economic growth. Revised, December 11. Revised version of the Prebisch Lecture delivered at UNCTAD, Geneva, on October 24, 1997.

Rodrik, D. 2002. *Feasible Globalisations: NBER Working Papers, No. 9129*. Massachusetts: National Bureau of Economic Research.

Sachs, J. D. and Warner, A. 1995. Economic reform and the process of global integration. *Brookings Papers on Economic Activity*. **1**, 1–118.

Safflios-Rothschild, C. 1985. *The status of women and fertility in the third world in the 1970-80 decade: Working papers / Centre for Policy Studies 118*. New York: The Population Council. Centre for Policy Studies.

Salehezadeh, Z. and Henneberry, S. 2002. The economic impacts of trade liberalization and factor mobility: the case of the Philippines. *Journal of Policy Modelling*. **24** (5), 483-486.

Sanderson, E. and Kindon, S. 2004. Progress in participatory development: opening up the possibility of knowledge through progressive participation. *Progress in Development Studies*. **4**, 114.-126.

Saito, K.A. and Spurling, D. 1992. *Developing Agricultural Extension for Women Farmers-World Bank Discussion Papers no. 156*. Washington: The International Bank for Reconstruction and Development. 0-8213-2078-5

Scoones, I. 1998. *Sustainable rural livelihoods: A framework for analysis-Institute of Development Studies-Working Paper 72*. Sussex: Institute of Development Studies. 1 85864 224 8

Scoones, I. 2009. Livelihoods perspectives and rural development. *Journal of Peasant Studies*. **36**(1), No page number.

Scoones, I. And Wolmer, W. 2000. Pathways of change: Crop livestock integration in Africa. In: **I. Scoones, W. Wolmer. eds.** 2000. *Pathways of change: Crops, livestock and Livelihoods in Africa. Lessons from Ethiopia, Mali and Zimbabwe*. Brighton: Institute of Development Studies. pp. 1-28.

Scoones, I. And Wolmer, W. 2003. Introduction: Livelihoods in Crisis: Challenges for Rural Development in Southern Africa. *Institute of Development Studies Bulletin*. **34** (3).

Scott, S., Miller,F. and Lyod, K. 2006. Doing Fieldwork in Development Geography: Research Culture and Research Spaces in Vietnam. *Geographical Research* . **44**(1), 28-40.

Sen, A. 1975. *Employment, Technology and Development*. Oxford: Claredon Press. 0 19 877052 9

Sen, A. 1984. *Resources, values and development*. Boston: Harvard University Press. 0-674-76525-7

Sinha, S. and Lipton, M. 1999. *Damaging fluctuations, risk and poverty: a review. Background paper for the world development report 2000/2001.* Brighton: University of Sussex.

Skelton, T. 2001. Cross-cultural research: issues of power, positionality and "race". In: **M. Limb and C. Dwyer.** eds. *Qualitative Methodologies for Geographers.* London: Arnold. pp. 87-100.

Smith, F.M. 2010. Working in different cultures. In: **N. Clifford and G. Valentine.** eds. *Key Methods in Geography.* Revised second edition. London: Sage publication. pp. 179-194.

Smith, P. 1988. Improving the project identification process in rural development. *Public Administration and Development.* **8**, 15-26.

Solesbury, W. 2003. *Sustainable Livelihoods: A Case Study of the Evolution of DFID Policy : Overseas Development Institute Working Paper 217.* London: Overseas Development Institute.

Spring, A. 1988. Using male research and extension personnel to Target Women Farmers. In: **S.V. Poats, M. Schmink, and A. Spring.** eds. *Gender Issues in Farming Systems Research and Extension.* Colorado: Westview press inc. pp 407-426.

Stake, R.E. 1995. *The art of case study research.* London: SAGE publications. 080395767X

Start, D. and Johnson, C. 2004. *Livelihood Options? The Political Economy of Access, Opportunity and Diversification: Overseas Development Institute working paper 233.* London: Overseas Development Institute. 0 85003 707 7

Stewart, D. W. and Kamins, M. A. 1993. *Secondary research-Information sources and methods.* Second edition. London: sage Publications. 0-8039-5037-3

Stiglitz, J.E. 2003. *Globalization and its discontents.* New York: Norton. 0-393-32439-7

Summers, R. and Heston, A. 1991. The Penn World Table Mark 5: an expanded set of international comparisons 1950–88. *Quarterly Journal of Economics.* **106**, 327–368.

The, R. Yorobe, J. 1996. *Policy options in the Philippine corn sector*. Quezon City: Philippine department of agriculture.

Tellis, W. 1997. *Application of a Case Study Methodology: The Qualitative Report*. [On-line serial]. Available: (<http://www.nova.edu/ssss/QR/QR3-3/tellis2.html>) [Accessed 9 October 2009].

Thywissen, K. 2006. *Components of Risk: A Comparative Glossary: Publication Series of UNU-EHS No. 2/2006*. Bonn: United Nations University Institute for Environment and Human Security (UNU-EHS). 3-9810582-1-6

Trujillo, M., Ordonez, A. and Hernandez, R. 2000. *Risk-Mapping and Local Capacities: Lessons from Mexico and Central America*. Oxford: Oxfam Great Britain. 0 85598 420 1

Tuminex, A.S. 2008. *The Past Is Always Present: The Moros of Mindanao and the Quest for Peace. Southeast Asia Research Centre Working Paper Series, No. 99*. Hong Kong: The Southeast Asia Research Centre (SEARC) of the City University of Hong Kong.

Twigg, J. 2001. *Sustainable livelihoods and Vulnerability to Disasters: Benfield Grieg Hazard Research Centre, Disaster Management Working Paper 2/2001*. London: Benfield Grieg Hazard Research Centre.

Twigg, J. 2004. *Disaster risk reduction: Mitigation and preparedness in development and emergency programming: Humanitarian Practice Network Good Practice Review No.9*. London: Overseas Development Institute. 0 85003 694 1

Twyman, C., Morrison, J. and Sporton, D. 1999. The Final Fifth: Autobiography, Reflexivity and Interpretation in Cross-Cultural Research. *Area*. **31**(4), 313-325.

United Nations Development Programme. 2009. *Human Development Report 2009: Overcoming barriers: Human mobility and development*. New York: Macmillan. 978-0-230-23904-3

United Nations International Strategy For Disaster Reduction. 2002. *Natural Disasters and sustainable development: Understanding the links between development, environment and natural disasters. Background Paper No. 5.* Commission on Sustainable Development acting as the preparatory committee for the World Summit on Sustainable Development Second preparatory session 28 January - 8 February 2002. Geneva: United Nations International Strategy For Disaster Reduction.

United Nations International Strategy For Disaster Reduction. 2009. *UNISDR Terminology on Disaster Risk Reduction.* Geneva: United Nations International Strategy For Disaster Reduction.

Valentine, G. 1999. Doing household research: interviewing couples together and apart. *Area.* **31**(1), 67-74.

Van Dijk, T. 2011. Livelihoods, capitals and livelihood trajectories: a more sociological conceptualisation. *Progress in Development Studies.* **11**, 101-117.

Van Donge, J.K. 2006. Ethnography and Participant Observation. In: **V. Desai and R. Potter** ed. *Doing development research.* London: Sage Publications Ltd. pp. 180-188.

Victoria, L. and Hellmans, A. 2005 *Citizenry-Based & Development-Oriented Disaster Response: Experiences and practices in Disaster Management of the Citizens Disaster response network in the Philippines.* Quezon city: Philippine centre for disaster preparedness.

Vos, F., Rodriguez, J., Below, R. and Guha-Sapir, D. 2010. *Annual Disaster Statistical Review 2009: The Numbers and Trends.* Brussels: Centre for Research on the Epidemiology of Disaster.

Vyas, V.S. 1996. Diversification in agriculture: concept, rationale and approaches. *Indian Journal of Agricultural Economics.* **51** (4), 636-643.

Warren, P. 2002. Livelihoods Diversification and Enterprise Development *An Initial Exploration of Concepts and Issues: LSP Working Paper 4 Livelihoods Diversification and Enterprise Development Sub-Programme .* Rome: Food and Agricultural Organisation of the United Nations.

Watkins, K. 1996. *Philippines: Myths and perils of Liberalisation*. Focus on the global South. Available at: <http://www.nautilus.org/focusweb> . [Accessed 2 May 2006].

Watson, E.E. 2004. What a Dolt One Is': Language Learning and Fieldwork in Geography. *Area*. **36** (1), 59-68.

Weiers, R.M. 1988. *Marketing research*. Second edition. London: Prentice Hall, Inc. 0-13-551409-6

Weiss, J. 1996. Project Failure: the implication of a '25 per cent rule'. In: **C. Kirkpatrick and J. Weiss**. ed. *Cost-Benefit Analysis and Project Appraisal in Developing Countries*. Cheltenham: Edward Elgar. pp. 172-188.

Wernstedt, F. and Simkins, P. 1965. Migrations and the Settlement of Mindanao. *The Journal of Asian Studies*. **25** (1), 83-103.

Whitehead, A. 2002. Tracking Livelihood Change: Theoretical, Methodological and Empirical Perspectives from North-East Ghana. *Journal of Southern African Studies*. **28** (3), 575 -598.

Wiggins, S. and Procter S. 2001. How special are rural areas? The economic implications of location for rural development. *Development Policy Review*. **19** (4), 427-436.

Williamson, J. 1969. Dimensions of post-war Philippine economic progress. *Quarterly Journal of Economics*. **83** (1), 93-109.

Windle, J. and Cramb, R. 1997. Remoteness and rural development: Economic impacts of rural roads on upland farmers in Sarawak, Malaysia. *Asia Pacific Viewpoint*. **38** (1), 37-53.

Winters, L. 2000a. *Trade liberalization and poverty: PRUS working paper No.7* . Brighton: Poverty Research unit at Sussex.

Winters, L. 2000b. Trade liberalization and poverty: What are the links? *The World Economy*. **25** (9), 1339-1367.

Winters, L. 2002. *Trade policies for poverty alleviation*. In: **B. Hoekman, A. Mattoo, and P. English** ed. *Development, trade, and the WTO-A handbook*. Washington: The World Bank. pp.28-38.

Winters, L., Mcculloch, N. and Mckaw, A. 2002. *Trade Liberalisation and Poverty: The Empirical Evidence: Discussion Paper 88*. Brighton: University of Sussex.

Wisner, B. 1993. Disaster Vulnerability: Scale, Power and Daily Life. *GeoJournal*. **30** (2), 127-140.

Wisner, B., Blaikie, P., Cannon, T. and Davies, I. 2004. *At Risk: Natural hazards, peoples vulnerability and disasters*. Second edition. New York: Routledge. 10-041525215-6

Wood, A. 1995. How trade hurt unskilled workers. *Journal of Economic Perspectives*. **9** (3), 57-80.

Wouterse, F. And Taylor, E. 2008. Migration and Income Diversification: Evidence from Burkina Faso. *World development*. **36** (4), 625-640.

World Bank. 2000. *Philippines-Growth with equity: The remaining agenda-A World Bank social and structural review*. Jakarta: Poverty Reduction and Economic Management Sector Unit, East Asia and Pacific Regional Office World Bank.

World Bank. 2001. *World Development Report 2000/2001-Attacking Poverty*. Oxford: Oxford University Press/World Bank. 0-19-521598-2

World Bank. 2003. *Urban-Poverty in East Asia a review of Indonesia, the Philippines, and Vietnam : Working Paper No. 11. East Asia Urban Working Paper Series*. Jakarta: Urban Sector Development Unit East Asia Infrastructure Department World Bank.

World Bank. 2007. *The World Bank development report 2008: Agriculture for Development*. Washington: The International Bank for Reconstruction and Development / The World Bank. 978-0-8213-6809-1

World Bank. 2008. Development Data Group, The World Bank. 2008. *2008 World Development Indicators* . [On-line]. Washington, DC: The World Bank. Available at: <http://go.worldbank.org/U0FSM7AQ40> [Accessed 7 July 2011].

World Bank. 2012. *The World Bank Data Catalogue*. [On-line]. Available from <http://data.worldbank.org/indicator/SP.POP.GROW/countries?page=1&display=default> [Accessed 20 January, 2012].

World Commission on Environment and Development. 1987. *Our Common Future: Report of the World Commission on Environment and Development*. Oxford: Oxford University Press. 019282080X

Yin, K.R. 1989. *Case Study Research, Design and Methods*. Beverly Hills: Sage Publications. 9780803934702

Yin, K.R. 1993. *Applications of Case Study Research*. London: Sage Publications. 0-8039-5119-1

Yin, K.R. 1994. *Case study research: Design and methods*. Second edition. London: Sage Publications. 0-8039-5663-0

Yin, K.R. 2003. *Case study research, design and methods*. Third edition. Thousand Oaks: Sage Publications. 0761925538