Meanings and Constraints: Processes Shaping Vulnerability Reduction in Philippine National Red Cross Disaster Preparedness Initiatives

A thesis submitted to Middlesex University in partial fulfilment of the requirements for the degree of Doctor of Philosophy

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Studentship Sponsored by the International Federation of Red Cross and Red Crescent Societies, with the support of the Philippine National Red Cross

31 January 2003

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Abstract

This thesis develops a conceptual framework within which to:

1. explore local vulnerability experiences;
2. unravel the processes by which community-based projects are shaped;
3. explore project impacts upon local vulnerability; and
4. reveal the implications for vulnerability reduction initiatives.

Community-based approaches are valued for their flexibility and their (potentially) high sensitivity to local-specific factors. It is postulated that a community-based approach is – in theory – more suited than other approaches to grasping the dynamics and complexity of local vulnerability. This thesis explores the conceptual and practical constraints to adherence to this ideal.

With reference to two case studies, this thesis explores vulnerability in all of its complexity in a typhoon-prone context. A project interface conceptual framework is developed, and is used to map and explain the interaction of community, Red Cross and local government project actors, their contributions to the conceptual understanding of vulnerability issues and the shaping of project outputs. Attention is paid to the nature and development of relationships between different groups of actor, and to situating the case study projects in this context of evolving relations and norms. The case study projects are explored in their wider context which includes paradigm and policy development in areas such as disaster management, as well as processes such as environmental degradation and market fluctuations. The thesis investigates the relative importance of different manifestations of vulnerability, of *underlying* and *event-centred* vulnerability, from the perspective of different groups of project actor.

From a community member perspective, vulnerability is inextricably linked to livelihoods. Sources of vulnerability are traced to factors such as: the political economy of natural resource management and the lack of livelihood-earning opportunities. Fundamentally, this thesis argues that isolating vulnerability to events from the wider social context risks treating symptoms rather than causes. Furthermore, isolating vulnerability to events, from other manifestations of vulnerability predefines 'problems' and risks bypassing local priorities and realities. An integrated approach to cross-sectoral vulnerability reduction, which links the fields of disaster management and development is called for.

Community-based initiatives have also been instrumental in increasing the *responsibility* placed upon communities and their institutions, in implementing measures designed to reduce vulnerability, without granting increased powers or means to tackle the root causes of vulnerability. *Control* of project processes remains vested largely in the Philippine National Red Cross, donor organisations and local government actors.

Finally, community-based approaches have served to shift the focus away from wider – often more politically sensitive – factors impacting vulnerability, which supersede community-level control and responsibility. There is a danger of community-based approaches unwittingly contributing to the *'depoliticisation'* of issues surrounding vulnerability.

Acknowledgements

I would like to express my most sincere thanks to Mrs. Loyola, Secretary General of PNRC, Mrs. dela Peña, Director of Services, and to all of the staff and volunteers of PNRC – particularly within ICDPP and DMS – who have facilitated and participated in this research project.

Special thanks for field support and hospitality to Mr. Roi Malibiran, Mr. Eric Salve, Jane and Rose at ICDPP, all at Or. Mindoro and So. Leyte Chapters of PNRC, Brgy. Captains Sonny Bautista (Mayabig), Democrito Hermogino (Tigbao) and families, the Soledad family in Nahulid. Also to all those who have provided interpretation and assistance in the field, particularly: Misael, Jowe, Randy, Clemen, Dino Villacrusis, the Mayabig brgy. Councillors and Mr. Mageamit in Or. Mindoro. Samuel, Efren, Isidra (Risa), Mrs. Escabillas, Mrs. Espedilla, Mr. Encluna, Mrs. Basagan, Mr. Piquero, the Tigbao brgy. Tanod, Ms. Tripole, Mr. Atienza and Mr. Ozon in So. Leyte.

Thanks are also due to my sponsors in Geneva, to members of the IFRC climate change project group, to John Mitchell and others at BRC, to Yasemin Aysan and IFRC desk officers for early inputs. Also to Lourdes Masing and Mel Luna for introducing me to ICDPP and for comments on my proposal, to Rosa Perez at PAGASA for typhoon data and information, to Ernie Joaquin and others at CLRG, U.P. Diliman for information on local government and governance. Particular thanks to Peter Walker in Geneva, as well as to my supervisors Prof. John Handmer, Prof. Edmund Penning-Rowsell and Prof. Robert Nicholls, and Jeroen Warner for academic inputs and advice.

Thanks to Margaret and Chris Allen for help with editing, to Ian and to friends at FHRC for their support. Last – but by no means least – I would like to acknowledge the invaluable contributions of the people of barangays Mayabig and Tigbao, of numerous local officials, Provincial and Municipal Government, and NGO (BMKF, KPLN, KUFA, PI) representatives in Or. Mindoro and So. Leyte. I hope to have accurately reflected the views and perspectives of these people and take full responsibility for any and all failings of this thesis.

1. Introduction

> *"The division between crisis and disaster response on the one hand, and development on the other, has long marred the efficiency of efforts to prevent damage in advance of disasters or to strengthen the impact of post-disaster actions, so that these contribute to reduced vulnerability in the future. Disasters occur in a long-term and local context, and it is unrealistic to assume a separation between 'normal' existence and those – often frequently recurring – periods that are disasters"* (Norton, 1999:viii).

The term 'disaster' means different things to different people. Disasters have been described as acts of God, as the outcome of extreme physical events or as the outcome of social processes. Yet, the manner in which we perceive disasters undoubtedly plays a fundamental role in determining the manner in which we respond to such situations. In this thesis, physical events, environmental, social, political and economic factors and processes are all examined from the perspective of a variety of actors involved in disaster management and/or vulnerability alleviation. Actors can be considered participants, implementers and intended beneficiaries of given programmes. The thesis argues that disaster events can best be prepared for and ultimately alleviated or even avoided, by addressing broader issues of *underlying vulnerability* (defined in Section 1.1 below). In doing so, it inextricably links disaster situations and their management with the wider context of societal development.

1.1 Defining Vulnerability

The definition of vulnerability employed throughout this thesis[1] is:

A degree of *susceptibility* to the effects of events or shocks, of processes of change or of a combination of factors, including stresses, which is not sufficiently counterbalanced by capacities to resist negative impacts in the medium to long-term, and to maintain levels of overall well-being. Vulnerability reveals itself as a limited or lessened ability to cope with potential or actual situations that may arise.

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[1] Unless otherwise qualified.

This definition can be applied to different social units; from individuals, households and communities; to regions, nations and financial or political institutions. For the purposes of this thesis, my analysis is limited to the vulnerability of (or that manifested by) individuals, households, communities, municipalities, provinces and their institutions within the Philippines.

Conceptually, I distinguish between two forms of vulnerability, namely: *manifest* and *underlying*. Manifest vulnerability is vulnerability made apparent by events such as flash flooding or droughts. Examples include food and water shortage (limited access), disease, malnutrition, crop or livestock loss, homelessness and property damage. In contrast, underlying vulnerability denotes the susceptibility that underpins the everyday life and livelihoods of the subjects of vulnerability study. This topic is explored in detail in Chapter 8, with reference to the research results presented in Chapters 5-7. The conceptual distinction between underlying and manifested vulnerability provides a foundation for the conceptual framework supporting this thesis. This builds upon the evolution of vulnerability analysis outlined in Section 2.1, and is developed in Section 3.1 as a natural progression. I use the term '*event-centred*' to describe a form of conceptual understanding of vulnerability that focuses upon (in the context of this thesis) typhoon-related manifestations of vulnerability. In addition to manifested vulnerability, event-centred understandings include the *root-causes* of vulnerability manifested during events.

Fundamentally, I argue that over-concentration upon event-centred vulnerability risks neglecting forms of underlying vulnerability, that unchecked are likely to emerge as future causes of event or stress manifestations of vulnerability. Others have sought to circumnavigate these same pitfalls. For instance, Adger (1999) employs the term "*baseline social vulnerability*" (p.249), to describe the exposure of groups or individuals to stress. Adger uses the term to describe vulnerability to future uncertainties. From this measure of baseline vulnerability, Adger traces the *root causes* of climate change-related *manifestations* of vulnerability (1999:249-252). Adger's (1999) comprehensive understanding of baseline vulnerability is strongly linked to everyday livelihoods, and in this sense supports my treatment of underlying vulnerability. Notwithstanding this, Adger's (1999) focus is upon human exposure and adaptation to external processes of

climate change and future uncertainties, and explains vulnerability from this starting point. My approach focuses upon local experiences of vulnerability (both manifested and underlying). It compares the different manners in which local vulnerability is conceptualised, and draws implications from this comparison for vulnerability reduction in the context of disaster management initiatives.

The remainder of this chapter explores my research focus and provides an overview of the main components of the thesis.

1.2 Research Focus

My research is sponsored by the International Federation of Red Cross and Red Crescent Societies (IFRC) to increase our conceptual understanding of vulnerability to natural events, of the vulnerability impacts of processes of social and environmental change, and of vulnerability reduction initiatives. The research findings presented in this thesis are based upon analysis of vulnerability processes and perspectives assembled within a time and space-bounded frame. Interviewing and primary data collection took place over an eleven-month period of which over seven months were spent 'in the field'. Issues concerning local manifestations of vulnerability and the manner in which meanings of vulnerability are constructed are explored in the context of two Philippine project case studies. These operate under the umbrella of: the Integrated Community Disaster Planning Programme (ICDPP) and the Community-Based Disaster Preparedness Project of Disaster Management Services (DMS-CBDP). These case studies are both community-based disaster management projects of the Philippine National Red Cross (PNRC). The projects are based, respectively, in Oriental Mindoro and Southern Leyte Provinces of the Philippines. The former case study is an inland site that experiences frequent river flooding. The latter is a coastal site that frequently experiences a combination of storm surge and typhoon-related flash flooding. Both projects focus upon planning, preparedness

and mitigation elements in their strategies to address local vulnerability (IFRC, 1995:5).[2] Before exploring the research topic in detail, I shall address two fundamental issues:

- Why study vulnerability in a typhoon-prone context?
- Why focus upon community-based disaster management initiatives?

1.2.1 *Why Study Vulnerability in a Typhoon-prone Context?*

Analytical approaches concerned with the conceptualisation of hazard or disaster-related vulnerability have been substantially developed by authors such as Adger (1996, 1999), Anderson and Woodrow (1998), Blaikie et al. (1994), Cannon (2000), Handmer and Dovers (1996), Handmer et al. (1998), Hewitt (1983, 1997), Lewis (1999), Maskrey (1989), Twigg (2001b), Twigg and Bhatt (1998), Winchester (1992, 2000).[3] However, there remains considerable scope for increasing understanding of the processes by which differential meanings of vulnerability experience are constructed by various actors, and the mechanisms by which manifestations of vulnerability are addressed at the local level. This thesis addresses the shortfall in detailed empirical data concerning local-level vulnerability experiences.

The context for this research is provided by typhoon events and the flash flooding, storm surge and wind damage with which these events are associated. However, my research focus is upon vulnerability in the community rather than upon the events themselves. In the hazards field, the tendency to focus upon natural events has been associated with the exaggeration of direct physical causes and effects, and the relegation of those factors that are underlying, and consequently less visible to outsiders and harder to define (Adger, 1999; Cannon, 2000; Hewitt, 1983; Wisner, 2001). Many areas like those studied in the Philippines, are subject to frequent extreme natural events such as typhoons. The occurrence of natural events in such cases is an integral part of the seasonal cycle of life for affected communities and their members. In this respect, those affected manage levels of vulnerability according to their priorities and capacity as part of their daily existence. This thesis upholds the view that vulnerability to full-blown "*disasters*" can only be fully

[2] These projects are explored in Section 4.3 and in Chapters 5 and 6, where I present my case study findings.
[3] Refer to Section 2.1 for an account of the evolution of disasters and vulnerability theory and analysis.

understood and addressed through the consideration of everyday or "*underlying*" vulnerability. This is because such vulnerability is too closely tied to societal and environmental processes of development and change to be treated as a separate phenomenon in times of crisis (Adger, 1999; Hewitt, 1983 and 1997; Lewis, 1999; Winchester, 1992 and 2000; Wisner, 2001). Focusing upon community experiences of typhoon events, in the context of actors' broader livelihood experiences provides an opportunity to explore the relative significance of typhoon events in actors' lives. This focus has also allowed me to explore the complex and interdependent processes and factors, which serve to link different local manifestations of vulnerability. Collectively, these processes and factors compose underlying vulnerability which is experienced as a contextual weakness or susceptibility underpinning daily life. Shocks, trends and stresses such as those related to the impact of typhoons, are experienced as manifestations of vulnerability, and take various forms.

1.2.2 Why Focus upon Community-based Disaster Management Initiatives?

This is a two-part question. Firstly I shall discuss the reasons for choosing to focus upon actual project case studies, and secondly the reasons why I have opted for community-based (as opposed to other types of) project.

Project Case Study Focus

An overriding aim of my research has been to increase understanding of the processes and factors which both cause and alleviate vulnerability, and to present these findings in such a manner as to be applicable in project, programme and policy-making processes. We have seen in Section 1.1 that my research is founded upon a dynamic form of analysis that treats vulnerability as a constantly changing condition, which is sensitive to a wide spectrum of factors and processes of change. Local actors play an integral role in determining the manners in which vulnerability can be reduced, to what extent and for whom. Organisations seeking to alleviate vulnerability are themselves actors in local-level processes. Thus roles played by intervening actors should be included in any analysis of the dynamics of vulnerability within a given locality, as an integral factor. Focusing upon

actual project case studies has provided an ideal mechanism for linking vulnerability study findings of the project sites to policy, programme and project processes.

Community-based Approach Focus

My reasons for selecting community-based projects are two-fold. Firstly, these types of project and programme are becoming increasingly popular amongst policymakers and actors in the field of disaster management. Some have cautioned against treating community-based approaches as a panacea for all of the problems encountered in implementing disaster management initiatives (Handmer and Dovers, 1996; Luna, 2000; Marsh, 2001; Mitchell, 1997). This not least due to an enduring emphasis upon risk management – as opposed to disaster prevention – approaches among prominent disaster management institutions across the globe. Handmer and Dover (1996) claim that

> "*despite much rhetoric about community and stakeholder involvement, hazard management is increasingly a professional activity closely linked to existing bureaucratic and political power bases... the emphasis here is strongly on reducing uncertainty by tackling the physical source, rather than having institutional arrangements that allow adaptability*" (p.490).

Nevertheless, it is increasingly – and sometimes uncritically – accepted by many actors in the field that community-based approaches have clear advantages over top-down approaches (Hall, 1997; Hearn Morrow, 1999; Lewis, 1999; Luna, 1997 and 2000; Masing, 1999; Scobie, 1997; Twigg, 1998). Within IFRC, the community-based approach is valued for its (potentially) high sensitivity to local-specific factors and for its comparative flexibility to evolve and to learn. As such, it is postulated that a community-based approach is – in theory – more suited than other, more traditional – top-down – approaches to the task of grasping the dynamics and complexity of vulnerability as manifested at the local level. Community-based approaches are also considered to be ideal conduits for implementing capacity-building initiatives as a form of long-term vulnerability alleviation.

The shift in emphasis from top-down to bottom-up local-specific approaches, echoes that witnessed in development practice.[4] Whilst upholding the principles underlying the employment of community-based approaches in disaster management, I argue in this thesis for more critical evaluation of actual project impacts based upon locally-defined criteria. I

also argue for the strengthening of internal project learning processes and of mechanisms for the application of lessons learnt to the ongoing project.

Secondly, the *community* provides an ideal lens through which to view manifestations of vulnerability, processes leading to the build-up of disaster situations and the progression of projects in their local context. Dynes (1998) holds that the concept of disaster needs to be rooted in specific social units. He considers the *community* to be an appropriate choice of social unit as "*a universal form of social life and response*", and as "*a universal focus of social activity*" (pp.109, 113). In this thesis, the term 'community' is employed in a similar sense to that used by PNRC in the context of community-based initiatives. Members of the communities in question are those living within a defined geographical area, which serves as the lowest administrative unit of the Philippine local government system. This administrative unit, termed *barangay*, equates to a form of village, which functions as a social unit, over and above its administrative role. Nevertheless, as shall be further explored in Section 2.2, barangay communities are heterogeneous, encompassing a variety of divisions and subgroups at any given time. Crucially, community membership is recognised as being fluid and graduated,[5] with community members linked to various social networks, many of which transcend community boundaries. In building upon community knowledge and capacities, I argue that community-based approaches in disaster management should emphasise community actor perspectives on local manifestations of vulnerability, and that community actors should be given freer rein in shaping eventual project outputs on the basis of their own local understandings and priorities. Constructions of vulnerability imposed as project boundaries by implementers and donors should be minimised, in order to promote meaningful local capacity-building.

If we wish to understand meanings of vulnerability in the lives of local people, then the communities in which they live provide appropriate subjects of study. To this I add the caveats that social relations are seldom entirely equitable and that vulnerability is unlikely to be evenly distributed amongst community members. As such, my analysis of the two

[4] This subject is explored more fully in Chapter 2.
[5] This is attributed largely to migration and settlement processes.

community units concerned builds upon the foundations of composite individual, household and other community sub-group analysis.

1.3 Research Objectives

Building upon the issues raised in Section 1.2, the findings of this thesis are intended to contribute to our understanding of vulnerability issues in a typhoon-prone Southeast Asian context, and to further our understanding of the propensity of community-based disaster management approaches to reduce local-level vulnerability.

1.3.1 Summary of Research Objectives

My research objectives can be summarised as follows:

1. to trace the processes and factors which contribute (directly and indirectly) to typhoon-related manifestation of local-level vulnerability;
2. to explore local capacities to prepare for, respond to, or to resist the effects of typhoon events;
3. to view local vulnerability-reduction strategies in the context of underlying vulnerability and of local understandings and priorities;
4. to identify and unpack the constructions (or meanings) of vulnerability which prevail among different groups of project actor;
5. to explore the processes and mechanisms by which project actors operating at different levels, contribute to the shaping of project outcomes;
6. to assess the contributions (potential and actual) of community-based disaster management initiatives in addressing local vulnerability, in the light of research findings under the above categories.

Research results are designed to contribute to programme and policy evolution within both PNRC[6] and IFRC.[7]

[6] The Philippine National Red Cross.
[7] The International Federation of Red Cross and Red Crescent Societies.

1.3.2 Research Questions

The central research question of this thesis is:

To what extent do community-based disaster management initiatives of PNRC successfully address local people's vulnerability?

From this umbrella question, a series of key research questions have been developed; these can be grouped under three categories (A to C) as follows:

A. *How can we conceptualise vulnerability at the local level?*

1. What are the direct effects of typhoon events?
2. *Which* factors make *which* actors vulnerable to the direct effects of typhoon events? To *what* extent are they affected, and why is this so?
3. *Which* wider factors and processes of change (social, political, environmental, economic, institutional) contribute indirectly to the vulnerability of *which* actors at the local level, to *what* extent, and *how* do they do this?
4. How do local-level participants (intended or actual) in community-based disaster management initiatives perceive vulnerability in their own lives?
5. How is vulnerability conceptualised within the various echelons of PNRC?
6. How is vulnerability conceptualised by local government actors and do constructions of vulnerability vary across differing programmes and circumstances? If so, how does this take place and why?
7. Are there differences in constructions of vulnerability, in capacities to reduce vulnerability or in priorities between different actors at the local level? If so, why?

B. *How can local-level vulnerability be alleviated (with reference to PNRC case study examples)?*

1. Which strategies (PNRC and community initiated) are considered effective at the local level in addressing vulnerability or mitigating disaster situations?
2. Which strategies (community member, PNRC or local government) are being employed at the local level to address vulnerability or mitigate disaster situations?
3. How do the PNRC programmes and projects studied address vulnerability and capacity-building issues, and how effectively do they do this from the perspectives of different groups of actor?

4. Which decision-making processes prevail in the various project outputs and strategies to address vulnerability issues, and why?

C. *How can findings of the research questions above be related to programme objectives and to broader policy issues?*

1. To what extent has PNRC been successful in its overriding goal of reducing local-level vulnerabilities, and by whose criteria? Where less successful, why is this the case and what lessons can be drawn?
2. Can Red Cross/Red Crescent national societies build upon local knowledge, understandings and capacities to enhance the effectiveness of community-based disaster management initiatives, and if so how?
3. To what extent has PNRC been successful in integrating its projects and objectives with government policy, approaches and programmes in the areas studied? What implications has this had for project processes and outputs, and what lessons can be drawn from negotiation and integration processes?
4. On the basis of my research findings, what recommendations can be made to PNRC, IFRC and other implementers of community-based approaches?

Meeting the research objectives and answering the questions outlined above, requires an understanding of three core areas:

1. vulnerability as manifested at the local level;
2. community-based approaches to disaster management;
3. project interface[8] analysis.

In the remainder of this chapter, I outline the significance of disaster management theory and vulnerability analysis (Section 1.3) in the context of this thesis. I also explore IFRC policy on the implementation of community-based approaches to disaster management (Section 1.4).

[8] The project interface denotes the space in which all of the actors affected by, or involved in the projects studied interact, relate to each other and operate. It is also the space in which factors and processes of change impact upon vulnerability at the local level.

1.4 Disaster Management and Vulnerability Analysis

Disaster events capture popular imagination and media interest around the globe. The more unique, unexpected, visually dramatic or wide-reaching their impact, the greater the attention which is drawn by disaster events. Associated debates tend to centre initially upon the safety of, and provision of relief to, disaster victims. Subsequent analysis of disaster situations seeks to identify at least the direct causes of the disaster event under scrutiny. In turn the findings of this analysis tend to raise issues such as the levels of risk and security associated with populations likely to be affected by future such events, as well as of the prevention or mitigation of future disaster events and the protection of vulnerable populations. An example of this post-disaster process is provided by the Ormoc City flood disaster of 1991 (Mahmud, 2000). In November 1991, Ormoc City on the island of Leyte, the Philippines was struck by a tropical storm that caused severe flash flooding. Mahmud (2000) documents that over 6,000 people were killed during this event, while tens of thousands were injured and/or made homeless. Mahmud (2000) concludes that, despite post-disaster changes in environmental management and civil society influence, the rigid and hierarchical political structure at the root of the chain of causes leading to the Ormoc disaster has remained intact. As is often the case in disaster management, vulnerability issues in this instance have only been partially addressed.

In operational terms, disaster events are 'managed' to varying degrees by a plethora of different organisations and groups, some of which are governmental, some international, some non-governmental, some private and some voluntary. Some are legally and politically accountable to affected populations, while others consider themselves morally accountable to provide what aid they can. Less than scrupulous actors may additionally seek political, social or financial gain from their involvement in disaster situations. It is these actors – who include politicians, managers, scientific and technological experts, and their institutions – who have been primarily responsible for shaping disaster management policy and practice. In so-doing, these actors have also been responsible for setting professionally or institutionally determined boundaries around areas of 'legitimate' disaster management activity (Hewitt, 1983; Parker, 2000).[9] In conceptual terms they have tended

[9] Refer to Section 2.1.1 for further details on this topic.

to pre-determine the disaster-related 'problems' faced by local people (Hewitt, 1983), with limited reference to actual experiences of vulnerability or to the underlying causes of disaster, such as the hierarchical political structure described by Mahmud in the Philippines (Mahmud, 2000).

I have employed vulnerability analysis as a mechanism by which to explore local experiences of vulnerability, local capacities and strategies to address vulnerability, as well as local understandings and priorities. Under the analytical framework employed, I have taken local perspectives of vulnerability as a starting point, and subsequently linked these to disaster management practices and approaches of LGU and PNRC actors. My focus is upon specific project case studies. However placing these within their broader social, political, environmental and economic – as well as disaster management – context, has contributed to my analysis of project processes and outcomes, as well as my understanding of existing barriers to effective vulnerability alleviation. My approach builds upon an increasing body of literature in the disasters field, supporting vulnerability analysis (Anderson and Woodrow, 1998; Blaikie et al., 1994; Cannon, 2000; Hewitt, 1997; Moser, 1998; Twigg, 2001b; Twigg and Bhatt, 1998).[10] This literature stipulates that relatively narrow frames of analysis which focus upon the characteristics of hazard events or stresses impacting local populations, be balanced or complimented by analyses of people's vulnerability to those same events or stresses (Cannon, 2000; Hewitt, 1997).

1.5 The Red Cross Community-based Disaster Management Strategy

Acting as an umbrella organisation, the International Federation of Red Cross and Red Crescent Societies (IFRC) incorporates a global network of national organisations operating under one guiding set of principles, a legal foundation and emblems. The fundamental priority of IFRC throughout the 1990s and beyond has been to alleviate vulnerability. IFRC's overriding goal is to "*improve the lives of vulnerable people by*

[10] The evolution of vulnerability analysis is examined in depth in Section 2.1.

mobilizing the power of humanity" (IFRC, 1999:1). A vulnerable person is a person defined as being "*at risk from situations that threaten his/her survival or capacity to live with a minimum of social and economic security and human dignity*" (IFRC, 1999:36).

Much of IFRC strategic planning over the last decade focuses upon working with and through vulnerable communities, and vulnerable elements within such communities. The institutions of the Red Cross/Red Crescent are intended to contribute far beyond the bounds of direct service-delivery and advocacy roles. Working with and through volunteers who belong to targeted communities, they are intended to provide "*a 'space' where people can come together to achieve solutions to community problems*" (IFRC, 1999:19). This is intended to have a positive impact upon both civil society and community development initiatives. In formulating disaster management strategies through use of the community-based approach, two broad groups of strategy stand out. The first is concerned with vulnerability reduction (with emphasis upon capacity-building), and the second is concerned with linking disaster management and development activities more closely.

1.5.1 IFRC Strategy: Reducing Vulnerability

Vulnerability and capacity assessment is intended to play a central role in planning, monitoring and evaluation processes in disaster management (IFRC, 1993). The capacities and vulnerabilities analysis framework developed by Anderson and Woodrow (1998) provides the foundations of the IFRC approach. This framework is tailored specifically to meet the needs of disaster managers, and in particular relief workers. It seeks to aid disaster managers in 'mapping' complex disaster situations, highlighting important factors and illustrating "*the relationships among factors that matter most to project effectiveness*" (Anderson and Woodrow, 1998:9-10).[11] Vulnerability and capacity assessment is a diagnostic tool, intended to provide information about the nature, level and distribution of risks faced by communities and their members, as well as the causes of risk and the resources (including intangibles such as human resources) available to reduce risk. Vulnerability and capacity assessment is a tool intended to better inform projects and

programmes, and to make them more responsive to local needs and priorities (IFRC, 1993). This corresponds with IFRC's goal to anchor programmes in local realities of vulnerability and capacity (IFRC, 1999). However, research findings presented in this thesis indicate that the employment of community-based approaches and diagnostic tools such as vulnerability and capacity analysis does not guarantee that local priorities and realities predominate in project processes and outputs.[12]

Aside from this emphasis on understanding, valuing and building upon local-level capacities, IFRC also highlights the importance of considering potential programme impacts on local actors, and of recognising areas in which Red Cross/Red Crescent actors have (and do not have) comparative advantages (IFRC, 1999). IFRC considered these two elements fundamental in deciding programme and project foci. Since vulnerability is in a constant state of change, programme impacts and comparative advantage have to be assessed and reassessed on a regular basis (IFRC, 1999). The principles of comparative advantage require that although vulnerability and capacity assessment is likely to unveil a plethora of potential projects and programmes, Red Cross/Red Crescent's actors' own capacities should not be over-stretched. The potential role of non-Red Cross/Red Crescent actors as effective implementers in areas of specialisation is stressed (IFRC, 1999). This theme of specialisation of the respective roles adopted by organisational actors, features in the research findings that I present in Section 6.2.

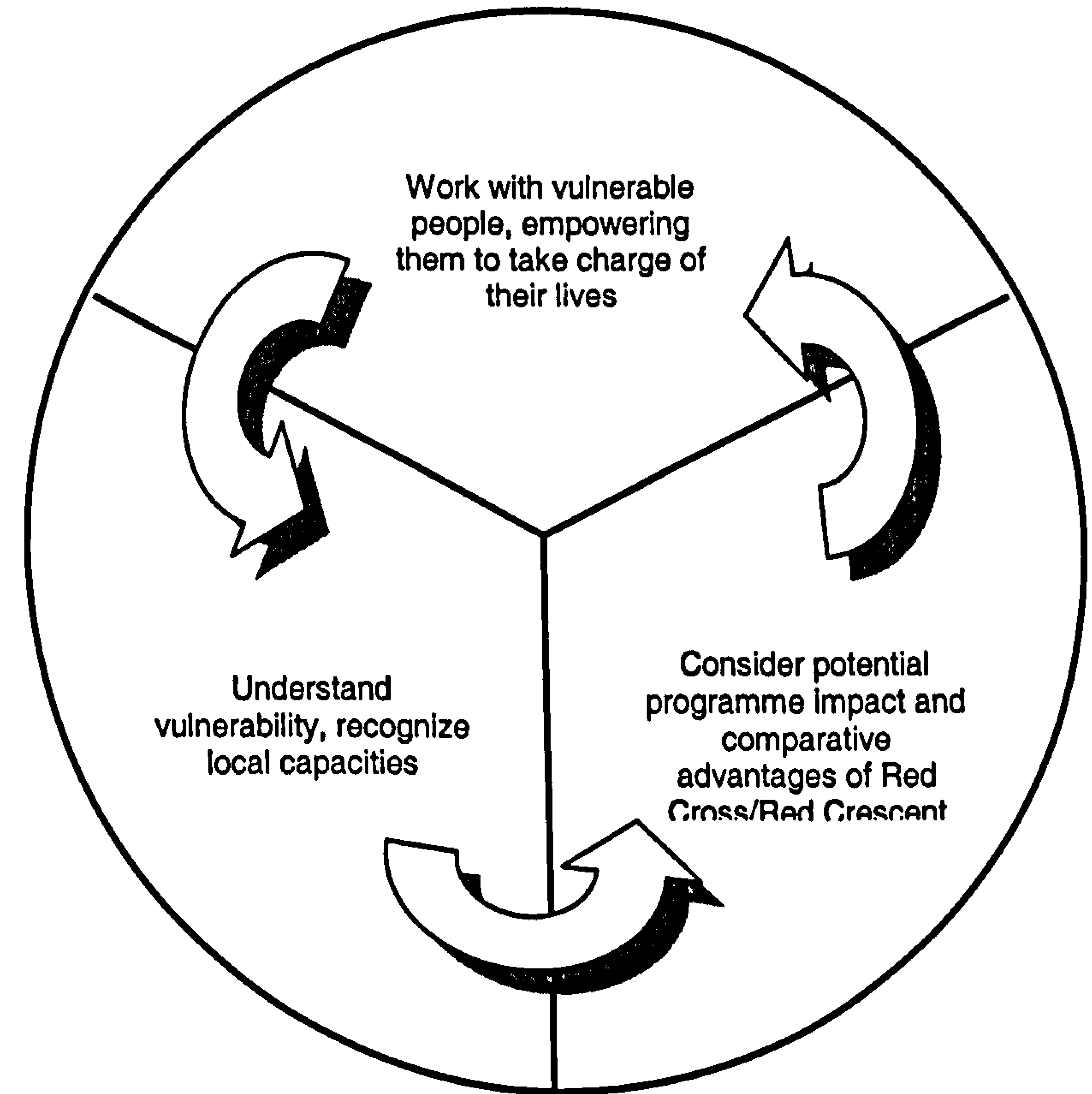
Although I recognise the wisdom of comparative advantage approaches from an organisational actor perspective, I caution against allowing organisational, departmental and professional specializations to place boundaries around project-based constructions of local vulnerability situations. I find this process has tended to lead to pre-defining local 'problems' and issues, and to heavily organisational actor (as opposed to community) -led 'solutions'. I argue that principles of comparative advantage should serve participant community interests first and foremost, rather than prioritising the interests of organisational actors. I draw a distinction between the transparent shaping of project outputs by negotiation, with reference to organisational comparative advantage; and the

[11] Refer to Section 2.1.2 for further analysis of Anderson and Woodrow's capacities and vulnerability framework.

imposition of outside conceptual constructions of local problems and situations to suit the capacities and specialisation of organisational actors. I find the latter approach contrary to fundamental principles of community-based approaches, and not least to those of community empowerment.

Key strategic vulnerability reduction elements mentioned above are encapsulated in Figure 1.1 below.

Figure 1.1: The Red Cross Approach to Vulnerability Reduction



Source: based upon IFRC, 1999:13.

1.5.2 IFRC Strategy: Linking Disaster Management and Development

A further strategic goal of IFRC is to ensure that disaster response is linked with long-term development. This is to be achieved through working with 'vulnerable' communities (IFRC, 1995). According to IFRC, disaster preparedness initiatives should build upon lessons learnt in disaster response and be integrated into processes of long-term development planning (IFRC, 1995). The integration of local capacity and vulnerability

[12] Refer to Chapters 6 and 8 for further details.

assessment, disaster management planning, preparedness and mitigation measures into local development planning processes is a key component of the PNRC projects studied, and this is explored in Chapters 6-8. Although emergency response has a continuing important role to play in the aftermath of disasters, disaster mitigation and preparedness activities are playing an increasingly important role in IFRC and national society strategy and activity. Disaster preparedness and mitigation programmes are designed to address vulnerability to the direct effects of hazard events. In contrast, relief and rehabilitation programmes are designed to address vulnerability as a result of hazard events.

In as far as these activities are concerned with "*reducing vulnerability and increasing capacity*" (IFRC, 1993:8), they can be said to share the objectives of development programmes. Vulnerability analysis also links disasters and development by examining the root causes of vulnerability, which are closely linked to processes of societal development (Adger, 1999; Hewitt, 1983 and 1997; Lewis, 1999; Winchester, 1992 and 2000).[13] Recognition by disaster managers of what entry into this complex wider field of societal *development* entails is crucial to meaningful vulnerability alleviation. Among community members, capacities to cope with shocks and stresses, and manage vulnerability are prominent amongst those factors that ultimately determine the eventual status quo in terms of vulnerability. IFRC acknowledges that disaster mitigation and reduction are more challenging areas than disaster preparedness and response. This is because disaster mitigation and reduction activities require strong local-level capacity, and need to be integrated in overall development strategy (IFRC, 1999:17-18).

In practice, the tendency to focus upon physical hazard events has had implications for community-based disaster management programmes. Causes that can be directly linked to the effects of hazard events tend to be incorporated in event-centred conceptual frameworks. These causes of 'event vulnerability' can be traced to processes such as environmental degradation, building and infrastructural quality, population pressures and migration trends – the latter two contributing to greater numbers settling or reaping their livelihoods in marginal areas such as foreshore, riverside or erosion-damaged hillside locations. Coping strategies represent the ways in which people respond to event

vulnerability during, in the aftermath or in preparation for events. Direct coping strategies such as stock-piling of basic commodities, developing warning systems and evacuation procedures, rebuilding homes and repairing infrastructure can also be incorporated in an event vulnerability conceptual framework. In the Tigbao case study project,[14] an attempt was made to alleviate the effects of flash flooding by dredging and altering the course of a stream that – during typhoons – threatened to flow onto surrounding farmland. Event vulnerability was thus alleviated, the risk of flood-related damage to this land having been significantly reduced. The underlying vulnerability of farmers had not however, been reduced by this action.

One means of addressing underlying vulnerability in the example cited above, might have been through the introduction of a livelihood earning scheme such as hog-raising or handicraft-making. Such a scheme would provide participants with an extra source of income to fall back upon in the event of a failing of their primary source of livelihood – typically derived from small-scale farming, or from agricultural labour. Underlying vulnerability in this context is closely linked to livelihood strategies, diversification of which proved to be a key vulnerability reduction measure for many community members.[15] Strategies to address underlying vulnerability are founded upon the three core areas of capacity, security and opportunity.[16] These provide a basis for more wide-reaching vulnerability reduction, which corresponds with an approach integrating disaster management and development. Fundamentally, vulnerability is a product of the institutional processes that to a large extent determine actors' access to resources and the range of opportunities open to them. Vulnerability reduction from either a developmental or a hazards perspective is concerned with issue of equity, and ultimately with the re-structuring of institutions and the redistribution of power within society (Pelling, 1998; Wisner, 2001). On the basis of my research findings, I argue that the event-centred constructions of vulnerability that tend to be favoured by organisational actors, discourage integration into the development sphere by narrowing the field of consideration. I distinguish between 'paper' integration of plans and actual integration of initiatives

[13] Refer to Sections 1.2.3 and 2.1 for further details.
[14] Refer to Sections 4.3-4 and Chapters 5-6 for detailed exploration of the study site area, community participants and project.
[15] This topic is explored in depth in Chapters 5 and 8.

(Chapters 6-8).

1.6 Thesis Logic and Structure

This thesis is divided into three Parts (Overview, Research Findings, Synthesis and Conclusions). Part One (Chapters 1-4) provides an overview of existing data and theoretical developments upon which basis the study and conceptual framework underpinning the thesis are developed. Chapters 1-4 respectively: introduce the subject matter; review existing literature on the topic; explain the research process and develop the conceptual framework employed throughout the thesis; and explore key elements of the contextual setting of project case studies.

Part Two (Chapters 5-7) comprises my research findings, which explore constructions and experiences of local vulnerability, and of vulnerability alleviation strategies. Chapter 5 examines the perspective of community members, Chapter 6 that of Red Cross actors, and Chapter 7 that of local government and Non-governmental Organisation (NGO) actors.

Part Three (Chapters 8-9) contains the synthesis and conclusions drawn from the empirical findings presented in Part Two. Chapter 8 develops an integrated analysis of fundamental concepts in the light of research findings, and employs these results in enhancing and expanding upon the existing conceptual framework. Chapter 9 provides a summary of key research findings as well as concluding comments and recommendations addressed primarily to those involved in community-based disaster management practice and policy-making (Section 9.3). The thesis ends with an outline of suggested future lines of research (Section 9.5).

[16] Refer to Sections 3.1.1 and Chapter 8.

2. Theoretical Underpinnings

The objective of this chapter is to lay down the theoretical foundations of the study that follows. I have not attempted to provide a definitive guide to each of the areas of theory touched upon, as this would in itself constitute a thesis. Instead, I have sought to synthesize key elements of the literature that underpin my conceptual framework, developed in Section 3.1. I have drawn upon literature across a wide range of academic fields. These include the sometimes overlapping areas of: natural hazards, disaster management, environmental management, agricultural and rural development, anthropology, project planning and management, as well as NGOs and civil society. I have emphasized the theoretical developments and paradigm shifts that have influenced my approach, and of which my own work is a part.

Section 2.1 provides a summary of the evolution of hazards, disasters and vulnerability theory. This comprises: a critique of dominant paradigms in the field in Section 2.1.1; analysis of the basic tenets of vulnerability analysis in the context of disaster management in Section 2.1.2; and the linkages between disaster management and development explored in Section 2.1.3. Section 2.2 provides an overview of the theoretical underpinnings of the community-based approach. Section 2.2.1 situates the approach in the context of shifting paradigms in disaster management as well as in development theory and practice. Sections 2.2.2 to 2.2.6 explore key element of the community-based approach, concerned with: opportunism and knowledge, co-operation and participation, conflicting interests, issues of scale and institutional design. Much of Section 2.2 is based upon writings from within the broad school of development literature, as community-based or participatory approaches have been most significantly developed by those writing from this perspective. By contrast, the community-based approach is a relatively new player within the hazards and disaster management schools. As such, it has received less critical attention from these perspectives. This thesis seeks to redress this imbalance.

2.1 The Evolution of Vulnerability Approaches

> *"Over the past decade or so, the idea of vulnerability has come to identify a distinctive view... Their (vulnerability studies) emphasis is upon how communities are exposed to dangers or become unsafe, rather than the character of natural or technological agents"* (Hewitt, 1997:141).

Hewitt has developed an "alternative" approach to understanding disaster events, which he has employed to counter the "dominant view" of hazards (Hewitt, 1983 and 1997). This alternative approach has emerged in the form of the "vulnerability paradigm" (Hewitt, 1998), which has substantially evolved beyond its initial critique of the dominant paradigm.[1] Maskrey also categorises theoretical approaches in the field in terms of two main approaches, which he calls the dominant and political economy approaches. These are opposing ends of a wide spectrum, incorporating a full range of viewpoints and options (Maskrey, 1989). Hewitt argues that the dominant approach in hazards research and practice continues to preside over the field, despite mounting and fundamental criticism of its basic tenets over more than a decade (Hewitt, 1997; 1998). The strands of argument that have evolved from this critique have shifted the focus of analysis away from natural hazards, towards vulnerability and the underlying causes of disaster events (Alexander, 1997; Blaikie et al., 1994; Hewitt 1997).

2.1.1 Critique of the Dominant Hazards/Disasters Paradigm

The dominant hazards paradigm[2] focuses upon the physical characteristics of hazard agents such as typhoons (Hewitt, 1983; Maskrey, 1989). Under the dominant paradigm, event-centred disasters approaches provide short-term 'snap-shot' views of disaster situations. In contrast to vulnerability approaches, the foci of dominant approaches are hazard-related risk, the (short-term) impact of hazard agents on human populations, and increasingly, upon response mechanisms and coping strategies (Hewitt, 1998). Over time, the dominant paradigm has evolved. Understanding physical hazard characteristics remains an important aspect of the paradigm. However it is widely acknowledged that this aspect provides

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[1] The vulnerability paradigm is explored in Sections 2.1.1 - 2.1.3, commencing with its critique of the dominant hazards view.

[2] An examples of recent work from a dominant paradigm perspective is provided by Smith, 1996. The notion

Footnotes continued on the next page

limited understanding of complex disaster situations and of the human-environment interface (Burton et al., 1993; Hewitt, 1998). I find that the main shift *within* the dominant paradigm has been from an early focus upon the physical characteristics of natural hazards to a wider focus upon disaster events (including hazard agents). This wider focus includes social processes to which disasters are attributed, as well as processes of human adaptation and coping mechanisms (Quarantelli, 1978). This 'hazards-to-disasters' shift within the dominant paradigm has been substantially contributed to by theorists such as: Burton et al. (1978, 1993), Dynes (1978), Kreps (1978), Quarantelli (1978), Slovic et al. (1974), Wenger (1978), White (1974), Wisner and Mbithi (1974). Writers such as Burton et al. (1978, 1993) and White (1974) have made strong contributions from within the dominant paradigm to our understanding of disasters from the perspective of disaster managers and policymakers, whilst also emphasising individual and household adjustment strategies. Although these theorists paid some attention to community response, others such as Dynes (1978), Quarantelli (1978), Wenger (1978) and more recently, Tobin and Whiteford (2002) have concentrated upon the disruption and adaptation during disasters of patterns of social organisation, with an emphasis upon community-level organisation. Throughout this shifting focus, the dominant paradigm has consistently favoured managerial approaches which seek to limit uncertainty and risk to human populations through largely technical means. Examples include typhoon detection, forecasting, warning dissemination and evacuation systems; the design and construction of flood defenses and typhoon resistant structures; provision of post-disaster health and sanitation facilities and care (Christie and Hanlon, 2000; Davis et al, 1998; Lavell, 1994; Lee and Davis, 1998; Ozerdem and Barakat, 2000; Parker and Budgen, 1998; Tobin and Whiteford, 2002; Wisner, 2001b). Such approaches have therefore tended to rely heavily upon 'expert' knowledge of the hazards concerned (Alexander, 1997; Bankoff, 2001; Hewitt, 1983; Maskrey, 1989).

The main criticisms levied against the dominant view can be summarised as follows. The dominant view has tended to emphasize physical processes and events, and to exclude important socio-economic and political processes from its analytical framework (Hewitt, 1983 and 1998; Watts, 1983a; Winchester, 1992; Wisner, 2001a). 'Disasters' have been

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of the 'dominant paradigm' is developed by Hewitt (1983, 1997).

treated as exceptional events, divorced from 'normal' life (Hewitt, 1983; Lavell, 1994). Most fundamentally, this school of thought is underpinned by a view of the environment as hazardous or *threatening to society* (Hewitt, 1983). Not only are people treated as victims (potential or actual) (Cannon, 2000); they are treated as living in a social sphere, which exists separate to that of the rest of their environment. The solutions to *victims'* problems are considered to require the input of experts in the field, while local knowledge and expertise tend to be sidelined and devalued (Christie and Hanlon, 2000; Hewitt, 1998). These arguments are expanded upon in the section below under four headings.

Disasters: Exceptional Events or Social Happenings?

In the late 1960s, White challenged the notion that natural hazards exist independently of complex human systems and social processes. In 1974, White argues that "*no natural hazard exists apart from human adjustment to it. It always involves human initiative and choice*" (1974:3). White seeks greater understanding of the relationship between natural and social systems, including human adjustment and systems to cope with risk and uncertainty in the natural environment. In so doing, White places actors at the centre of the debate by recognising the role played in particular by individuals, as well as by social groups, policy-makers and implementers in determining the outcomes of disaster events. Disasters have been described as "*the social disruption and changes brought about by the physical agent and its impact*" (Quarantelli, 1978:3). Implicit in this understanding of disasters is the notion that society and its composite members *respond* to social disruption (Quarantelli, 1978). Quarantelli holds that social response to disasters is manifested at societal, community, organisational and mass aggregate or individual levels (Quarantelli, 1978:4). Yet theorists of the dominant paradigm such as White and Quarantelli fail to question the basic assumption that disasters are exceptional events that can be treated as distinct from everyday life (Hewitt, 1983).

Building upon these ideas, Hewitt launched a fundamental criticism of the dominant view in 1983, in the form of a 'human ecology' framework for analysing disaster events. Vulnerability is defined by Hewitt as a product of many factors and processes of a socio-economic nature (Hewitt, 1983). Other theorists such as Adger (1996, 1999), Blaikie et al. (1994), Cannon (2000), Lavell (1994), Lewis (1999), Maskrey (1989), Pelling (1998), Twigg (2001a), Twigg and Bhatt (1998), Winchester (1992, 2000), Wisner (2001b) have

also contributed to a shift in the focus of vulnerability analysis away from physical (event-centred) processes, and towards underlying socio-economic and political factors. Fundamental to this reasoning is the argument that the interface between natural events and social processes is central to understanding the impact of natural events on vulnerable people (Blaikie et al., 1994). Thus, the Pressure and Release model of Blaikie et al., 1994 invites us to trace the progression of vulnerability to hazards backwards from (directly applicable) unsafe conditions, through economic and social pressures to (relatively remote) root causes embedded in the political economy. According to the model, disasters occur at the interface between hazards and vulnerability-generating processes, and are caused by pressure building-up on both sides of the equation. Disaster release occurs only through reductions in vulnerability (Blaikie et al., 1994).

In their case study of social response to drought in Kenya, Wisner and Mbithi (1974) find that strategies designed to cope with drought incidence have, over time, become institutionalised in Kenyan agricultural and social systems. Accepting Wisner and Mbethi's assertion that adjustment to environmental stress is a *continuous* process (1974:94), it follows that social response to exceptional disaster events cannot readily be separated from everyday practice and social processes (Hewitt, 1983). Hewitt argues that it is crucial to examine everyday happenings and processes in attempting to understand fast (e.g. typhoons) as well as slow onset (e.g. drought) disasters and events (Hewitt, 1983). By extension, this 'alternative' approach calls for the analysis of day-to-day aspects of *vulnerability* to be integrated with those previously considered distinctly exceptional and therefore separate. As Eade puts it:

> "*For people who are living in poverty and on the margins of society, the difference between normal life and what outsiders define as a crisis may be marginal. Poverty and exclusion are themselves a kind of chronic emergency. Even very modest changes in their situation may enable poor people either to increase their toe-hold on survival; or plunge them into deeper crisis*" (Eade, 1997:166).

Even from within the Hazards school, the need for this school to broaden its paradigm is being increasingly recognised. In particular, the need to consider event-centred measures in the context of long-term development is acknowledged (Burton et al., 1993:262; Lavell, 1994). Handmer and Dovers (1996) use the concept of resilience to this effect. In examining the institutions of sustainable development, Handmer and Dovers disassociate

the notion of resilience from that of 'stability'. Thus, resilience (which has a reverse relationship with vulnerability) measures capacity to absorb change and the effects of shocks and stresses, *without* implying an eventual return to a state of equilibrium or stable norm. Instead, resilience provides a measure for the continuation of social life within a state of change (Handmer and Dover, 1996). This conceptual use of resilience and sustainable development fits well with approaches developed within the field of agricultural and rural development, and by the sustainable livelihoods school.[3] Paradoxically, the Hazards school is founded upon an assumption that recognises a clear line of distinction between disruptive disaster events and everyday life. This has lead to disasters being treated as uncontrollable elements, characterised by uncertainty and instability. Implicitly, everyday life is stable and predictable in contrast (Hewitt, 1998:80).

From Static Models to a Dynamic Framework

In making this distinction between disasters and everyday life, it follows that much of the study of hazards and disaster events has been confined to one-stop, boundary-defined frames. Hazards, natural events and disaster situations are considered with limited reference to the long-term vulnerability continuum, the political economy or development processes. Blaikie et al (1994) describe these types of analysis[4] as "*static models*" which exaggerate the separation of hazards and social processes, as well as leaving the flexible response and preparatory mechanisms employed by local actors outside the framework of analysis. These are contrasted with "*dynamic frameworks*" which allow in analytical terms for the integration of natural events with social processes and the political economy (Blaikie et al., 1994). The relationship between human and natural 'systems' is one of dynamic interdependency (Handmer et al., 1998). Dynamic frameworks of analysis allow us to explore the complexity, variety and flexibility of the range of adjustments people adopt in response to shocks, trends and stresses (Wisner and Mbethi, 1974; Paul, 1997). Approaching vulnerability as a dynamic 'process' rather than as a 'state' (Handmer et al,

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[3] The contributions of these approaches to this thesis are introduced in Sections 2.1.2 and 2.1.3. The sustainable livelihoods approach is explored in detail in Section 8.1.1.

[4] For an example of this type of analysis see: Miller, D. J., Brinkmann, W. A. R. and Barry, R. G. **Windstorms: a case study of wind hazards for Boulder, Colorado** in: White, G. (ed.) (1974) **Natural Hazards: Local, National, Global.** Oxford University Press, New York.

1998), assists us in understanding the differential and changing nature of vulnerability in the long as well as short-term (Winchester, 1992).

Expert Bias

Despite the emphasis of theorists such as White (1974) and Burton et al. (1993) upon human agency[5] in response and decision-making processes, the approach taken by the Hazards school remains a largely managerial one.[6] Expert knowledge and constructions have been valued over and above those found within communities. Within the school, "*technical expertise, not common sense or being there decides knowledge*" (Hewitt, 1998:78). Therefore solutions "*are found to lie in technical counter force. They need professionals and mission-oriented agencies to confront and tame nature. They must predict the extremes and target people at risk, informing and moving them around in relation to expert knowledge of the hazards*" (Hewitt, 1998:78). Managerial approaches are typified by restricted analyses of risk and uncertainty in relation to specific phenomena (Hewitt, 1998), as opposed to wider-reaching vulnerability analysis. Dominant managerial approaches are supported by the notion of 'bounded rationality', which is employed by authors such as Slovic et al. (1974) and Burton et al. (1993). The notion of bounded rationality is used to explain decision-making processes and outcomes, and to demonstrate "*limitations in the ability of the decision-maker to think in probabilistic terms and to bring relevant information to bear on his judgements*" (Slovic et al., 1974:187). Understanding of bounded rationality can be "*exploited*" by 'experts' "*to improve adjustment to natural hazards*" (Slovic et al. (1974:204). Most significantly, the Hazards school fails to take a holistic approach to analysis and understanding, both in linking the various aspects of disasters and situating them in their context, and in acknowledging the existence of plural understandings and interpretations of disaster situations (Alexander, 1997). Similarly, failure to take account of the worldviews of different stakeholders in disaster management distorts our understanding of the outcomes of strategies intended to reduce vulnerability (Bakewell, 2000). Natural hazard research[7] has traditionally been dominated by

[5] Refer to Section 3.1.3 (under *Actor-oriented*) for an explanation of the concept of agency.
[6] See for instance Quarantelli (1997).
[7] This is particularly true of fast onset hazards such as floods and typhoons, as opposed to slow onset droughts.

geographers, which has resulted in a human-ecology driven focus upon human adjustment to natural hazards and response to events. This professional bias has resulted in the relative neglect of other important aspects of vulnerability such as hazard perceptions, wider coping strategies, policy roles and implications (Paul, 1997). In addition, mainstream disaster management practices have frequently been driven by inputs from technical experts in fields such as health and engineering. Indeed, the outputs and responsibilities allocated to (or claimed by) the various disaster management agencies (in both government and non-governmental sectors) tend to be fragmented according to sectoral expertise, donor fads and the allocation of funding (Benson et al, 2001). While not in themselves detrimental, the influence of expert and professional biases within the dominant approach has implicitly caused a devaluation of local (non-expert) knowledge and experience (Christie and Hanlon, 2000; Hewitt, 1998). We shall see in Section 2.2 that basic assumptions of the dominant paradigm run contrary to those associated with the community-based approach on a number of counts. This is true in the relative value attached to expert and non-expert knowledge forms, as well as in the consideration of the roles of different actors and of their respective viewpoints.

The Nature of Knowledge and Reality: Differing Assumptions

Both 'insiders' and 'outsiders' (Chambers, 1983) – or 'victims' and 'non-victims' – (Bhatt, 1998b) "*function as subjects, mutually acting upon each other, interacting, rather than either one being relegated to the position of passive object*" (Bhatt, 1998b:74). Quarantelli finds that the greatest gap between theorists of the different broad schools is due to their differing assumptions about the nature of knowledge and 'reality' (Quarantelli, 1998). He finds that positivists seek to define and explain a reality they believe to exist. Meanwhile, others adhere to a social 'constructionist view' by which all theorising and research is equally constructed, and as such – although each approach is valid and adds to the body of knowledge – there is no single academic 'reality' to be grasped. Still others who tend to be involved in more applied or participatory/action research and analysis – I include myself in this category – recognise plurality of understanding and construction, but uphold actors' perspectives as paramount. This type of subjective insight is treated as equally valid to that of academics and other "experts" (Bakewell, 2000; Quarantelli, 1998). Such pluralist perspectives sit uneasily with dominant approaches which have tended to justify the separate analysis of disaster events from other human-environment relations, by treating

disasters as especially intractable problems which are to be solved through scientific rationalism and technocracy (Hewitt, 1983). Recognition of the plurality and co-existence of worldviews is fundamental to the analytical framework underpinning this thesis,[8] and is also fundamental to understanding the processes by which the dominant paradigm has been perpetuated.

Researchers are not neutral explorers of absolute truths and knowledge. Rather they can be seen as active players – by intent or default – in defining and/or maintaining research agendas. Relief workers and disaster managers are similarly adept at distorting victims' 'stories' in line with their own understandings and expectations, and in so-doing perpetuating myths of reality (Bhatt, 1998b). Hewitt argues that notions "*like 'disaster' have been gradually... redefined to suit modern, instrumental agendas that link science to professional and administrative, especially governmental, practices*" (1997:4). Hewitt asserts that the development of the dominant view is linked to the wider perspective of materialism, and in particular to "*the social pressures upon materialist and secular institutions required to interpret and deal with unpalatable or apparently unmanageable material events*" (Hewitt, 1983:14). Although disaster management is ostensibly about reducing vulnerability and addressing root causes, in practice, disaster management is more often concerned with the implementation of palliative response measures, as situations arise (Handmer et al., 1998). Handmer et al. (1998) claim that pressures to operate within the bounds of existing systems serve to legitimise their institutions and practices even where these are unsustainable. Likewise, economic efficiency goals have implications for both standards and types of disaster management initiatives (Handmer et al., 1998; Rocha and Christoplos, 2001). Mainstream hazards research,

> "*has invented its problem field to suit its convenience. It does not reflect upon the extent to which the institutions it serves – the societies that have made such technocratic authority possible – could be part of the problem*" (Hewitt, 1983:14).

Hewitt's aspersions of dominant approaches to natural hazards are harsh, and have far more wide-reaching application than the field of natural hazards research. Nevertheless, Hewitt provides a plausible explanation as to why such approaches have been able to

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[8] Refer to Section 3.1 for development of the analytical framework.

dominate the field for so long, evolving so little, against such a mounting barrage of criticism.

2.1.2 Vulnerability Analysis for the Study and Practice of Disaster Management

We have seen that vulnerability has been treated by the dominant hazards school as a derivative of physical processes (Hewitt, 1997). As vulnerability studies have developed, so too has the notion of vulnerability existing in its own right, independent of hazard "*agents*" (Hewitt, 1998:81). As shall be explored below, this *underlying* vulnerability is a far more holistic – and also complex – concept than its agent-specific predecessors.[9] A primary challenge of vulnerability studies lies in maintaining this all-inclusive, holistic approach, without creating a paradigm of vulnerability which is either over-complex or so generalised and abstract as to be impracticable and locally inapplicable (Hewitt, 1998).

Vulnerability analysis is of little practical value unless it can be applied to further understanding local realities, and/or contribute to disaster management and related practices. This stance is reflected in Burton et al.'s criticism of the vulnerability school which they find to be "*strong on societal critique and weak on practicable prescription*" (Burton et al., 1993:251). In the context of community-based disaster management, participatory vulnerability and capacity assessment is increasingly employed (for instance, Alexander 1997; Buckle, 2000; Goodyear, 2000; Heijmans and Victoria, 2001; Masing, 1999) to identify particularly vulnerable people and the various components of vulnerability and local capacities within the communities concerned (Anderson and Woodrow, 1998). Vulnerability and capacity analysis is a key element of community-based approaches to disaster management. It contrasts with the type of top-down risk and impact assessment that have been traditionally employed by disaster managers and relief agencies with minimal involvement of those affected and with little reference to their knowledge, understandings and capacities (Heijmans and Victoria, 2001). However this thesis presents the case that despite the participation of community members in the

[9] Refer to Section 1.1 for the definition of vulnerability as used in this thesis, and for an explanation of the
Footnotes continued on the next page

assessment of their vulnerability and capacities, assessment outcomes still tend to be carried out within (and therefore shaped by) the parameters of dominant understandings of identified 'problem' fields such as natural disaster occurrence. This section explores the differential nature of vulnerability experiences in both everyday life and disaster situations. It also considers the manner in which disaster management thinking and practice differentiates between manifestations of vulnerability, and in doing so limits the scope of disaster management.

Determinants of Vulnerability from the Literature

In exploring the determinants of vulnerability, distinction can be made between those factors associated with physical characteristics of human exposure to natural events and those concerned with social characteristics of the communities and actors influenced by these events. Firstly, factors concerned with physical characteristics include the impacts of natural events upon affected communities, temporal biases, proximity and levels of exposure. Blaikie et al. (1994) distinguish between immediate and ongoing impacts on the one hand, and cumulative[10] (between disasters) impacts on the other. They find that the former have tended (wrongly) to be treated as separate from other social, economic or political factors associated with the everyday, whilst the latter have frequently been ignored altogether. Frequency of disaster event occurrences, the stages of impact of a given event, and the time – of day and season – at which it occurs are all crucial factors in determining patterns and levels of vulnerability (Blaikie et al, 1994). Seasonality is one of the most important rural time factors. Coincidence of a sudden disaster event with the "hungry" season when labour demands tend to be highest, food supplies lowest and disease most prevalent, can lead to severe disaster impact (Chambers et al., 1981; Chambers, 1983). Those based in particularly hazard-prone locations are often those with limited access to resources and livelihood opportunities (Khan, 1991; Blaikie et al, 1994). In this manner, different manifestations of vulnerability are compounded.

Secondly, factors associated with the social characteristics of vulnerable communities and actors include poverty, power relations, processes of marginalisation/exclusion as well as

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term 'underlying vulnerability'.

livelihood strategies and coping mechanisms (Alexander, 1997; Tobin, 1999). Although poverty and vulnerability are strongly linked, they are not synonymous (Bankoff, 2001; Bhatt, 1998a; Blaikie et al., 1994; Moser, 1998). Poverty tends to reinforce other vulnerability inducing factors, and is closely associated with power relations and processes of social exclusion and marginalisation (Bankoff, 2001; Lavell, 1994; Tobin, 1999; Tobin and Whiteford, 2002). However, there can be trade-offs between poverty and vulnerability, resulting from people's livelihood strategies as well as government or NGO initiatives (Chambers et al., 1989 cited in Blaikie et al., 1994; Christie and Hanlon, 2000; Rocha and Christoplos, 2001; Winchester, 2000). In conceptual terms, poverty tends to be employed as a relatively simplistic descriptive measure when compared with vulnerability (Blaikie et al, 1994; Moser, 1998). Winchester links power with wealth (measured in terms of access to resources). Those with greater access to resources tend to lose more in absolute terms, but less in relative terms, than those with more limited access during typhoon events (Winchester, 1992). Power is also associated with dependency relationships of the less powerful with regard to those with greater power, which serve to limit the choices of those with less power (Smith, 1985). Those lacking access to resources such as cash income, health care, employment, land, water, safe housing or credit can be expected to have less capacity to manage and control decisions and events affecting them (Moser, 1998; Winchester, 2000; Wisner, 2001b). Ethnic, caste, class, religious, gender, age, linguistic, family origin and physical or mental ability divisions play a strong role in determining levels of exclusion or marginalisation.

Actors implementing disaster management initiatives are often concerned with identifying and reaching "*the most vulnerable*". IFRC defines these as "*those at greatest risk from situations that threaten their survival or their capacity to live with a minimum of social and economic security and human dignity*" (1995:6). To classify specific generic groups such as women, children, the disabled and the elderly as the most vulnerable, is to over-simplify the concept of vulnerability (Buckle, 2000; IFRC, 1993). Although membership of these and other such groups has a bearing upon vulnerability, many factors combine to determine degrees of vulnerability (Bakewell, 2000; IFRC, 1993; Tobin, 1999). "*The*

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[10] Described as the "Ratchet Effect" by Chambers, 1983.

recognition and identification of locationally or socially vulnerable sectors of populations is itself only an indicator of the processes that have brought about those conditions" (Lewis, 1999:5). Social divisions tend to be compounded by dependent *vertical* alignments based upon transactional relationships. These vertical alignments tend to supersede or undermine *horizontal* alignments between marginalised people and groups, making cooperative organisation difficult (Smith, 1985:193).

Local people build upon the sets of resources and assets to which they have access, in implementing complex livelihoods strategies (including coping and adaptive mechanisms) designed to address a wide range of livelihood shocks and stresses (Bhatt, 1998a; Blaikie et al., 1994; Moser, 1998; Sen, 1981; Twigg, 2001b). These local systems are often effective at reducing vulnerability (Blaikie et al, 1994; Moser, 1998). Many marginalised people demonstrate a tendency to adopt livelihood strategies that rely upon high levels of diversification and flexibility (Chambers, 1983; Altieri, 1987; Scoones, 1995). Chambers categorises those who depend for their survival upon a multiplicity of livelihood strategies as "*foxes*". They are distinguished from "*hedgehogs*" who Chambers defines as those dependent upon a single means of sustaining a livelihood (Chambers, 1983:142-3). In describing *hedgehogs*, Chambers draws upon the example of labourers "*who are bonded through debt to work for one master*" and who "*cannot diversify sources of food and income*". "*They achieve a certain low-level security, but have no escape. They are locked to a single support*" (Chambers, 1983:143). In this context, vulnerability is characterised by a lack or shortage of viable livelihood options and a corresponding inflexibility in decision-making. This is largely due to factors restraining the capacity of groups, households or individuals within a community or society to address their vulnerability and to cope with the shocks (including natural events) trends and stresses that impact their lives. When related to livelihoods, vulnerability – and inversely resilience[11] – is governed by a number of variables, which can be broadly categorised as follows:

- access to tangible resources including: land, water resources, cash savings, credit, produce, tools, livestock, materials for construction/production, consumer durables, new technologies/varieties, agricultural inputs

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[11] The inverse relationship between vulnerability and resilience is explored in Section 2.1.1 on Disasters:
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- access to intangibles including education, knowledge and skills, legal (justice) recourse, labour, time, health, energy and self-esteem
- social and political power relations and interactions
- environmental specifications and limitations
- other motivational factors including custom, prioritisation, conceptualisation, belief systems and values.

From the discussion above, we can conclude that vulnerability is complex, with many variables combining and interacting over space and time as components of wider processes of change. Below, I explore the differential nature of vulnerability experience, which applies at various levels, including that of small communities and their sub-groups.

Differential Vulnerability

Vulnerability underlying everyday life is differential. The underlying vulnerability of different actors is dependent:

1. upon the interplay of social institutions that determine and delimit actors' access to resources and life opportunities;
2. upon actors' abilities, wishes, beliefs and priorities;[12] and
3. upon the impacts of past or ongoing shocks, trends and stresses upon different actors.

Whilst at times countering each other, elements of each of these three broad bands of factor are also mutually reinforcing. As a result, although actors in a given area may be equally at *risk* from the immediate effects of natural hazard events, they will experience *differential vulnerability* to a much broader range of shocks, trends and stresses (Burton et al., 1993; Tobin, 1999; Winchester, 1992), which includes hazard events such as typhoons. People should be seen as being part of socio-economic systems that allocate risk and vulnerability differentially to their members, and this occurs within both communities and households (Blaikie et al., 1994; Boyce, 2000; Cannon, 2000; Lavell, 1994; Moser, 1998, Tobin, 1999; Winchester, 2000; Wisner, 2001b).

Exceptional Events or Social Happenings?

[12] This point refers to the concept of actor 'agency' which is explained in Section 3.1.3 under *Actor-oriented*.

At the root of differential vulnerability is the inequality and difference which exists in all societies. In development literature difference has been conceptualised in terms of cross-cutting cleavages in society such as gender, age, family status, indigenous or settler status, health, religion, language, income, livelihood activity, ethnicity and caste or class (Chambers, 1983; Kabeer, 1994; Smith, 1985). Such factional differences are embodied in local and regional political economies and are associated with processes of social exclusion/marginalisation.[13] Divisive internal differences can to an extent be counterbalanced by social capital within wider communities. This, in as far as social capital in the form of networks, organisations (Cannon, 2000) and the reciprocal social ties which these encompass (Bebbington, 1999; Falk and Kilpatrick, 2000; Svendsen and Svendsen, 2000), promote social cohesion and collective resilience to shocks and stresses (Cannon, 2000).[14] Social capital may therefore be an important factor in establishing differences in *collective* vulnerability between otherwise similar *communities* (Cannon, 2000). However, even the more reactionary elements of social capital are at all levels rooted in existing social systems and the political economy context. As such the role of social capital in overcoming inequalities and differential vulnerability should not be overestimated. Furthermore, shocks or stresses may themselves impact social capital and the resilience of social networks to withstand future shocks and stresses (Tobin, 1999). This theme is explored in some detail in Chapter 8. Overall, studies point to the conclusion that it is society's most vulnerable individuals and groups whose interests are least likely to be represented (Boyce, 2000; Chambers, 1983; Lavell, 1994; Smith, 1985, Winchester, 2000). This finding has to be reconciled with the fact that it is precisely these people that many development and disaster management agencies would most like to reach.

It is not only in everyday life, but also in disaster situations that vulnerability is differentially manifested across society (Buckle, 2000; Winchester, 1992). Crisis of any type carries the potential to unite vulnerable people around a common cause. New alliances can be formed in times of disaster, and safety-net strategies or networks activated

[13] The concepts of exclusion and marginalisation are explored in relation to vulnerability in Section 8.1.2.

in ways in which they would otherwise not have been (Marsh, 2001; Tobin, 1999). Luna (1997) has provided examples of these types of action in the Philippines. Disasters can also accentuate differences, particularly once any immediate common danger has subsided. This is particularly true of differences associated with diversity of goals, and of the relative weight attributed to different objectives, types of knowledge and understanding (Buckle, 2000; Tobin, 1999). Difference in society is not in itself detrimental. It can however pose considerable obstacles to the participatory and collaborative activities to which we have attributed so much weight in increasing the resistance and resilience of communities, social institutions and individuals in disaster situations.

The 'life story' method of vulnerability analysis developed by the Disaster Mitigation Institute[15] is designed to increase understanding of the vulnerability experiences of individuals from different groups, by situating these experiences in their own life cycles (Bhatt, 1998b). Key to such forms of analysis is acceptance of the complexity and diversity of vulnerability experiences amongst different social groups, as well as of the integrated nature of everyday vulnerability experiences, and those manifested during extreme events (Alexander, 1997; Lavell, 1994). While recognising the existence of linkages between everyday or underlying and manifested vulnerability, disaster managers have tended to take a conceptually bounded, pragmatic approach to addressing particular manifestations of vulnerability as they arise, increasingly on the basis of vulnerability and capacity analysis. Red Cross/Crescent national societies, for instance, increasingly distinguish between vulnerability *to* the direct effects of natural hazards and vulnerability *as a result of* natural hazards. This entails a recognition that those who are vulnerable to natural hazards are not necessarily the same people who are left vulnerable as a result of natural hazard events (Walker, 1999).[16] Disaster management initiatives are structured around such dominant organisational understandings and discourses, and reflect the same boundaries and differentiation between manifestations of vulnerability and disaster management activities. As such, disaster mitigation initiatives tend to be designed to

[14] Refer to Section 8.1.1 for a detailed explanation of the concept of social capital.
[15] Operating in South Asia.
[16] P. Walker, IFRC personal communication (email): 15 Nov. 1999.

address vulnerability to the direct effects of hazard events. Meanwhile, relief and rehabilitation initiatives address vulnerability as a result of hazard events (Walker, 1999).[17]

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2.1.3 Linking Disaster Management and Development

Conceptually, the notion of underlying vulnerability[18] fits particularly well with the developing school of sustainable livelihoods approaches to development.[19] The relationship between vulnerability and sustainable livelihoods is explored in detail in Chapter 8. This section provides an overview of the links between disaster management and development, with reference to the contributions of conceptual frameworks such as Sen's 'Entitlements' approach, the 'Access' model of Blaikie et al. and 'Sustainable Livelihoods' approaches. These frameworks have in common a conceptual linkage of disaster situations with processes of societal development, and as such are all *dynamic* frameworks. Livelihoods and the evolving social relations and transactions which govern access to asset and resources as well as livelihood options, are key bridging factors.

As a starting point, disasters and development are *pragmatically* linked in three core manners. Firstly, disasters tend to stem from processes of development (Blaikie et al., 1994; Hewitt, 1983 and 1997; Lavell, 1994; Lewis, 1999; Ozerdem and Barakat, 2000; Winchester, 1992) that can be difficult to alter. For instance in a Nicaraguan context, Rocha and Cristoplos find that there is "*generally little governmental capacity to shift away from traditional trajectories of extensive rural and peri-urban development, even if current demographies and risk mapping clearly show the profound dangers of past models*" (2001:250). Secondly, disasters often stimulate forms and processes of development such as micro-enterprise support, infrastructural development or sustainable environmental management practices (Mahmud, 2000; Ozerdem and Barakat, 2000; Rocha and Christoplos, 2001). Related, but less well understood, is the manner in which disaster experiences shape cultural understandings of human interaction with the environment (Bankoff, 2001). Thirdly, disasters tend (especially in the short to medium-term) to

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[17] Ibid.
[18] Refer to Sections 1.1 and 3.1.1.
[19] The sustainable livelihoods framework and approach is presented in Chapter 8, with reference to its

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setback development trajectories and initiatives, through economic loss and social disruption as well as by exposing developmental weaknesses (Christie and Hanlon, 2000; Lewis, 1999; Ozerdem and Barakat, 2000; Rocha and Christoplos, 2001; Tobin and Whiteford, 2002). It follows that *sustainable* development[20] must include disaster mitigation and prevention elements (Burton et al., 1993; Handmer and Dovers, 1996; IFRC, 1995 and 1999; Lavell, 1994; Lewis, 1999; Ozerdem and Barakat, 2000; Rocha and Christoplos, 2001; Skertchly and Skertchly, 2001).

In *conceptual* terms, actors' access to assets and resources is key to both livelihoods-related development and resilience to disaster shocks. Much of the more recent work on this topic has been influenced by the '*Entitlements*' approach of Sen (1981) which challenged the notion that famine is always caused by (supply side) food shortage. Sen introduced the idea that famines occur even where sufficient food supply is available, due to certain group's or individual's lack of entitlements to food supplies. Sen's approach focuses upon dynamic exchange and trade relationships, and their role in creating or contributing to famine situations. Entitlements carry purchasing power in formal and informal markets, and have as their basis 'endowments' or bundles of assets to which actors have access. Sen lists four main types of food entitlements: transfer (state grants or gifts), labour, trade-based (from exchange), production (includes cash and food crops). Not only formal market operators, but also – for instance – subsistence farmers are included in the entitlements framework. Under Sen's framework, the land to which subsistence agriculturalists have access is considered an endowment, while their primary form of entitlement is production (Sen, 1981).

Later approaches have retained the notion of *access* to assets (and therefore opportunities) as fundamental in determining actor resilience in disaster situations (Lavell, 1994; Moser, 1998; Tobin, 1999; Winchester, 2000). The concept of specific entitlements has been superceded by the complex and wider concept of livelihood. One such approach is

application in relation to the case study findings of this thesis.

[20] Theorists such as Rocha and Christoplos (2001) and Wisner (2001b) argue persuasively that neo-liberal dominated economic development models pay scant attention to issues of equity or long-term sustainability which need to be addressed if vulnerability is to be reduced across society. The term ***sustainable development*** refers to forms of development that are intended to capture elements of equity and sustainability.

embodied in the 'Access model' of Blaikie et al. (1994). This framework is designed to complement the Pressure and Release model,[21] in providing an overview of the manner in which "*unsafe conditions*" arise in relation to the social processes that allocate assets and resources in society (Blaikie et al., 1994:46). Unlike the Pressure and Release model (Blaikie et al.), the Access model does not attempt to incorporate national policies and world systems, although their impacts in areas such as trade, economic growth and stability, land reform, health, education and disaster relief, are included (Blaikie et al., 1994). This approach widens the notion of vulnerability to encompass – not just the effects of natural hazards – but also of a wide range of socio-economic and environmental livelihood shocks and stresses. Much of the focus of the Access model is upon the household level. This focus proves useful in exploring the factors and processes supporting differential impacts and levels of resilience between different actors and groups. Under the model, access to resources is treated as fundamental in determining the nature of everyday livelihoods. In turn, the livelihood options and strategies of different actors are key to understanding disaster resilience. Resource access is determined partially by spatial distribution, by market forces and significantly by socially allocated '*rights*' and '*social expectations*' or '*obligations*' in relation to resources. Such rights and obligations are unequally distributed in society, and are strongly influenced by "*structures of domination*" which to a large extent determine the "*income opportunities*" and "*access qualifications*"[22] that differentially delimit the livelihood options of different actors (Blaikie et al., 1994:46-55).

The sustainable livelihoods school[23] specializes in exploring the relationship between day-to-day livelihood strategies, access to resources, and social institutions in a vulnerability context (Ashley and Carney, 1999; Twigg, 2001b). The assumptions of this school are built upon key ideas developed in agricultural and rural development fields which portray impoverished communities as flexible, skilled and knowledgeable managers of complex, diverse and *dynamic* ecosystems (Altieri, 1987; Chambers, 1983; Chambers et al., 1989;

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[21] Also of Blaikie et al., 1994. Refer to Section 2.1.1 under *Disasters: Exceptional Events or Social Happenings?*
[22] Examples of access qualifications include capital, skills and labour requirements (Blaikie et al., 1994).
[23] Refer to Chapter 8 for a full explanation of the sustainable livelihoods framework and approach, as well as their application to this thesis.

Ellis, 1995; Scoones, 1995; Wisner and Mbithi, 1974). The notion of everyday livelihood *stability* for poor majorities in the South is rejected (Handmer and Dovers, 1996; Scoones, 1995; Wisner and Mbethi, 1974). Consequently, diminishing distinction is made between disaster shocks on the one hand, and the stresses and trends associated with everyday life and processes of development on the other (Eade, 1997; Hewitt, 1983 and 1997; Lavell, 1994; Wisner and Mbethi, 1974). We shall see in Chapter 8 that the sustainable livelihoods approach has much in common with the Entitlements framework of Sen (1981), and the Access model of Blaikie et al. (1994) above. To paraphrase Twigg (2001b), sustainable livelihoods is significant in that this approach explores livelihoods from a *development* context. Whereas other frameworks take disasters/hazards vulnerability as their starting point, sustainable livelihoods treats disasters/hazards vulnerability as part of the vulnerability context within which livelihoods are shaped (Benson et al, 2001; Twigg, 2001b:8). Sustainable livelihoods represents an important staging post in the progression of disasters-development thinking, and – of the frameworks studied – provides the strongest conceptual links between the two areas.

2.2 The Community-based Approach

As a social unit, the community serves as "*a universal focus of social activity*" (Dynes, 1998:113). Dynes finds it

> "*useful to think of a community as a structure which has evolved to meet needs and to deal with problems as well as to allocate resources to problems. This allocation process takes place within an organized division of labor as groups and organizations engage in efforts relating to one or more community need. Thus, the community has to be conceptualized as a multiorganizational system*" (Dynes, 1998:113).

In the quotation above, Dynes highlights the importance of the community as a *complex*, *decision-making*, *resource allocating* and *multi-organisational* structure. Dynes highlights the role played by the community social unit, as a locus of social action. Beyond this definition, communities are not only multi-organisational but are also multi-layered (Marsh, 2001). The term community can be used to describe ethnic or linguistic groups living within a wider society or the people living within the territorial bounds of a district, municipality, town or village. Subgroups within a village may themselves constitute a

community with – for specific purposes – decision-making structures of their own. Guijt and Shah (1998), criticize the long history in participatory development of simplifying the notion of community. They claim that:

> "*Inequalities, oppressive social hierarchies and discrimination are often overlooked, and instead enthusiasm is generated for the cooperative and harmonious ideal promised by the imagery of 'community'*" (1998:7-8).

Guijt and Shah (1998) argue that minority groups are often excluded or disadvantaged by the majority rule focus of community processes, while social pressure to abide by rules and norms embedded in the community structure can be oppressive for some members.

For the purpose of my thesis, the term community (where not otherwise qualified) encompasses a fluid network of members of the lowest official administrative unit (in the Philippines, the barangay),[24] and the institutions by which they govern and/or are governed. Members of such communities share certain common values and understandings, as well as unequal access to local resources. The communities are expanded beyond their direct members and territorial claims by means of social networks and ties to outside people or institutions, such as extended family or peoples' organisations. Both formal and informal institutions, ties and structures found to be embedded in community decision-making processes and actions are included. In this sense, the term community is used to designate a *fluid sphere of social interaction*, rather than a territorial area or defined group of people and their institutions.

We have seen that disaster management has been dominated by top-down, interventionist approaches that can be characterized as focusing upon technology-centered or (external) expertise-driven initiatives. Examples include the construction of sea and river defenses, the design of earthquake or typhoon resistant housing, warning system design and post-disaster health provision, housing and infrastructural repairs. Although the vast majority of resources continue to be invested in top-down initiatives, over the last two decades increasing global emphasis has been placed upon bottom-up or community-based approaches to disaster management, with particular emphasis upon local planning,

[24] Refer to Section 1.2.2 for a description of the barangay as a 'community' and social unit of analysis.

preparedness, mitigation, organisation and capacity-building (Alexander, 1997; Benson et al, 2001; Christie and Hanlon, 2000; Crondstedt, 2002; Matin and Taher, 2001; Ozerdem and Barakat, 2000; Rocha and Christoplos, 2001).

In the Philippines context, community-based disaster management is increasingly endorsed by a wide range of relief and development oriented NGOs, often operating in conjunction with government actors and programmes, as stipulated in the 1987 constitution[25] (Constantino-David, 1992; Luna, 2000; Masing, 1999). Disaster management is co-ordinated by the National Disaster Coordinating Council, a government body established in 1978. Its mandate includes national disaster preparedness planning and the organisation and support of local level Disaster Coordinating Councils[26] (Luna, 2000; Region IV, 1997). From the government perspective, the 1991 Local Government Code provides for the decentralisation of government resources, decision-making powers and responsibilities. This code supports government involvement in community-based initiatives generally, and the increased partnership of government agencies with community leaders, People's Organisations and NGOs operating at the local level (Luna, 2000). The increased government policy emphasis upon working in partnership with People's Organisations and NGOs operating at the local level is not only indicative of changing global policy trends. More importantly in the Philippines context, the changing emphasis reflects the change from an oppressive regime whose excesses had been visibly countered and challenged by People's Organisations and NGOs, to one which encourages collaboration with such organisations and which is (relatively) responsive to demands emerging from civil society (Constantino-David, 1992; Luna, 2000 and 2001). In practice however, the institutionalisation of State-NGO relations may also have served as a mechanism by which NGO activity can be regulated and controlled by the State (Constantino-David, 1992). From the NGO perspective, many organisations have responded (albeit cautiously) to new opportunities to work with government actors and influence government activity (Constantino-David, 1992).[27] Many have increased their emphasis upon community-based

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[25] The 1987 constitution states that the "*State shall encourage non-governmental, community-based, or sectoral organizations that promote the welfare of the nation*" (Article II, Section 23, Philippine Constitution).

[26] Disaster Coordinating Councils exist at regional, provincial, municipal and barangay levels.

[27] This position is by no means universal among NGOs in the Philippines, some of which have maintained a

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disaster management (including vulnerability reduction through socio-economic projects) at least partially in response to donor preferences for community-based planning, mitigation and preparedness (Luna, 2000 and 2001). Furthermore, many primarily developmental NGOs with a history of implementing participatory community-based initiatives have expanded into disaster management activities to support existing projects and the communities with which they work, and have brought their experience of operating community-based approaches with them. This trend was particularly evident during the 1990s when the country was struck by a series of high profile large-scale natural disasters[28] (Luna, 2000 and 2001). In the Philippines, participatory community-based approaches are associated with the broader "people's empowerment" movement which contributed to the fall of – and succeeded – the Marcos regime. As such the community-based approach has political as well as practical and ethical resonance (Constantino-David, 1992; Luna, 2000 and 2001). Community-based approaches not only fit changing paradigms in international disasters and development fields but are also relatively inexpensive forms of activity in a context of increasing scarcity of funding for NGOs operating in the Philippines[29] (Luna, 2000).

Community-based approaches are broadly intended to target vulnerability and coping capacities at an aggregate level close to that at which the primary impacts of events are experienced (Masing, 1999; Skertchly and Skertchly, 2001). The primary disadvantage of the community-based approach lies in the relative lack of resources, decision-making, legislative and regulatory powers available to local level actors and institutions (Lavell, 1994). On balance, community-based approaches have the advantage of operating at smaller scales and are intended to build upon local knowledge, experience and in particular upon the capacities, coping and adaptive strategies of local people (Benson et al, 2001; Goodyear, 2000; Masing, 1999; Rocha and Christoplos, 2001; Tobin and Whiteford, 2002). However there remains a degree of ambiguity in our understanding of the interplay of individual, household and various levels of "community" or collective vulnerability

highly critical stance in relation to government (Luna, 2000 and 2001).

[28] These include the July 1990 earthquake, the Mt. Pinatubo eruption in June 1991, the Ormoc flash floods in November 1991 and the Mt. Mayon eruptions in 1993 and 1994 (Luna, 2000:13).

[29] This is partially attributed to the impact of the World Bank's classification of the Philippines as a middle income country upon foreign donors (Luna, 2000 and 2001).

reducing strategies and resilience (Paton et al, 2001). In the disaster management literature in particular, there has been little in-depth empirical analysis of the operation and long-term effects of community-based approaches (Benson et al, 2001; Marsh, 2001; Luna, 2001). This thesis is intended to contribute to redressing this imbalance.

2.2.1 Theoretical Setting

A new school of though in development practice and theory has been slowly gaining momentum over the last few decades. This paradigm shift is represented by a move away from orthodox technocratic and top-down approaches, towards ones concerned with fostering participation and community institutional capacity-building (Bakewell, 2000; Chambers, 1993; Constantino-David, 2001; Kabeer, 1994; Shepherd, 1998). Authors such as Chambers propagate the idea that while "*normal bureaucracy*" centralises, standardises and simplifies, it is "*by becoming more complex and diverse that ecosystems and livelihood strategies become more stable and more sustainable*" (1993:120). Micro-level action has become increasingly favoured by activists of various political and theoretical persuasions. Non Governmental Organisations (NGOs) have – with donor backing – come to play a central role during the 1980-90s in developing and promoting participatory approaches to development (Edwards and Hulme, 1992 and 1995; Hulme and Edwards, 1997a; Korten, 1990), and more lately to disaster management (Benson et al, 2001; Christie and Hanlon, 2000; Goodyear, 2000; Lavell, 1994; Lewis, 1999; Luna, 2000; Masing, 1999; Rocha and Christoplos, 2001). However, there is a lack of consensus as to both the nature of communities and the purpose of such community-based activity (Marsh, 2001; Midgley, 1986; Rocha and Christoplos, 2001).

Due to its strongly participative elements, community-based planning and management is presented by its advocates as both a fundamental form of empowerment, and a compelling mechanism for enforcing the transmission of ideas and claims from the bottom-up. Indigenous populations have – it is claimed – been successfully managing their environments and coping with crises for centuries (Scoones, 1995; Shiva, 1995 and 1996). Community-based management is nothing new; outside intervention takes its place among other factors, which have disrupted grassroots systems. Current trends advocate handing a large dose of responsibility for both environmental, and disaster management back to local

communities. Grassroots organisations – pre-existing or otherwise – are considered to be an appropriate medium through which local-level management can take place. Outside intervention correspondingly emphasizes the value of local experiences and priorities, the facilitation of grassroots activities and local institution and/or capacity-building (Benson et al, 2001; Chambers, 1983 and 1993; Chambers et al., 1989; Christie and Hanlon, 2000; Goodyear, 2000; Lavell, 1994; Pretty and Scoones, 1995; Rocha and Christoplos, 2001; Shepherd, 1998; Tobin and Whiteford, 2002). Associated with this increased emphasis upon local perspectives, values and knowledge systems is a broad criticism of dominant disasters and development approaches which are said to reflect Western hegemonic discourses:

> "*The discourse of vulnerability, no less and no more than that of tropicality or development, belongs to a knowledge system formed from within a dominant Western liberal consciousness and so inevitably reflects the values and principles of that culture*" (Bankoff, 2001:29).

Pragmatically, in comparing bottom-up approaches with their top-down counterparts,[30] Korten (1980) criticises centralised bureaucratic organisations for their lack of capacity to respond to diverse community-defined needs or to build from community skills and values. Although much of this criticism has been leveled against Government agencies, it is equally applicable to large NGOs and international organisations, such as PNRC or United Nations bodies (Christie and Hanlon, 2000; Constantino-David, 1992). Within centralised and bureaucratic organisational structures, micro-level management is likely to be subjugated to more pressing (from the organisational view-point) funding trends, objectives or elements of a wider, overriding policy framework (Christie and Hanlon, 2000; Korten, 1980). Lavell (1994), Ozerdem and Barakat (2000) and Rocha and Christoplos (2001) document examples where higher level technical knowledge of hazards and regulatory requirements fail to be translated into local development and disaster management plans and procedures because they are divorced from local socio-political realities. Organisational actors also have aspirations of their own. As a result, they may

[30] The polemic analytical distinction drawn between bottom-up and top-down approaches is in practice far from absolute. Whereas bottom-up initiatives tend to be shaped and driven largely by the priorities of local beneficiary actors, top-down intervention is defined by agendas imposed upon local recipients by actors who are situated at a higher level of the social hierarchy. Top-down approaches have often been associated with bureaucratic government initiatives (Chambers, 1993; Korten, 1980), although they can equally pertain to NGO actors (Edwards and Hulme, 1995).

not always prioritise the interests and wishes of local people. Even where they do seek to do this, they are likely to be hindered by their distance from local people, which can be: physical, social and in terms of knowledge, perception and attitude. These factors have been categorised in terms of a series of "*biases*" by Chambers. Writing in the rural development context, he has called these: spatial, project, person, dry season, diplomatic and professional biases (Chambers, 1983:1-23). Set against the background of this paradigm shift, it is hardly surprising that the community-based approach is considered an effective and ethically preferable medium for disaster management.

This said, proponents of the community-based approach would do well to heed Marsden's warning – encapsulated in the quote below:

> "*Techniques, technologies and cultural forms (organizations and institutions) do not stand alone. They are tools that can be used in a variety of ways. It is important to understand how they are employed and why they are applied, and to discover who uses them and under what conditions*" (Marsden, 1994:54).

2.2.2 *Opportunism and Knowledge at the Community-level*

Scoones emphasizes that the "*high level of variability*" associated with "*dynamic ecosystems*" necessitates "*flexible responses to uncertain events*". Contingent responses are,

> "*critical to successful survival in a hostile and uncertain environment. Because of unpredictability, prescriptive planning and imposed solutions will not work and locally derived responses are the key to success*" (Scoones, 1995:3).

Those managing resources at the local level tend to adopt what is often known as an "*opportunist*" or "*process*" approach. The more fragile and variable the ecosystem in which they operate, the greater the degree of opportunism – and often diversification – that will be required. Central to such an approach is knowledge and understanding; of the vagaries of the ecosystem itself; as of the various coping strategies that can be used effectively in response (Scoones, 1995). The fact that natural environments are highly variable necessitates a continuous and substantial process of knowledge-building and up-dating if fluctuations and changes are to be timeously accounted for and reacted to. The proximity and intensity of involvement of community organisations in their environment suggests that they have the propensity to quicker take note, and reach a level of understanding, of the processes of change.

According to Marsden,

> "*knowledge... is never neutral. It can never be completely packaged. Its history and its content must be uncovered if we are to approach its meaning and not be mystified by its current form*" (Marsden, 1994:54).

Essentially, this means that knowledge available at the local level is likely to be coloured by local and individual needs and priorities as well as cultural and historical norms and values (Bankoff, 2001). Simultaneous and often conflicting realities, can and do exist. Managing institutions need to make sense of contradictions, and choose between different options as best they can (Christie and Hanlon, 2000).

I started with the premise that community-based approaches have been associated with an ability to grasp the dynamics and complexity of vulnerability as manifested at the local level. Such approaches are treated as more able to construct, and to respond to local situations in a *holistic* manner (Masing, 1999). The "*overarching purpose of holistic thinking is to bring together in our thoughts and actions the physical, biological and social worlds, as parts of a whole*" (Flood, 1998:147). Holism, entails recognising the equal validity of constructions of causal relationships formulated by outsiders to the communities concerned, and constructions based primarily upon differential local-specific knowledge and experience at the community level. This challenges assumptions that outside experts make the most appropriate decision-makers in the process of managing community concerns, although it does not negate their role (Alexander, 1997; Bankoff, 2001; Christie and Hanlon, 2000; Masing, 1999).

2.2.3 Co-operation Not Coercion

Community-based approaches to disaster management are expected to operate in a bottom-up and principally voluntary manner (Luna, 2000; Masing, 1999). Through organisation, decision-making and action at the local level, local actors are said to be empowered, a goal which is considered by many in itself worthwhile (Johnston and Clark, 1982; Korten, 1980; Masing, 1999; Uphoff 1991 and 1992). Within this school of thought, the greater the level of empowerment, the greater the capacity of a community and its members for effective and successful collective action. In this sense, empowerment is also concerned with civil society-building (Pelling, 1998). If empowerment is the goal of community-based

approaches, the pathway is one of 'assisted self-reliance' (Christie and Hanlon, 2000; Uphoff, 1991), with an emphasis on assessing and building upon existing local capacities and institutions (Buckle, 2000; Masing, 1999). The danger of creating and/or maintaining dependency relationships through such approaches should not be underestimated (Cernea, 1991; Christie and Hanlon, 2000; Rocha and Christoplos, 2001).

Since community participation is founded upon the notion of common interest, co-operation between the different actors (internal and external to the community) involved is required, in everyday as well as in extreme circumstances (Christie and Hanlon, 2000; Marsh, 2001; Uphoff, 1991 and 1992). Differences in levels of "community spirit" or "social capital" in given locations and situations are factors that tend to be employed to explain variations in levels of co-operation and mutual support in otherwise similar circumstances (Cannon, 2000; Paton et al, 2001). Community-based institutions cannot be assumed strong enough to bend more powerful members of the community towards the goals of the less powerful (Midgely, 1986; Oakely, 1991). Nevertheless, a community-based approach can make use of public debate, perceived overriding need and group pressure to overcome some of the obstacles to collective action (Christie and Hanlon, 2000; Uphoff, 1992). Uphoff analyses human behavioural patterns witnessed during the course of an irrigation project – "Gal Oya" – at some length. In particular, he examines factors of personal motivation leading to degrees and combinations of altruism pure, selfish behaviour and self – or group – interested co-operation. One lesson to be drawn from the Gal Oya project, is that barriers can be overcome at community-level by group efforts to motivate participants to act in the common good, and to call to account those that do not (Uphoff, 1992). In Gal Oya, social pressure proves an effective mechanism for promoting collective support of the common good, particularly where communication channels and reciprocal ties founded upon trust and shared values are weak.

Establishing or tailoring existing community-based institutions, and gaining a consensus as to the forms that initiatives will take, is a slow and laborious process (Cernea, 1991). Johnston and Clark (1982) suggest that local institutions often seek to limit the costs of participation by actively reducing the communal obligations at play between their members. Such findings cast doubts upon the abilities of community-based institutions to

retain high levels of co-operation and management capacities in the long-term and particularly, in the face of social and economic evolution. Midgley warns that,

> *"the capacity of communities to engage in participatory activities is highly variable. Communities are comprised of individuals who differ in their desires to become involved or who are constrained by various factors from participating. Also people become involved to a lesser or greater degree at different times and in response to different issues... communities that are fragmented into different factions or divided by culture, religion or other allegiances will not cooperate as effectively as those that are cohesive and well integrated*" (Midgely, 1986:29).

Proponents of the community-based approach often fail to recognise that involvement for the participants themselves has its *costs*; principally in terms of time, energy and lost opportunities, that have to be weighed against potential benefits (Bryant and White, 1984; Johnston and Clark, 1982). Many see disaster management as primarily a responsibility of government agencies (Lavell, 1994; Luna, 2000), although this role is increasingly been attributed to civil society actors and NGOs as state functions (and expenditures) are reduced in accordance with neo-liberal principles (Benson et al, 2001; Rocha and Christoplos, 2001). In contrast to government officials and NGO staff, those involved at the community-level are unlikely to be financially remunerated for their efforts. It is often the more advantaged (in terms of social position, financial wealth or access to resources) members of a community that invest most in participatory efforts, and the poorest and most vulnerable who invest least (Chambers, 1983; Wade, 1986). Success of the approach in terms of empowerment is likely to be a function of the amount of control and/or influence various actors have over participatory processes. Marginalised actors often rely to a large extent upon the altruistic tendencies of more powerful community members (Uphoff, 1992). In practice, the benefits of participation in community-based initiatives are likely to be unequally spread among community members (Marsh, 2001). Yet, Midgely (1986) argues that real community participation only occurs when the poorest community groups both equally participate and accrue the benefits of community-based actions.

Leonard emphasizes the need for locally-based institutions to have both the capacity to take decisions and to act upon them. He also stresses the importance of such institutions being able to sustain the legitimacy of their decisions "*against internal and external challenges*", as well as their ability to "*mobilize the human and material resources needed to execute the program decided upon*" (Leonard, 1982:24). One of the most prominent reasons given

for community-based institutions lacking essential capacities, is that associated with conflicting interests and priorities at the local level which can lead to a lack of co-operation (Chambers, 1983; Marsh, 2001; Uphoff, 1992). For instance, community members who perceive their livelihoods to be particularly vulnerable to natural hazard-related shocks are more likely to co-operate in relevant disaster management initiatives, than those who do not (Paton et al, 2001).

2.2.4 Conflicting Interests

Midgely (1986) finds that proponents of the community-based approach commonly "*fail to recognize that deprived communities are not homogeneous and that inequalities of one kind or another characterize most forms of social organisation*" (Midgely, 1986:25). The propensity for local elites to capture community-based activities and outputs is widely recognised in the literature (See for instance: Chambers, 1983; Johnston and Clark, 1982; Kabeer, 1994; Smith, 1985; Uphoff, 1991 and 1992). However, Midgely (1986) suggests that the concept of social 'elites' tends to be used too simplistically. In practice, social systems are multi-layered and local elites are themselves often 'small fish' dominated by higher levels of elite. Wade (1986) concludes from his study of common property resource management in Indian villages, that elite control of community-based institutions need not necessarily entail their exploitation by that elite. Elite capture is likely to become a problem however when local institutions are able to confer benefits or costs that are divisible – as opposed to commonly held – by nature (Wade, 1986). In a similar vein, the short-term priorities of some – particularly those whose interests are not exclusively, or even predominantly tied-up in the local resource base – may often be prioritised over more long-term interests, either for the community as a whole, or for certain of its members.

Differential rights of access to resources are a prominent source of division within communities. It should be recognised however, that in a given community, conflict over access to resources will exist alongside more entrenched, cross-cutting and often less visible types of inequality (Watts, 1983b). These can be associated – for example – with gender, labour mobility, income-earning opportunities, declining land fertility or fish stocks, climatic variation, volatile produce markets, or credit terms. This leads us to an issue that has already been touch upon on several occasions, namely: that of scale.

2.2.5 *Issues of Scale*

> *"In a peasant paradise one simply cannot forget about merchants, workers and states even if they are problematic for aspirant anarchists"* (Watts, 1983b:79).

It is a paradox of the community-based approach that, on the one hand it is supposed to cultivate holism, and on the other that it has a tendency to focus analysis upon one level, namely: the micro. Yet it is apparent that vital linkages exist between micro, meso and macro-levels of disaster management, which ultimately affect success at any level. Community-level capacity cannot be divorced from such issues as land tenure arrangements, succession, water-shed management, taxation, produce pricing policy, trading patterns and local government powers (Christie and Hanlon, 2001; Lavell, 1994; Rocha and Christoplos, 2001; Tobin, 1999). In an increasingly globalised world, local communities are often distanced from key decision-making powers and processes (Tobin, 1999). Nor should it be forgotten that micro-level success – and equally failure – is likely to attract political interest and/or opposition from various factions, as has been explored above. For community-based institutions to realise their potentials, or even in some cases to survive, they are likely to find themselves obliged to cultivate and carefully define linkages with the broader social system (Johnston and Clark, 1982; Rocha and Christoplos, 2001). In addition to focusing upon the understandings, perceptions and experiences of members of local communities therefore, it becomes equally important to understand the policy discourse and perceptions of those who govern (Gauld, 2000).

2.2.6 *Institutional Design*

Central to today's search for strategies and mediums conducive to successful community-based action, is the notion of 'putting people – or more specifically their needs and wishes – first' (Cernea, 1991; Chambers, 1983). When it can be made to work, community-based action incorporates crucial elements of flexibility, experiential learning and responsiveness which are today being advocated by an increasing number of theorists and practitioners as necessary ingredients for success (For instance: Chambers, 1994; Korten, 1980; Uphoff, 1991). In practice, the nature and practices of both community-based institutions and

outside supporting institutions have a strong role to play in determining the outcomes of community-based initiatives.

Learning which cannot be practically applied is essentially redundant, yet lessons cannot be applied in practice until they are openly acknowledged. Changing of individual attitudes may be required for effective and inclusive learning to take place (Chambers, 1983 and 1993). However, much of the pressure for *selective* learning[31] is not a function of individual interests per se (although these can also play an important part), but of political or internalised institutional pressures. Change of any description has a power relations – and inevitably conflict of interests – element. Any intervening actors (be they institutions or individuals) can be held responsible to a degree – directly or indirectly; consciously or unconsciously – for deciding who the winners and losers of processes of change will be. Therefore it is imperative to understand the political context within which the various actors operate, and this includes organisational actors (Cernea, 1991; Oakley, 1991; Marsh, 2001; Scoones and Thompson, 1994). NGOs themselves operate within a political economy context. Although in certain respects they may act as civil society agents of change, they also respond to donor and state demands, as well as global trends (Christie and Hanlon, 2000; Edwards and Hulme 1992 and 1995; Korten, 1980; Rocha and Christoplos, 2001).

In practice, use of the community-based approach does not insure against wider institutional and/or organisational forces shaping the projects undertaken. There is a danger for NGOs attempting to implement a community-based approach, of allowing the 'big picture' of what NGOs can accomplish to squeeze out the little, and in particular the "*daily struggles*" of local community members (Hulme and Edwards, 1997b:280). Thus practical reforms are also required at the level of institutional actors (Chambers, 1993).

[31] For a more in-depth discussion of selective learning in development project processes, refer to Hulme, D. (1989). Learning and Not Learning from Experience. Public Administration and Development Vol. 9(1):1-15.

Korten describes the "*Learning Process Approach*" by which actors are to embrace error, plan with the people and link knowledge building with action (Korten, 1980). Adopting this approach commits project actors to acknowledging their mistakes and learning from them as an ongoing process and integral part of the project. The approach demands that project processes be highly flexible in scope, duration and if necessary, in direction (Korten, 1980). The learning process approach contrasts with a more orthodox control-oriented approach (Chambers, 1993; Chambers et al., 1989; Korten, 1980; Shepherd, 1998). Learning requires recognition of the existence of the uncontrollable element, and that institutions, groups, individuals and systems are all inherently fallible. Effective learning also requires recognising the complexity of real life situations, and being prepared to react to and to deal with unforeseen events and circumstances as they arise (Christie and Hanlon, 2000; Korten, 1980; Chambers, 1983). For such institutional arrangements to function in a practical sense, means must be sought to directly relate institutional rewards and sanctions to the objectives of that institution (Shepherd, 1995).

2.3 Summary

> "*The concept of the small community as a cohesive and integrated entity fighting for justice against powerful external forces is inspired by the romanticism of populist thought rather than a serious analysis of community life and its complex characteristics and dynamics*" (Midgley, 1986:35).

As the quotation above suggests, there exists a danger of idealising community organisational and management capacities. This is particularly true when analysis is focused upon (potentially) equitable styles of community-based action, as opposed to considering community life and institutions in a more holistic manner. We have seen that community-based approaches are praised for their comparative closeness to the grassroots, and therefore to the needs and priorities of community members. Community-based approaches are also upheld for their potential for flexibility in responding to variations in local specific factors, in changing needs and perceptions, and in application of lessons learnt, as they arise. Whilst recognising these potential strengths of the community-based approach, this thesis argues that it does not necessarily follow that community-based disaster management is inherently or universally better than other forms of disaster management. We have seen that experiences of vulnerability vary across project

communities, and are open to differing constructions among project actors. The community-based approach provides a solid foundation for the reduction of local vulnerability. However successful implementation of the approach is a function of the levels of collective actor willingness to formulate and to act upon collective actor understandings of: local perspectives and priorities; social institutions; and the political economy.

The tendency of dominant hazards and disasters approaches to focus upon physical hazards rather than upon people's vulnerability (Hewitt, 1983; Watts, 1983a; Winchester, 1992) has implications for community-based approaches to disaster management. A community-based approach encourages local participants to play an active role in defining their own situation and needs, as well as in formulating strategies to meet these needs. Yet, dominant hazards/disasters approaches often tend towards prescriptive aims (Christie and Hanlon, 2000). In the rush to discover or to refine practical solutions to *predetermined* problems, it is easy to see how such factors as complex social processes, political realities and instances of entrenched inequality are often – at best – recognised as relevant but as 'falling outside of operational or research remits'. Effectively this is a form of 'depoliticisation'[32] of the process of disaster management which not only makes for easier packaging of the issues by researchers, but also makes the pill a more palatable one for institutions and actors concerned with disaster management to swallow. This leaves actors in the field with a dilemma: to work with existing institutions on comfortable, well-trodden ground and be able to contribute to practice; or to challenge those institutions and associated mindsets and risk the marginalisation of one's input as a dissenting voice.

In attempting to overcome the failings of dominant paradigm-led and some forms of community-based approach to disaster management, this thesis focuses upon local vulnerability experiences within their political economy context. Research findings explored in Chapters 5, 7 and 8 reinforce the importance of livelihood strategies in understanding vulnerability, and support my own conceptual framework (developed in Chapter 3) as well as the basis of the livelihoods and asset/resource access based

[32] Depoliticisation in the sense described by Ferguson (1994) with reference to the impacts of development
Footnotes continued on the next page

frameworks explored in Section 2.1.3. Within the thesis as a whole, I have given predominance to the sustainable livelihoods approach in analysis (Chapter 8). This is due first and foremost to the approach's treatment of vulnerability and secondly, due to its broad conceptualisation of livelihood strategies, which are *explicitly* taken to incorporate objectives such as reducing vulnerability and increasing well-being. By contrast, the approaches of Sen (1981) and Blaikie et al. (1994) (outlined in Section 2.1.3) tend to place greater emphasis upon 'economic' criteria in livelihood decision-making. The respective approaches of Sen (1981) and Blaikie et al. (1994) also *implicitly* treat coping strategies as related to – but at the same time distinct from – everyday livelihood strategies.

In Chapter 3, I develop my conceptual framework for the purposes of this thesis. This framework substantially builds upon the vulnerability approaches explored in Section 2.1. by introducing *interface analysis* and related concepts from anthropological and rural development sources.

institutions and their discourses, upon development processes.

3. Conceptual Framework and Research Methods

Section 3.1 introduces and develops the conceptual framework underpinning the thesis and its findings. This framework builds upon the vulnerability analysis and participatory community-based approaches presented in Sections 2.1 and 2.2 respectively. *Underlying* vulnerability, defined in Section 1.1 as 'the susceptibility that underpins the *everyday* life and livelihoods of the subjects of vulnerability study', is employed in the context of vulnerability analysis at community and sub-community levels (Section 3.1.1). The concept of the *project interface* is introduced as a key conceptual tool in developing my framework of analysis (Section 3.1.2), and the key tenets of this approach from the literature are explored. For the purposes of this thesis, the notion of 'project interface' denotes the space in which all of the actors affected by, or involved in the projects studied interact, relate to each other and operate. It is also the space in which factors and processes of change impact upon vulnerability at the local level. In Section 3.1.3, I present my analytical approach and underlying assumptions which both support and have helped to shape the conceptual framework employed. Key elements of this approach include holistic analysis, a practice/policy orientation and a case study focus.

In Sections 3.2 to 3.4, I explore important practical issues concerned with the design and implementation of the study, and relate these to the conceptual framework employed. Section 3.2 is concerned with research design, and focuses upon my choice of research methods, their suitability to the study and the manner in which these were employed. Section 3.3 examines key stages in the research process. Section 3.4 explores ethical and practical issues concerned with the implications, value and relevance of the research, which arose during the research process. Finally, summary chapter conclusions are provided in Section 3.5. Research approaches, design and methods are all important elements in determining research outcomes. In attempting to lay these out transparently, I acknowledge my own role as a social *actor* (and not a neutral agent) in the research process. This is fundamental to the conceptual framework employed.

3.1 The Conceptual Framework

Chapter 2 revealed a variety of different ways of understanding and analysing natural hazards and the occurrence of disaster events. In the course of this thesis, I have endeavoured to bring together the various conceptual strands that have proved most appropriate in the context of the aims and objectives of the research project. The ensuing conceptual framework is most notably influenced by the work of: Long (2000, with Long, 1992 and with Villarreal, 1993); Blaikie et al. (1994); Winchester (1992); Twigg and Bhatt (1998). I have employed a series of figures to illustrate the key tenets of the framework. Each of the three diagrams has a different focus, although all three share a common theme in implicitly drawing the role of community actors (in responding to and shaping, local level vulnerability) into the framework of analysis. All are intended to compliment each other though they also overlap one another in certain aspects. Each is a simplified representation of complex, dynamic and somewhat nebulous reality, which is designed to clarify and aid analysis. However, as a series, the figures provide an overview of the key aspects of vulnerability and project interface analysis in the context of this study.

3.1.1 Vulnerability Analysis

Figure 3.1: An Overview of Factors Contributing to Community Level Vulnerability

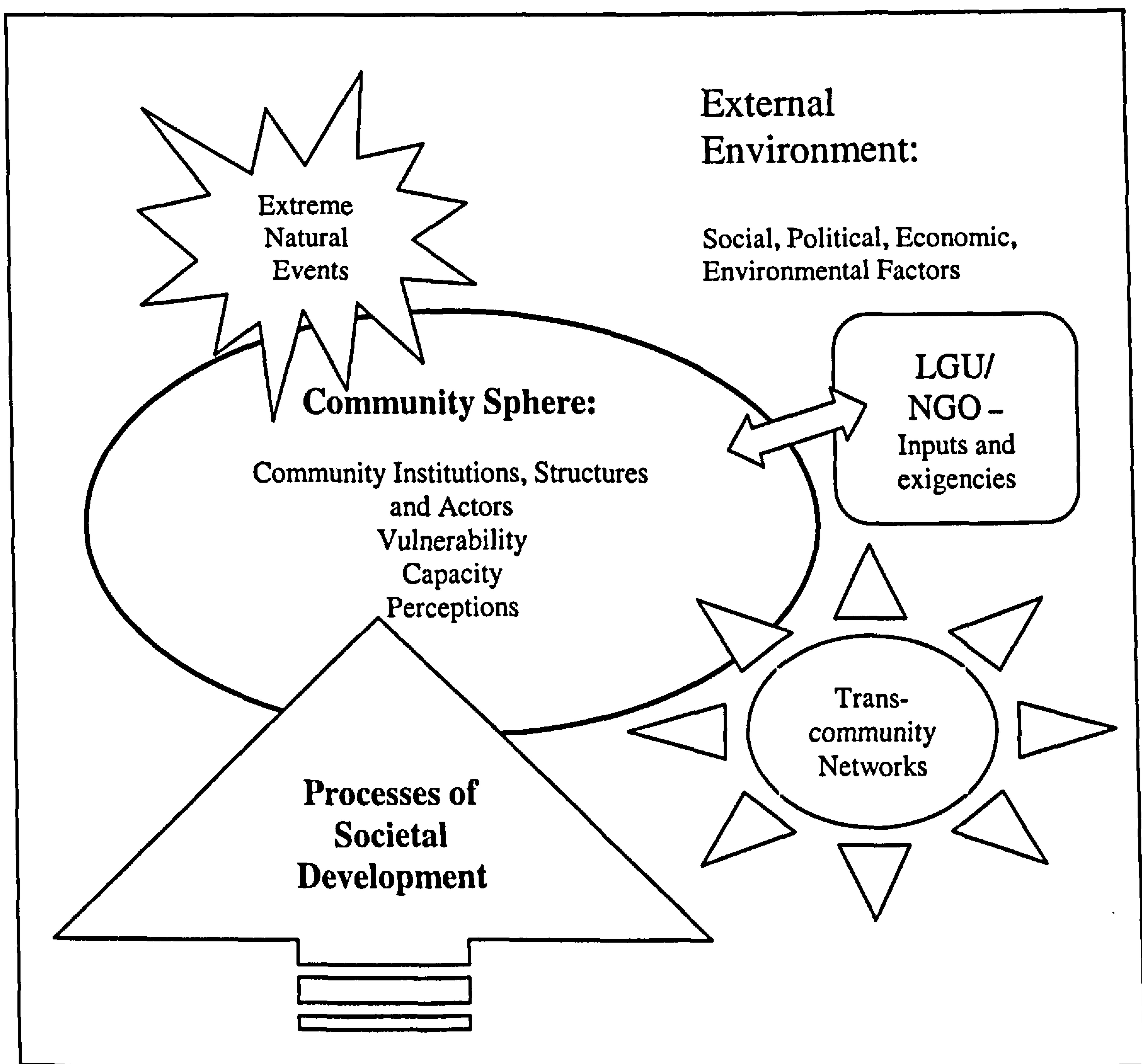

Figure 3.1 illustrates key factors contributing to levels of vulnerability within the community in either positive or negative terms. These factors are categorised in broad terms as: extreme natural events, processes of societal development, trans-community networks and local government inputs and exigencies. The community sphere represents the social space in which community institutions, structures and actors interact. It is the space in which community affairs are discussed and negotiated and in which solutions and strategies are implemented. The community sphere is also the primary space in which various factors and processes of change impact upon local-level vulnerability, although this sphere – while useful for purposes of analysis – can be further divided into various sub-groups of the community down to the household or individual level. In the diagram, these factors are represented in the 'external' environment (meaning, largely determined or

situated externally to the project community) which is shown to impact to varying extents, manners and degrees upon the project interface. Extreme natural events impact upon the community sphere, as do trans-community networks, which represent the links between community members and the wider environment at various levels. Note that this form of analysis treats the community not as a closed entity, existing in a social bubble, but rather as one exhibiting both diversity and fluidity. This entity not only experiences the impacts of wider processes upon itself, but also links with and influences elements of wider society. For the purposes of this thesis, the community is viewed conceptually, as being made up principally of community institutions, structures and actors, manifesting a variety of vulnerabilities, capacities and perceptions, which are variable over time and across groups of actors.

Figure 3.2: Key Elements of Community Level Vulnerability

Figure 3.2 illustrates the key elements of community-level vulnerability and provides examples of the many different aspects of vulnerability within the community, manifested in the external environment. Aspects of vulnerability and likewise capacity to overcome vulnerability are weighed and negotiated by community institutions, structures and actors as part of a continuous process. Underlying vulnerability is always present in a given community, though is inconstant in its distribution, level and in the forms in which it is manifested. It is the various manifestations of vulnerability that tend to be most visible to agents, external to the community. Particular manifestations of vulnerability tend to provide the focal points of vulnerability reduction initiatives, hence the sphere of interaction depicted in Figure 3.2. The flow of external factors and processes into this sphere of interaction represents a wide array of different knowledge forms, perceptions, agenda and other factors that invariably contribute to discourse surrounding vulnerability issues, as well as to the form, extent and effectiveness of vulnerability reduction initiatives.

Thus far, the conceptual framework explored has focussed upon situating the different manifestations of vulnerability and factors contributing to community-level vulnerability. It is important to gain understanding of these aspects of vulnerability. However, without an understanding of the *processes* by which manifestations take shape and the various factors contribute to vulnerability, 'what' happens has been explored without explaining 'how' and much less 'why'.

3.1.2 Interface Analysis

Interface analysis provides the key to answering those how and why questions. The framework of analysis I have employed is broadly based upon the form of "actor-oriented" approach developed by Long, in the context of agrarian development and social change (Long, 1977 and 1984; Long and Long, 1992; Long and Villarreal, 1993). Under this approach, individual or group actors are assumed to function according to their various "world views", which are themselves shaped by overt and covert power processes, socially constructed systems of knowledge and of ignorance and the interaction of actor networks. The "interface" is the setting for interaction – or conflict and accommodation – of different actor worldviews or perceptions. According to Long,

> "*(I)nterfaces typically occur at points where different, and often conflicting, lifeworlds or social fields intersect, or more concretely, in social situations or arenas in which interactions become oriented around problems of bridging, accommodating, segregating or contesting social, evaluative and cognitive standpoints*" (Long, 1999:1)[1]

The strength of this framework of analysis, lies in its ability to embrace the dynamics of processes of change as they affect actors at various levels from the individual to the international organisation. One purpose in developing this framework has been to meet the specific goal of providing a framework for understanding intervention processes which would meet the needs of both academics and practitioners (Long and Villarreal, 1993). In this context, the identification of fields of interface is a methodological approach for grasping complex, variant combinations and amalgams of worldviews (Arce and Long, 2000). As such, interface analysis provides a lens through which to view the workings of intervention processes in specific life-situations.

In the context of this thesis, specific community-based projects provide the focal interface. These encompass a variety of institutions, structures and actors who operate primarily in very different socio-political spheres, brought together to some extent under the umbrella of the project. Much of the focus of later chapters is upon the interface between PNRC disaster management strategies and initiatives on the one hand, and on the other, local community experiences and interpretations of vulnerability in all their diversity. The concept of the project interface however, provides an ideal analytical tool with which to explore the roles of other actors (e.g. LGU) and associated processes, in shaping eventual project outcomes. Emphasis is placed upon gaining a wider understanding of regional, national and international structural elements in as far as they influence local-level socio-economic and political structures and relations. This is as true for local communities affected, as for Red Cross actors operating at the local level, who can be situated in local, regional, national and global networks both within the IFRC and outside of it.

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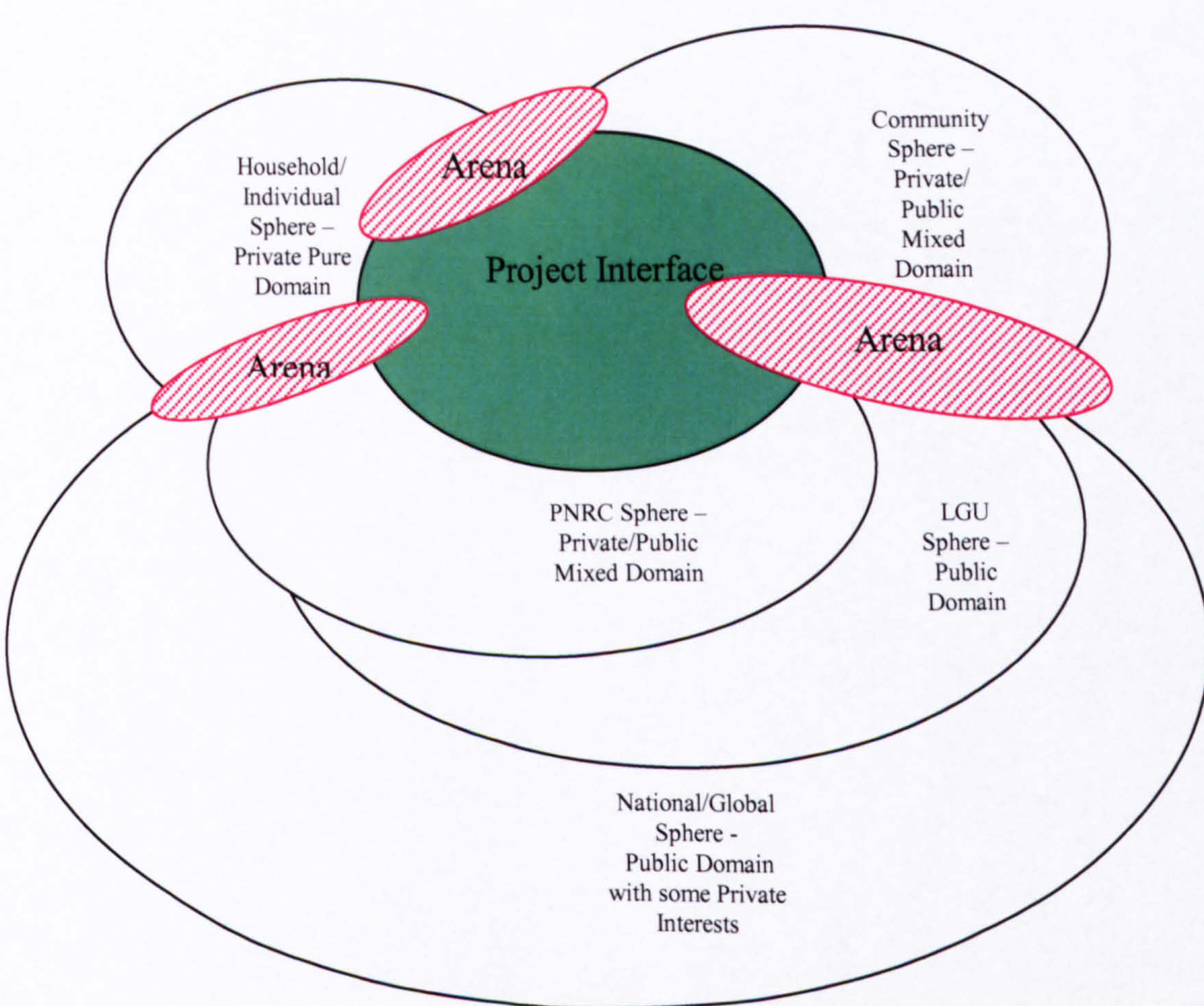
[1] Unpublished paper, quoted in Hilhorst, 2000:22).

In the words of Long and van der Ploeg,

> "*the analysis of intervention must be inserted into an appreciation of the more global panorama. This raises the question of the complex interaction between specific interventions on the one hand, and the multitude of developmental patterns, strategies, and actors, on the other hand*" (Long and van der Ploeg, 1989:237).

Figure 3.3: Interface Analysis in the Context of a Community-based Project



In the figure above[2] as in the rest of the thesis, the project interface denotes the meeting space in which all of the 'actors' affected by, or involved in, the projects studied interact, relate to each other and operate. The five other "spheres" respectively represent the realms of the household and individual actors, of the community, of local Government, of PNRC and of national and or/global actors. Actors may move across spheres at various times and in various respects. As such, the spheres pertain not so much to the actors themselves as to

[2] Largely based upon Long's approach to the study of interface domains and arenas (Long and Villarreal, 1993; Long, 2000).

their actions. Thus, a national government minister operates as a public servant in the national/global sphere; as a community member operating in the community sphere while participating in public assemblies in his home barangay; and as a private individual whilst attending to family concerns in the individual/household sphere. As hinted at in the example above, distinctions of public and private domain accompany actions in the various spheres. However these distinctions are by no means clear cut and are culturally relative. For instance, Pertierra finds that Filipinos tend to "*personalise the public sphere and when possible use its resources to pursue private gain. Such an expropriation does not necessarily indicate selfish motives, since true leaders redistribute these gains among their followers*" (Pertierra, 1998:124). The public/private domain distinctions outlined in the above diagram provide an indication only based upon the findings of the case studies in question. From the example given above, there could be ambiguity as to which domain certain actions of the minister best belong when – for instance – self and public or national and community interests come into play. Pertierra claims that politics in the Philippines "*is mostly perceived as the pursuit of partisan interest rather than an acknowledgement of a common good. Consequently, government funds and projects are allocated on the basis of reward rather than entitlement*" (Pertierra, 1998:126).

The spheres depicted in Figure 3.3 are more than spaces in which actors act. They are 'domains' of social life subject to shared experiences and to associated sets of values, rules and norms which are not absolute, but which are open to differing interpretations. The defining factor is that these 'central cores' or 'clusters' of norms and values imply a 'degree of social commitment' (Long, 2000:191).

Arenas such as those depicted above occur at points of contact or interface between different domains (Long) or – in the figure above – spheres. Arenas also occur within single domains or spheres particularly in situations where differing issues and/or values come into play (Long, 2000). Arenas are defined as spaces where contestation and negotiation over issues, values and resources takes place. These arenas are not limited to localised disputes or situations. Rather, they may also incorporate roles played by 'external' or geographically remote actors, contexts or institutional frameworks (Long, 2000). Long emphasises the role of this form of analysis in exploring contestation and the dynamics of negotiating power differentials between actors in much of his work. However,

interface analysis is also concerned with revealing through various arenas "*the dynamics of cultural accommodation that makes it possible for the various 'world views' to interact*" (Long and Villarreal, 1993:148). In the context of the projects studied, one primary role of PNRC is to add weight to project-related community negotiating power in various arenas. Likewise, strong community involvement in the project also adds weight to PNRC strategies and discourse in arena where households and private individuals take precedence. One issue explored in chapters 5-8, is that of the extent to which local project actors are able to operate and assert their influence in various project-related arenas. These range from barangay based discussions, to international donor negotiations with high-ranking staff of PNRC headquarters.

Although this study is based upon two highly localised projects, it also encompasses a range of processes, actors and agency associated with micro, meso and macro levels of analysis. This ability to encompass different scales is a strength of interface analysis. The wider factors and processes of change outlined in Figures 3.1 and 3.2 above can encompass processes associated with various arenas, taking place at a variety of levels.
These include:

1. Intervention processes implemented within the immediate locality such as river control initiatives;
2. Wider area processes such as watershed deforestation;
3. Regional or national level processes such as price fluctuation and regulation of specific practices;
4. Transnational level processes such as the depletion of Pacific Ocean fish stocks.

All of these levels can be drawn into the analysis in terms of their impacts upon, links with and general influence through the interface under study. Likewise social interaction takes place in various forms and at various scales across the interface. Forms of social interaction range from inter-personal links based upon dyadic ties such as patron-client relations, buyer-seller or debtor-creditor transactions; to wider social and exchange networks; to more formally constituted groups and organisations (Long, 2000). One of the great strengths of interface analysis is that by incorporating plurality into the framework, the worldview of no particular set of actors is – in terms of analysis – allowed to dominate the worldviews of other actors. Likewise, the starting point of the interface allows issues arising in specific life-situations to be examined without limiting the scope or level of processes to be examined from the outset.

A related approach of the actor-oriented school – named "*cognitive approach*" – has been developed by Uphoff. This cognitive approach is concerned with the analysis of how individual actors impact and influence situations (Uphoff, 1992). He contrasts this with structuralist explanations of how situations or processes impact individuals. The approach is designed to include influences which are generally not included in academic frameworks of analysis, but which were found to be of substantial importance in the course of the project upon which Uphoff bases his analysis. Uphoff provides the examples of values, friendship, energy levels and past experience as often neglected – but influential – factors. Orientation to action is analysed in terms of the dynamics of individual and group motivation and values. The cognitive approach is particularly well suited to the analysis of community-based projects, and in the context of this study, has proven useful in exploring the dynamics of community-level negotiation, reasoning and decision-making. Where Uphoff's somewhat optimistic approach falls short, is in incorporating local dynamics of power relations and 'realities' into the framework of analysis.

Interface analysis can perhaps best be summed-up in the words of Long and Villarreal as "*a difficult research topic but one which... is central to understanding the intended and unintended results of planned intervention*", as well as to unravelling the associated complex web of interaction between various groups of actors involved (Long and Villarreal, 2000:148).

3.1.3 Analytical Approach and Underpinning Assumptions

Underpinning my approach are three basic assumptions which cut across the themes explored in this section. These assumptions are, namely:

1. Any given state of vulnerability should be considered transient and subjective. This is because states of vulnerability are determined by the combination and interaction of a multitude of factors and processes of change which impact at the local level. Perceptions of vulnerability may differ widely among and between members of a local community, and other actors. This can be attributed to different levels or types of understanding of vulnerability, as well as differing needs and agendas.

2. Members of local communities are – as individuals and/or as groups – capable of describing and defining vulnerability in terms of their own experience and understanding. This is treated as participants' fundamental right to participate and put voice to their perspectives in the research context. It is however recognised that as a researcher, it is a privilege rather than a right to access this type of co-operation and information and as such, the right for actors to choose *not* to participate (or to limit their participation) in the research process is also upheld.

3. Local level expectations and perceptions of any project or programme are themselves shaped by – among other factors – the unfolding of that project or programme and the approaches and attitudes adopted by all involved. Likewise, exposure to the researcher or research process is also likely to influence local perceptions.

Holistic

At the broadest level, my approach aims to be as holistic and inclusive as possible in terms of the field of analysis. Analytical reductionism is avoided in favour of incorporating – as far as possible – the complexity of 'real-life' situations into the framework of analysis. In practice, this has translated at one end of the scale into research which traverses disciplinary boundaries, combining elements of disasters, development and anthropological theory and approaches. At the other end of the scale, my approach aims to include the differing perceptions or world-views of a whole spectrum of actors involved to varying degrees with one or other of the case study projects.

'Real-life' is by nature complex. Writers from the hazards field such as Hewitt (1983, 1997) and Maskrey (1989) have sought to move away from simplistic conceptualisation of disaster events, and emphasise the need to incorporate complexity into analysis. Oversimplified representation of situations and of forms of analysis is symptomatic of reductionist techniques. Thus from a gender perspective, Kabeer (1994) links the analytical technique of "methodological reductionism" with a failure to properly consider whole sectors of analysis. As a method, Kabeer describes reductionism as the study of separate fragments of the whole, each considered in isolation, in order to methodically build up a clear and scientific body of knowledge. In concentrating on the micro, such an

approach to knowledge building tends to neglect the many and varied relationships which inevitably exist between the various micro elements themselves, and also between the micro and macro. Kabeer asserts that reductionism as a method itself legitimises this failure to take into account crucial issues, including those associated with marginalisation and inequality.

Reductionism in social research is closely associated with the positivist school of thought, which characteristically attempts to predict and explain human behaviour and social phenomena in terms of cause and effect chains. These are themselves linked to identifiable sets of wider truths and laws which make up the social world (May, 1997). The realist school has long countered positivism in asserting that there exists no social world *independent* of people's knowledge of the social world around them, at least in as far as people's knowledge affects their behaviour. Realism upholds the task of the social researcher in explaining observations of the social world "*within theoretical framework which examine the underlying mechanisms which structure people's actions and prevent their choices from reaching fruition*" (May, 1997:12). Although realism may retain elements of determinism – in terms of structures over people's actions – the cause and effect chains characteristic of positivism are considered by members of the realist school to be overly simplistic. This is true in as far as the positivist approach disregards factors such as knowledge, which may be incomplete, and ignores underlying structures and processes.

Holism holds that "*the significance of the parts can only be understood in terms of their contribution to the significance of the whole*" (Collins English Dictionary, 1998:737). In social science research, this translates into three fundamental areas. Firstly, there is a need to recognise the existence and the impact of different forms of knowledge and knowledge construction, as explored in Section 2.2. Secondly, there is a need to recognise the role and importance of social structures, relations and processes that link and – to an extent – determine the parts. Thirdly, it is necessary to recognise the *integrated* role played by unpredictable or chaotic elements in the social world.

Actor-oriented

The terms 'actor-oriented' and 'agency' have already been introduced in the context of interface analysis. Fundamentally, an actor-oriented approach to research emphasises the roles of individual, group and institutional actors in shaping the world around them through agency. Under this school of thought, human behaviour is shaped – and situations are created – by actors themselves as much as by physical environments, social processes or pre-existing social structure. Understanding the role of various actors in shaping situations and project outputs, requires that actor interaction in its various forms be explored. In this context, differential knowledge, perceptions, values, resources and agenda become focal points in understanding the workings of social relations in their various arenas. *Power* relations underlie each of these themes. Power is a relative concept that cannot be easily be quantified. Power can also not be fully attributed to factors external to the actor or actors concerned. Thus, while situations and underlying socio-economic or political conditions accord access to power to actors in various contexts; agency is essentially the exercise of available or inherent forms of power by actors, in accordance with their capacities, value systems and will.

Fundamentally under this approach, researchers are also treated as actors, who directly or indirectly impose their own value systems, definitions or forms of understanding upon the process of research. Inherently, the role of the researcher is to initiate questions and to raise awareness of issues. Researchers structure the course of knowledge acquisition, and regulate the forms of knowledge that are recognised and incorporated within the research process. Depending upon the methods used, researchers decide to varying extents which questions are to be asked at all in understanding an issue or situation, and make decisions as to the weighting of responses and other forms of knowledge in terms of their respective contributions to eventual research findings. Viewed in this light, social research can never be entirely objective, not least because it cannot be fully detached from its human subjects and actors.

Translated into the formal language of research methodology therefore, my approach again proves itself incongruous with the constraints of positivism. Human behaviour and social phenomena cannot be explained in the same manner as their natural-science counterparts (May, 1997). This is due to human agency and to the questionable scope for pure

objectivity in a social context. Rather, this research approach applies an element of subjectivity in that actor's own understandings and interpretations of their environment dominate research findings (May, 1997). Limits have been placed upon subjectivity in this research context only in as far as I have, in my role as researcher, set the bounds of the study and attempted to synthesis the various interpretations and representations of actors who have contributed to the study findings. Thus for example, when a key local government interviewee[3] places her own experience in the context of a (so far) disaster-free period in office, I interpret her emphasis of the preparedness and mitigation aspects of disaster management under her jurisdiction, subject to the constraints of her period in office. In contrast, where another key government interviewee[4] tells of increased prioritisation of preparedness and mitigation aspects, in the context of his understanding of broad policy directions, I interpret this assertion in the context of his subject of discourse and own professed understanding.

Practice/Policy-oriented

Hulme (1995) in summarising the many different approaches to project planning, draws a strong distinction between mainly academic, political economy perspectives, and those which are more practice-oriented. Are academics and practice to remain forever worlds apart? Certainly in agricultural and rural development, concerted efforts have been made to bring the two together, notably by practitioner theorists such as Long and Uphoff. Many more academics have graduated away from highbrow theorising, to concentrate upon more pragmatic issues of actor approach, and of methods to be employed.[5] Both have important roles to play, and should support one another. The problem lies in bridging the gap between practice oriented attempts to grasp complex reality, and more abstract theorising.

Both Uphoff's cognitive, and Long's actor-oriented approach provide attempts to bridge the divide between purely theoretical or academic modes of analysis, and those employed by practitioners in rural development. The thesis also attempts this, in as far as any academic thesis can aspire to do so. Building upon the body of theory developed over the years within

[3] Governor Lerias, Southern Leyte Province.
[4] Mr Umali, Provincial Administrator Oriental Mindoro.
[5] See for example Chambers, 1983 and 1993; Bhatt, 1998b; and Maskrey and Jegillos 1997.

the broad hazard/disaster field, the thesis is concerned with developing a framework of analysis which is *appropriate* for understanding and analysing community-level vulnerability in its socio-economic context. The empirical studies are project-focussed, and findings are presented – as far as possible – in a practitioner-friendly manner. This in order that they might contribute to Red Cross/Crescent understanding and ultimately policy in the context of continuously evolving doctrine, approach, and practice.

This thesis is concerned not so much with abstract theorising, as with the development of a conceptual framework, appropriate to the research context – namely community-based disaster preparedness and mitigation projects. Notwithstanding that this framework may have wider application in understanding hazards, disaster events and vulnerability generally, my focus is upon the development of a conceptual tool. This tool (or framework) is designed to aid future understanding of particular situations, rather than to provide proof of overriding rules which may be said to govern sets of like situation. Significant weight is given to empirical findings unearthed within this framework of analysis. Such is their level of detail, that these finding may never be entirely replicated even in similar circumstances. However as real-life examples of community-based initiatives in action, findings are intended to contribute to the body of knowledge on vulnerability and related processes. The findings have also proven themselves coherent enough to provide certain insights into the intervention process, and – if not hard and fast rules – at least tendencies and dangers associated with certain types of approach.

Case Studies Approach

The overriding justification for using a case study approach, is to explore local realities, with a view to increasing existing knowledge and understanding. Bhatt argues for understanding vulnerability through exploring the life stories of vulnerable people. This, he argues, increases understanding of vulnerability to events, by allowing vulnerable people to situate specific events within their life-cycle (Bhatt, 1998b). In a similar vein, Dahal's study of isolated hill communities in Nepal, illustrates that a case study approach allows community vulnerability (in this case to extreme climatic phenomena) to be more fully explored from the perspective of community members themselves. Dahal finds that the

> *"current perspective of looking at vulnerability has failed to focus on these people. They love and value their land resources. They suffer when lives are lost but may lose their hopes of survival if farmlands are lost*" (Dahal, 1998:67).

The implication is that case studies may allow a conduit by which to explore the *meaning* of specific events and situations in the context of the various life-worlds in which they are understood, created and responded to. Here enters a methodological argument which states that case studies carry an important element of authenticity and authority to the research, although this is by no means a universally held position, even within the realm of social science (May, 1997). In undertaking a case study with considerable emphasis upon local perspectives and situations, there is also a danger of neglecting wider socio-political forces and power structures (Hulme, 1995). However, this is not an inherent failing of the case study approach as a genre. Wider factors and causal processes can be incorporated in the study through the employment of appropriate framework of analysis.

Exploring causal processes in real life situations is important in understanding the paths by which various outcomes are achieved. In real life, influencing factors cannot be limited as they can under strict laboratory conditions – or within the realms of theoretical modelling. Narrative accounts of events within particular case studies are an important means of understanding both processes and their outcomes (Hammersley and Gomm, 2000). Thus case studies may also serve as a means of testing and developing existing conceptual models and theory, with respect to their application and relevance to specific real-life situations.

The case-study approach allows for comparisons to be drawn between two or more case studies, though by no means guarantees that more generalisations than exceptions will emerge in comparative findings. Generalisability is an important issue in case study analysis. The essence of the problem can be summed up as follows: "*the trouble with generalizations is that they don't apply to particulars*" (Lincoln and Guba, 2000:27). Lincoln and Guba argue that such generalizations are both relative, and time-and-context-bound. Case studies are – with some exceptions – more suited to expansionist than to reductionist pursuits (Stake, 2000). In the context of this research project, comparison of two case study sites has proven useful in distinguishing between contingent or peripheral, and primary issues and factors. Comparison has allowed for a certain degree of

generalisation of case study findings. Notwithstanding, the limitations and contextual features of such generalisations are recognised. However, significant differences between case study findings which emerge through comparison may also highlight important issues that could easily otherwise be bypassed. Where, as in the context of this thesis, the underlying goal is to produce results that can be adapted to meet the needs of a hugely diverse region (and thus be applicable in a practical sense, across a wide area) then it becomes crucial to have some grasp of local-specificity.

3.2 Research Design

My research aims are set out in Section 1.3 and can be summarised as follows: to unpack the concept of vulnerability from various perspectives, to establish the priorities and concerns of intended beneficiaries, to identify the scope and extent of local initiatives – both potential and actual – and to contrast and compare differing interpretations of individual, grassroots organisational and Red Cross roles. Seeking to gain understanding of such a wide and evolving range of different perspectives, factors and processes, and at the same time to capture the dynamics of actor interaction and intervention, has required the identification and use of appropriate research methods.

3.2.1 Rural Appraisal Methods

Participatory Rural Appraisal (PRA)/Rapid Rural Appraisal (RRA) techniques provided flexibility and a means of achieving depth of understanding and analysis of local situations. Use of these techniques raised certain ethical and practical issues to be contended with during the preparatory and early stages of my fieldwork.

PRA methodology first emerged in the mid-1980s, as a development of earlier RRA methods which were first introduced in the late 1970s. Both RRA and PRA have as their founding philosophy a desire to obtain a truer and deeper understanding of rural life in the developing world. Both approaches rely heavily upon techniques such as semi-structured interviewing, sketch mapping, transects, diagramming, matrixing and simple ranking exercises. The primary difference between RRA and PRA is that RRA has been treated as

an essentially *extractive* process, in which outsiders learn from rural people, and then process and use knowledge gathered, according to their own agendas. PRA however, is designed to promulgate ownership of projects and processes by local people, and to encourage analysis, problem-solving and planning by – or at least with – local participants (Chambers, 1993).

By nature, PhD research tends to be fundamentally *extractive.* However, a stated purpose of my own research has been to feed back into monitoring, evaluation and policy-making elements of the projects and programmes concerned. Local actors' views have been overtly sought with a view to this end, and as such the research can be said to have a strong participative leaning. Nevertheless, as a researcher, I was never actively or directly involved in project decision-making processes. Thus, this research project leans more towards RRA than PRA, but doesn't fall entirely within the ambit of either. Rather the research is considered to be largely based upon an amalgam of the two approaches, and as such, draws upon a toolkit of methods which are largely common to both.

For the purposes of my research, RRA/PRA techniques have been treated as tools to be used in implementing the approach outlined above, rather than as the supporting foundations. Techniques were adapted and developed according to local circumstances and research requirements. Throughout the research process, a high level of consultation and collaboration with PNRC staff and volunteers has been sought. The strength of RRA/PRA methodology in this type of research setting, lies in its recognition of factors such as inherent cultural bias in research processes, and the active (as opposed to neutral) role of researchers themselves. The role of researchers in shaping perceptions and future project directions, as well as in shaping research and information processes, is recognised (IIED, Feb. 1991). Associated methods are not only highly adaptable, they are also designed to encourage the promotion of trust-based relations between researcher and project participants – be they actual or intended. Knowledge and learning are shared in circumstances which meet the terms of participants, and which inspire as far as possible, the maximum confidence of local people involved.

3.2.2 Research Methods

Semi-structured interviews were the primary method employed in the course of my fieldwork. From my research questions, I devised interview questions (using clear and non-intimidating language), and drew up interview checklists[6] for each of six different categories of interviewee. These categories encompass: Local level community members (including PNRC volunteers), PNRC Chapter-level staff, PNRC national level staff, barangay (village level) local government officials, municipal level local Government staff, provincial level local Government staff. These checklists were never intended to be adhered to religiously, and were, as anticipated, adapted over the course of interviewing to allow for more fruitful framing of questions as I became increasingly familiar with the social norms, customs and understandings of interviewees. On the rare occasions when research subjects proved reluctant to speak on a given topic, they were encouraged to speak about issues with which they were more comfortable, or in which they were more interested. In broad terms however, the same topics were broached, and the same underlying research questions were addressed throughout interviews with each of the different categories of respondent, in both case study areas.

As a starting point within the barangay project sites, key informants were approached in order to gain a preliminary insight into different areas of vulnerability, and differences between social groups within the community. In purely practical terms, key informants also explained the local administrative set-up and helped to determine the interviewing procedure that was to follow. In a strongly hierarchical society such as the Philippines, this approach served a double purpose as it was imperative to explain my purpose and to seek "permission" from local officials before proceeding with community member interviews. The studies then proceeded by means of semi-structured individual interviews, conducted on a house-to-house basis. These could be described as essentially targeted interviews, with some random elements. Targeted in the sense that each barangay was subdivided for research purposes into geographic areas, each with distinct characteristics. Within each sub-division, house-to-house interviews were then conducted on a 'semi-random' basis. Certain types of household were targeted however to ensure a reasonably representative

range in terms of economic status, main form of livelihood and family origins, from each subdivision. I also ensured that interviews included men and women over a wide age range, male and female heads of household, as well as other household members. Further – or follow-up – key informant interviews and focus group discussions were also conducted. Key informant interviews included barangay Captains – past and present – and Councillors, other barangay officials such as the Secretary, Treasurer and barangay Police, barangay health workers, ethnic minority representatives and leaders of various Peoples Organisations operating at the barangay level.

Government officials at the municipal and provincial level were also targeted for interviews according to department and position. Similarly, interviews were held with a small number of PNRC staff at national and Chapter level. Much of the background material on PNRC and Government activities and policy was collated from existing published materials and internal reports.

Other techniques made use of in the field were focus group discussions, mapping, direct observation and informal discussion. Focus group discussions were carried out on a one-off basis. In each of the two project site areas, group discussions were held with members of the locally-based trained teams of PNRC volunteers (BDAT and DRT) and with the barangay Council members, including the Captain. Hazard, resource and social mapping were carried out in a limited capacity. In as far as these exercises had already been completed by community members or officials for administrative purposes or during PNRC training sessions, the finished maps were referred to directly. Direct observation and informal discussion are exactly what they claim to be – informal tools to aid the researcher in understanding local situation and issues. RRA/PRA methodology emphasises, among other factors, the importance of recognising the roles played by *all* research tools, used with varying degrees of formality, in shaping the research process itself, the understanding and eventual findings of the researcher.

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[6] A example of one of these checklists is provided in Appendix C.

3.3 Field-based Research

3.3.1 Case Study Selection

Early in the research process, I decided to focus upon two Philippine-based case studies of CBDP in action. The Philippines was chosen as a suitable location for fieldwork, for three main reasons. Firstly, this was due to the country's impressive reputation in implementing the type of community-based project studied, and in particular because of the pioneering nature of the PNRC projects studied. Secondly the Philippines case studies chosen had the advantage of being of a manageable (within the limited timeframe of a comparative study) scale, when looking at flood hazards in the country. Thirdly, the Philippines was selected as a result of the relatively strong capacity of the PNRC to support the level of research to be undertaken, when compared with other National Societies in the region. My purpose in exploring two separate sites was to allow for a comparative approach which would identify common themes and issues.

I made a preliminary five-week field trip to the Philippines during September-October 1998. One purpose of this visit was to meet key members of the PNRC in order to discuss my research aims and eventually to gain their full support for a more detailed research plan which was formulated during this visit. My second objective was to collect background information and to gain a better understanding of the PNRC, its programmes and individual projects. Finally, I also used the occasion to visit as many of the project sites as possible and to meet local PNRC staff and volunteers, as well as local politicians within whose jurisdiction the projects fall. I also attended two different community volunteer training sessions of the PNRC, one of which involved a three-day stay in the village concerned. As well as familiarising myself with a key part of the programmes studied, this also allowed me to gain a degree of insight into local level issues, as well as of the customs, perceptions and priorities of local participants. When selecting which particular project sites upon which to base my study, several different criteria were taken into account. Most importantly these included:

- The type of flooding (coastal, river, coastal and river) affecting a given area;
- The frequency and extent of flooding events;
- Degree of physical isolation (high, low, average);

- Population of the community concerned;
- Primary livelihoods of the populace (derived mainly from fishing, mainly from agriculture, mixed);
- Socio-economic rating – difficult to gain an accurate picture prior to commencing study as average figures can be misleading;
- Voluntarism within the community (village) involved to participate in the study;
- Support of the PNRC local Chapter involved.

From the above list of criteria, those which were accorded most importance in the eventual selection of my two study sites were: the frequency and extent of flooding events, the degree of physical isolation, the population of the community concerned and voluntarism within the community involved. The type of flooding experienced was not considered of particular relevance for the form of vulnerability analysis concerned and did not significantly alter the nature of the projects studied. Socio-economic ratings were taken into account, but in reality, there was a large degree of variation between different household and sectors of the given communities. Similarly, livelihood strategies, although fundamental to my analysis of vulnerability, were diversified in both sites according to the options available, which were themselves determined by highly local-specific factors. Support of the PNRC was offered for all of the project sites considered, and as such was not an issue that needed to be taken into account.

3.3.2 Data Collection

Data collected in the course of fieldwork falls within three broad categories:

1. Secondary source, contextual data. This is drawn mainly from local Government materials and features socio-economic and environmental profiles and statistics of the areas studied. These included details of official classification of administrative division on a scale of 1 to 4;
2. Data on PNRC policy, programmes and projects as well as wider institutional issues. This information is drawn from mixed primary and secondary sources such as interviews and focus group discussions with PNRC staff and volunteers, PNRC training sessions, published materials and internal reports;

3. In-depth vulnerability study which comprises mainly of primary data arising from interviews and focus group discussions, as well as information drawn from PNRC and LGU sources. In total, over a period of six months, I conducted 168 interviews, and 5 focus group discussions.[7]

3.3.3 Analysis

My research has two main facets. The first of these is an in-depth community-level vulnerability study. The second is the organisational/institutional angle, which incorporates PNRC and LGU actors, as well as project and programmes processes in their institutional/organisational settings. Although the two sides of the equation have been brought together within my analytical framework, for the purposes of data analysis, they have been treated as separate entities in the first instance. This has also been reflected in the structuring of the thesis, where the three chapters of Part Two are devoted to the analysis of these facets, before drawing the findings together in Part Three.[8]

Organisational/institutional analysis has been concerned in broad terms with looking at issues concerned with the conceptualisation of vulnerability, the Red Cross as an institution, disaster management and vulnerability reduction within the local government framework, organisational directives, different components of community-based capacity-building, programme and project learning cycles and sustainability. Analysis of the community-level vulnerability study findings was intended to identify any trends regarding vulnerability, and to establish whether people within the communities studied could be grouped together in a meaningful manner, as outlined below. Much of this part of my analysis has been concerned with understanding not only vulnerability within the community, but also with grasping difference,[9] change and interaction at the community-level.

[7] For a detailed breakdown of interviews and focus groups, refer to Appendix B.
[8] For a summarized breakdown of the thesis chapters, refer to Section 1.6.
[9] It is fundamental to my analysis that community members are not treated as a uniform group with an – assumed – common set of interests.

During the initial stages of data analysis, community member interviews were grouped in accordance with certain forms of categorisation that had arisen during the course of the research. Divisions such as gender, age and health are also emphasised as cross-cutting the groups listed below.

Firstly, residential areas of the two barangay project sites were first split into different geographic areas with distinct characteristics. In Mayabig, the official barangay sub-divisions were maintained for analytical purposes, as these divisions were found to have real working and social significance in barangay life. In Tigbao however, the most significant distinctions were found between those living adjacent to the highway, those living alongside the minor 'barangay roads', and those living in outlying hamlets which each have their own distinct characteristics. These barangay divisions were commonly referred to by community members and were employed for analytical purposes in the research, although they did not correspond to official barangay sub-divisions. The findings of interviews with households living in each of these areas were considered together, in order to better analyse the differences between them in terms of vulnerability. Secondly, findings were divided and analysed in terms of social groups within the barangay. These groups encompass: those considered "native" (either on husband or wife's side), upland migrants moving to the coastal areas (Tigbao), those from neighbouring barangay, the Mangyan cultural minority group in Mayabig and migrants from outside of the two municipalities/provinces. Findings were then regrouped according to the stated primary source of livelihood of each household, for example: rice farmers, landowning farmers, tenant farmers, landless labourers (manual work in agriculture and construction industry), fisherfolks, white collar professionals, semi-skilled workers (including drivers, carpenters, artisans), and traders and storekeepers. Finally, findings were also analysed in terms of those relying upon one or two primary sources of livelihood, and those relying upon a variety of different sources of livelihood.

Throughout all of the forms of analysis outlined above, the implications in terms of vulnerability, and vulnerability reducing strategies and capabilities have provided the focus. I have sought to highlight both the unifying factors and elements of difference within and between the communities concerned. Although in both cases, certain distinct groups have emerged within each community and this was accounted for in the analysis

process, it is also recognised that such grouping of community members are far from static. There are many different ways in which community members can be grouped in different circumstances, and community members may frequently move between different groups.

3.4 Ethical and Practical Issues Arising

In this section, I aim to map out the key methodological issues that arose during the course of my fieldwork. I have included this section as I feel it is fundamental to my approach to recognise the degree of subjectivity inherent in this type of fieldwork and to treat the issues that arose as well as my attempts to address those issues with as much transparency as possible. Research ethics feature in many of the issues raised below. As a researcher, one's "*ethical stance is heavily influenced by events and feelings experienced in the field where personal participation and commitment are concerned*" (De Laine, 2000:30). Therefore, ethical codes and professional or disciplinary standards, need to be balanced with personal feelings and observations arising from the research process. Those issues raised below are not unique, but are common to this type of research. Therefore, rather than undermining the validity of my findings, transparency is intended to strengthen the thesis results by demonstrating that fundamental issues have been taken into account. Value is added by explaining the process by, and the extent to which, issues have been addressed, as well as unveiling elements of interpretation by myself as a researcher. Implicitly, this also serves to set some qualifications to the findings I have drawn from the large mass of data collected.

3.4.1 Access, Disclosure and Research Subject Rights

Access to research subjects was gained in the first instance, through direct introduction or suggestion of Red Cross actors to key project or organisational actors, local government agents and key local figures. Within the case study project sites, access was gained through key local figures or "*key informants*" to a wide range of community members. Some guidance was both sought and accepted in selecting community members to interview. Likewise, those who volunteered themselves to give interviews were taken up on their offers. However, in neither case was a large proportion of interview subjects hand-picked

by local leaders, nor was any attempt made to exclude particular community groups or sub-sectors from the interviewing process.

It is fundamental to PRA/RRA methodology to recognise that research subjects themselves exercise certain rights. Some such rights that have been touched upon above, are concerned with valuing the knowledge and understanding of research subjects in its own right, and with according research subjects the right to express their own perspectives on issues and situations under analysis. Other rights are concerned with the nature and parameters of relations between the researcher and the researched. Bonds of trust, of mutual respect, understanding of aims and objectives, as well as anticipated outcomes are all imbued to various degrees in the research process. Associated rights pertaining to the research subject, include that of a clear explanation of the aims and objectives of the research, and an introduction to the researcher which includes some explanation of their position, their support base and their background. Note that this position excludes the use of covert research practices in this context, whether these be manifested in terms of concealed research objectives, or in terms of both concealed objectives and identity as a researcher.

Another important right and fundamental ethical issue is concerned with disclosure of information and of individual views and statements. In this context, research subjects are accorded the right to request anonymity in relation to the disclosure of all or of any part of their expressed views or statements, which may have emerged in the course of interviews or informal discussions. It therefore becomes important to clarify – or reiterate – this position at appropriate junctures in the research process. It is implicit in the above that research subjects should be asked as a precursor to any interview, whether or not they are willing to participate. This willingness should never be taken for granted – particularly in the context of house-to-house interviewing. In the context of my own case studies where prior consent of barangay officials had been obtained, it is likely that some individuals may have felt to some extent *obliged* to submit themselves to interview, due to the role played by those in a position of authority. Obtaining the express consent of individuals or groups concerned was therefore also a means of counteracting any negative feelings of obligation or of powerlessness of research subjects to overtly refuse to participate in interviews.

3.4.2 Interpretation

One of the first issues that arose in the course of my fieldwork, was that of linguistic interpretation. My grasp of the two dialects widely spoken in my project study sites was too basic to hope to enter into discussions at the level required on complex issues such as vulnerability. Within the timeframe and resource base of the PhD, there was little scope for obtaining the level of linguistic fluency required for interviewing purposes. As such, I took the decision to rely heavily upon outside interpreters. This raised serious questions as to the preferred role and characteristics of those who undertook to help with interpretation. From the outset, I sought individuals who had some affinity with the localities studied, who were comfortable in the various contexts in which interviews were conducted – from the barangay to Municipal government – and who were familiar with the social norms and expectations of the area. Clearly, interpreters had to have a fair grasp of the English language, as well as being native speakers of the dialects respectively used. However, in practice, linguistic competence proved a less important criteria than sensitivity to the understanding, needs and wishes of interviewees, as well as to the aims and objectives of the research process.

One tricky issue was that of interpretation – beyond the realm of pure linguistic interpretation – by those interpreting statements of interviewees. Interpreter's aside comments upon things hinted at rather than overtly stated by interviewees, or efforts to contextualise humour or to explain linguistic nuances all added to the quality and understanding of specific situations and statements. At times during the research process, a tendency was displayed by well-meaning and enthusiastic interpreters to by-pass the straight interpretation process and directly give their translation of the meaning behind statements. As far as possible, this tendency was discouraged, but it took some effort to ensure that – as far as possible – statements by interviewees were translated – as accurately as possible *first* – and *then* contextualised according to their own understanding by those interpreting. Not only are researchers themselves actors (as opposed to neutral agents) in the research process, but so also are those who assist or facilitate the research process. This clearly includes interpreters, but also includes less obvious agents such as those who have helped to arrange interviews or have played some role in introducing me to key individuals such as local government officials or barangay Captains.

3.4.3 Cultural Sensitivity

Cultural sensitivity is an issue that I have already touched upon above. It is a highly subjective element than defies quantification. One can be culturally aware and sensitive to difference, however the understanding that defines cultural sensitivity is not something that one acquires as an absolute. I made every attempt within the remit of the research process to make myself aware of social norms and values. I read appropriate books, but learnt much from informal discussions and from debriefing exercises in the various offices of PNRC. In short, becoming culturally sensitised is an ongoing process, with one's degree of understanding increasing with one's exposure, but also as a function of the quality of that exposure and of one's interest and willingness to learn. With respect to my two case studies, this means that they cannot be considered entirely in isolation of one another. Findings were tentatively aired, verified and – where necessary – qualified through cross-checking during the course of the research process. However, most of the work of analysing and interpreting the data, was carried out after the completion of my fieldwork, for both case studies. As such, both cases were reviewed in the light of the entirety of my in-country experiences and learning.

3.4.4 Sampling

Sampling in this context, refers to the process of selecting – not only the case study sites themselves as previously discussed – but also to the process of selecting *who* to interview or to hold focus group discussions with. Implicitly, sampling also determines who is *not* spoken to in the research process. In Section 3.2.2 above, I listed the categories of person with whom interviews or group discussions were conducted. Many of these groups were cross-cutting, particularly at the barangay-level, where factors such as age, gender, origin, place of residence, house-type and primary occupations were all taken into account in the sampling process. My emphasis has been upon representative sampling. That is, to identify key groups whose views and perspectives are to be included in the research and to ensure that representatives from each group were interviewed. Several individuals from each group were selected as a form of sampling safeguard.

The PRA/RRA literature discusses issues of sampling at some length. Various sampling techniques are advocated – often with a view to ensuring fully *random* sampling. Random sampling is broadly intended to ensure that the outside researcher is not deliberately or inadvertently guided towards an unrepresentative or biased sample which will distort eventual findings. However, there is a strong argument for some degree of deliberate structuring of the sampling process to ensure that specific groups such as women, children, old people, those with disabilities or ethnic minorities are represented in the research process – essentially for the same reason – to avoid bias.

3.4.5 Autonomy

Maintaining autonomy in the context of research such as this which is focussed upon a particular organisation and its projects is potentially problematic. Throughout my fieldwork I was given substantial support by PNRC, which included access to project documents, staff and volunteers at all levels of the organisation, transport to and from project sites, guided tours and introductions from respected staff members to key individuals. My autonomy was encouraged in as far as I was allowed free rein (notwithstanding serious safety considerations) in selecting the project sites to be study and in design of the research project itself. Crucially, I was encouraged to view projects and programmes critically, as my findings could be used constructively in organisational evaluation and learning processes. However real my autonomy may have been to myself, my sponsors and supporting organisation, this by no means ensured that my situation was perceived as such by others involved in the research process, and not least by interviewees.

To many, I was first and foremost a representative of the Red Cross, regardless of my attempts to otherwise represent myself. Some hoped that my findings could bring increased funding or future projects into the locality, and this perception undoubtedly coloured some of their responses in terms of expressing needs, wants and explaining their situations. Others were hesitant to voice opinions that could be construed as (even constructive) criticism of the Red Cross movement or its projects for fear of appearing ungrateful for what they or their community had received, or of jeopardising the chances of future funding being brought in. To yet others, I was an outsider to whom certain grievances could be voiced with the assurance that so-doing would not invoke socially

detrimental repercussions, and might possibly even lead to some small future improvements. Likewise, from the perspective of the various members of local government I interviewed, some were disposed to speak fairly frankly to me about politically sensitive issues, as an outsider primarily researching PNRC projects and local vulnerability rather than local politics. Others for example, were keen to stress the strength and merits of their relations with PNRC and were little disposed to constructively analyse their involvement in the projects concerned.

As was the case for cultural sensitivity, when objectively viewing my level of autonomy from the various perspectives concerned, the best I can claim is to have taken account of these issues in the interpretation and analysis of my findings, and to have made every effort to reinforce my status as an autonomous researcher, particularly in my relations with interviewees. This said, the support of PNRC in particular, proved in many respects invaluable in the field and as such, being seen to maintain my autonomy had to be balanced with all the gains of this level of support.

3.4.6 Validification of Findings

Many of the issues which fall under this heading have already been touched upon in the sections above. As such, I shall simply provide an overview in this section. Whereas, I uphold that research of this nature is not concerned with uncovering universal truths. Findings in this context are relative and context sensitive, this does not negate the need to incorporate appropriate safeguards of validity in the research process. This can and has been done through the cross-checking of information and of the first traces of findings as they emerged. Largely, this was accomplished in the course of subsequent interviews at various levels, although official data sources were also referred to where appropriate. I sought to ensure comprehensive representation of various viewpoints and categories of people, and actively sought to include minority or marginalised groups. As far as possible, I also sought to incorporate insight into the role played by political and other agenda, as well as cultural norms in shaping responses to my questions and representations of particular situations and events. This proved particularly important both in shaping appropriate questions and in interpreting interview and discussion group responses after the event.

3.5 Summary

The framework outlined in Section 3.1 represents the foundation of my conceptual contribution to the field. As well as underpinning the thesis as a whole, this framework is employed in the analysis and synthesis of field-based research findings, presented in Chapters 5-8. The framework serves to inform and shape analysis of my findings. Importantly, it has also been tested throughout the research process, and what is presented here, reflects the synthesis emerging in Chapter 8. In addition to employing the project interface conceptual framework developed in Chapter 3, this later chapter builds upon sustainable livelihoods approaches to explore the relationship between livelihoods, vulnerability and related processes such as exclusion/marginalisation and social capital, in the light of fieldwork results.

A fundamental assumption is that *no* actor in the research process can be considered entirely neutral or objective. In this light, the need to take account of the role played by (formally) unstated perceptions, understandings and agendas is highlighted. Meanings which influence the scope and nature of intervention and project or programme negotiations are found to be embedded in formally unstated elements as much as in official discourse. 'Meanings' represented in actions and approach as well as discourse provide a focus of this study. This is reflected in my own research methods and approach.

Ethical dilemmas have been highlighted as "*an unavoidable consequence*" or "*an occupational hazard of fieldwork*" (De Laine, 2000:2). This thesis supports the view that acknowledging the existence of such dilemmas, and explaining the manner in which they have – as far as possible been resolved – is an important part of the research process. This is particularly true of social research such as that undertaken, which explores processes and impacts of community organisation, participatory schemes and – potentially – of civil society development. Even minimal project involvement as an independent researcher carries the potential of negatively influencing the will of local actors to participate in the project itself, or in future such initiatives. This can be through placing excessive research-related demands upon participants, through misunderstandings, or through raising

(consciously or otherwise) unrealistic expectations of the project, other project actors, or of the potential influence of research findings. Research of this nature carries a substantial degree of ethical obligation and requires high levels of social sensitivity and awareness. This thesis also supports the use of relatively informal and exploratory research methods in this context, with informal, semi-structured interviews and group discussions favoured over formal surveys. The thesis also endorses a degree of immersion in community life (as far as possible within the PhD context) and acknowledges that substantial insight was gained through participation in both formal and informal social functions and activities. Such participation helped to contextualise the various narratives and perspectives emerging from interviews that form the basis of Chapters 5, 6 and 7.

The position of the two case study project sites: Mayabig, Oriental Mindoro and Tigbao, Southern Leyte are each marked with a red dot. Major cities are marked with yellow dots.

Figure 4.1: Map of the Philippines

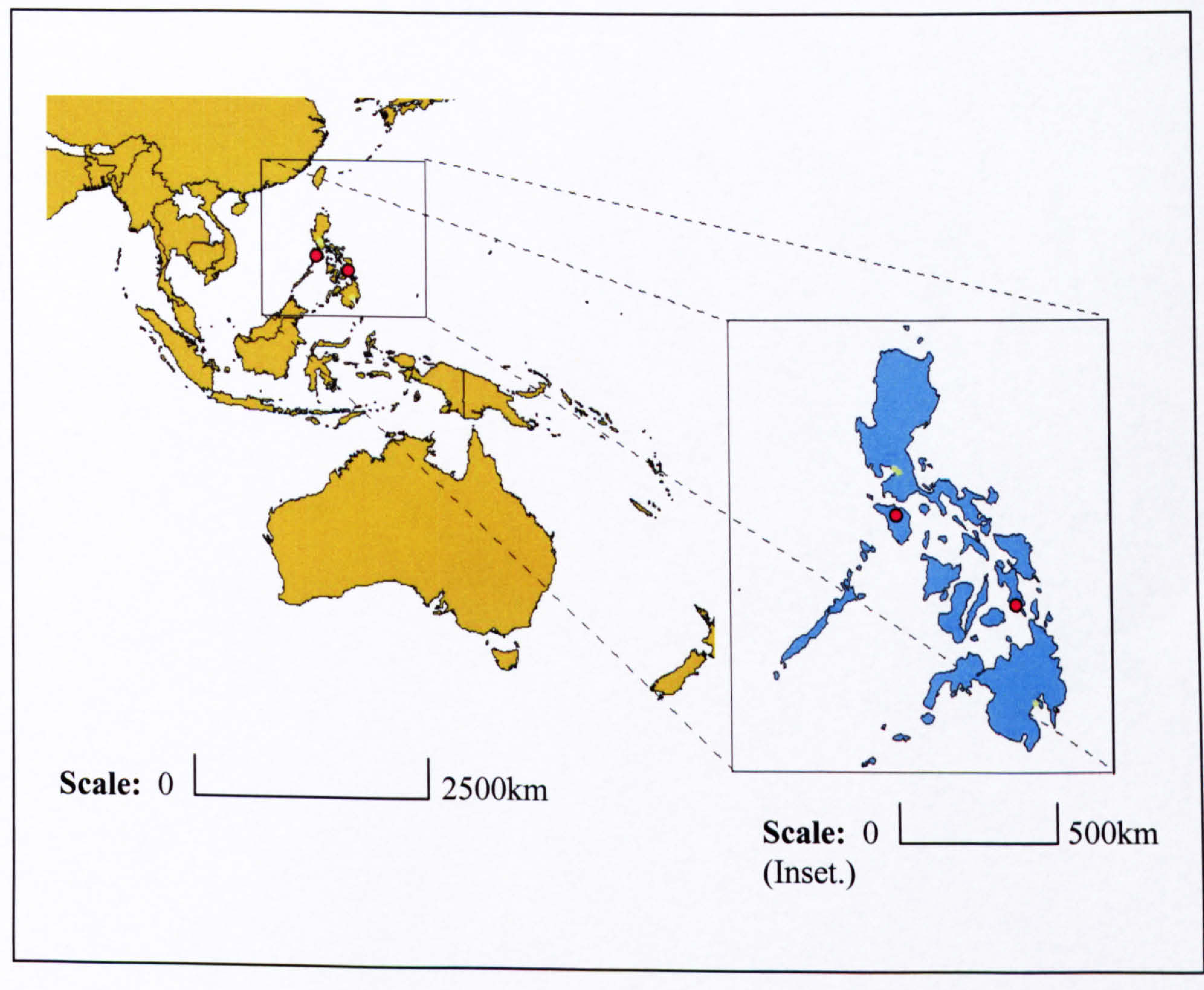
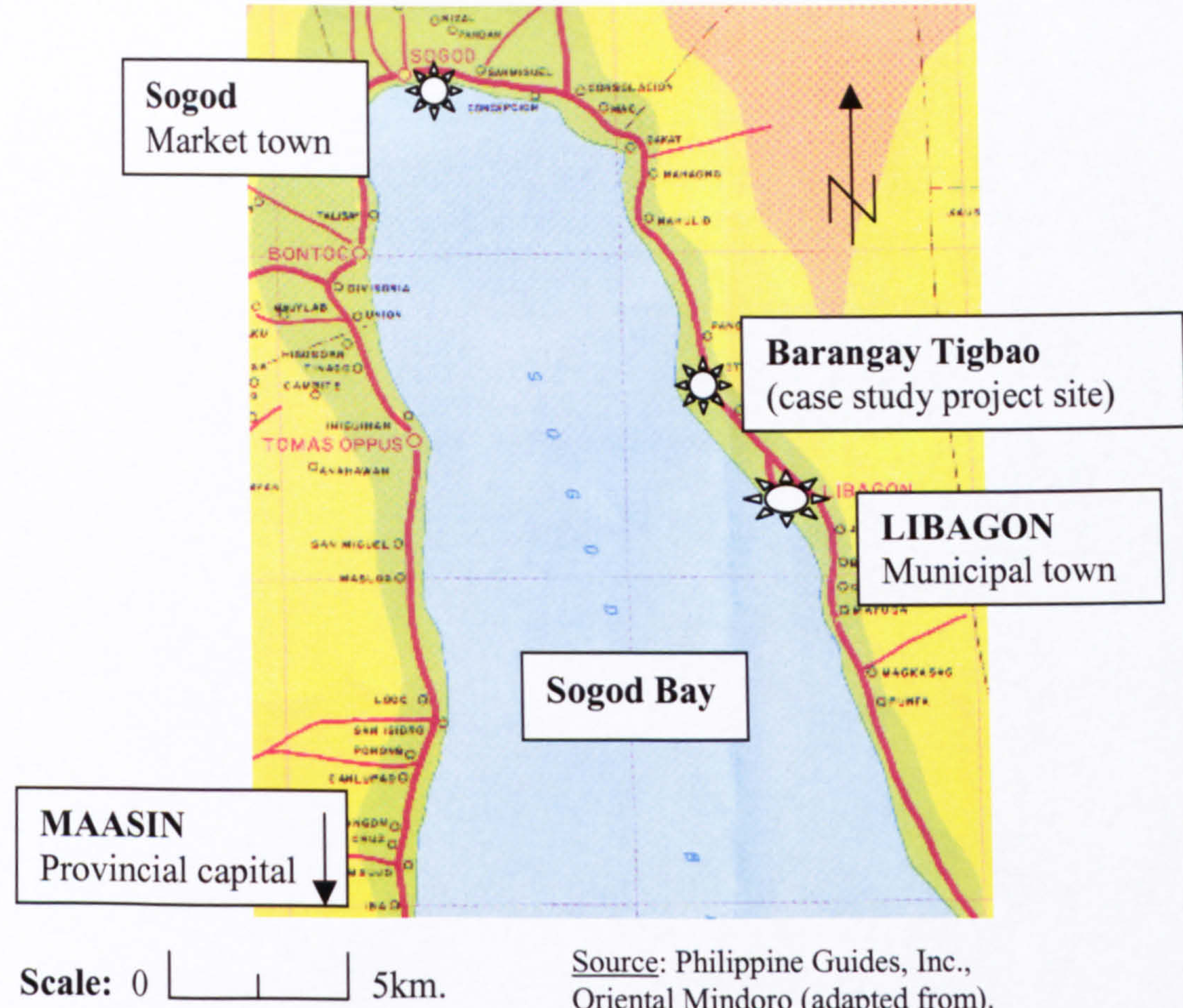


Figure 4.2: Area map of Barangay Tigbao



Scale: 0 5km.

Source: Philippine Guides, Inc., Oriental Mindoro (adapted from).

Figure 4.3: Area Map of Barangay Mayabig

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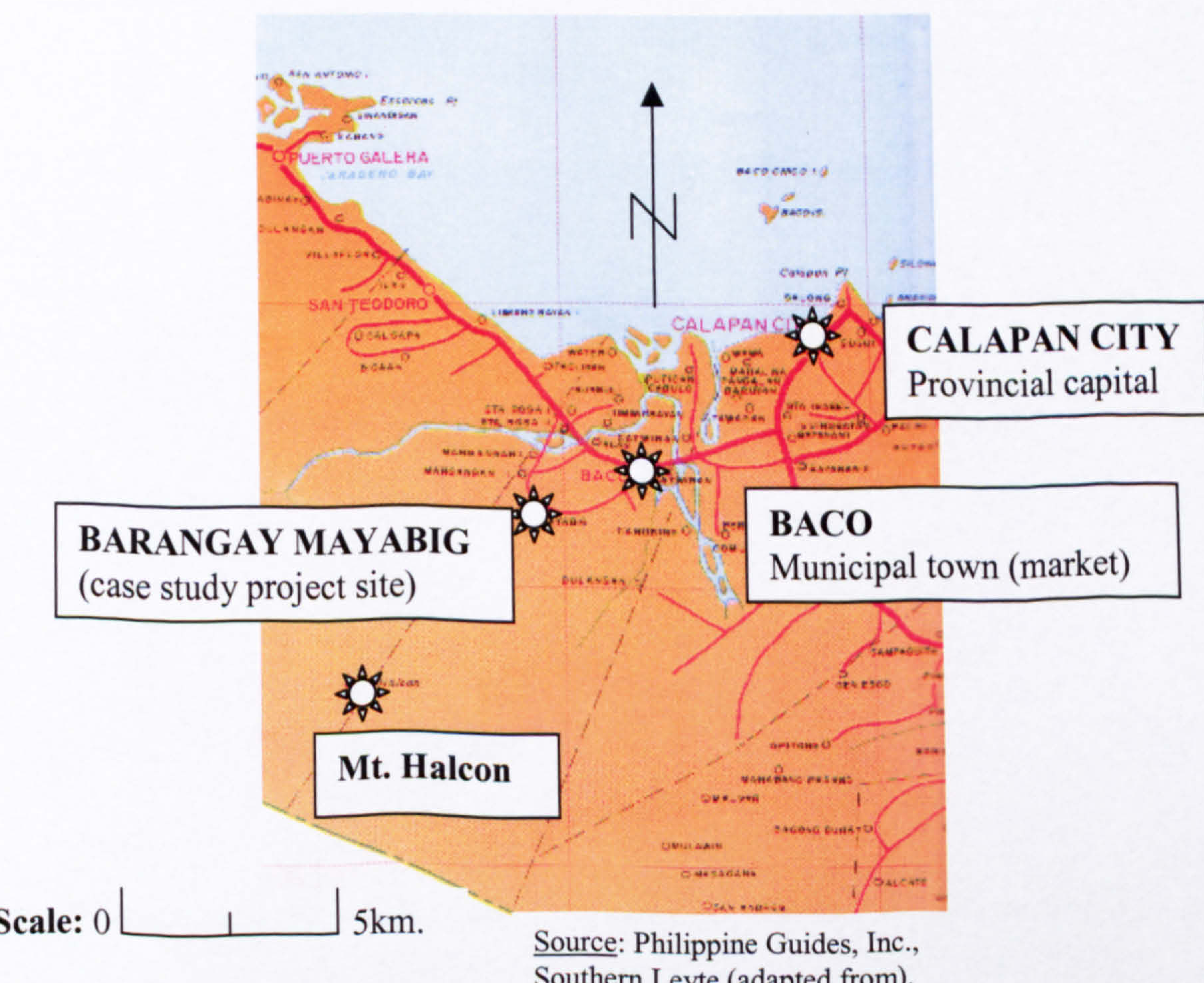


Scale: 0 5km.

Source: Philippine Guides, Inc., Southern Leyte (adapted from).

Figure 4.4: Plan of Barangay Mayabig

KEY TO SPOT MAP:

Barangay sub-divisions:

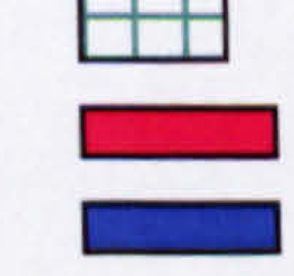
1 - Centro
2 - Pook
3 - Balikat
4 - Alwas
5 - Greenhills
6 - Sibagan
7 - Boulevard
8 - Mangyan Settlements.

Key features:

A - Barangay Captain's house
B - Councillor's house
C - Community building
D - Coredam
E - Irrigation channel
F - Municipal highway.

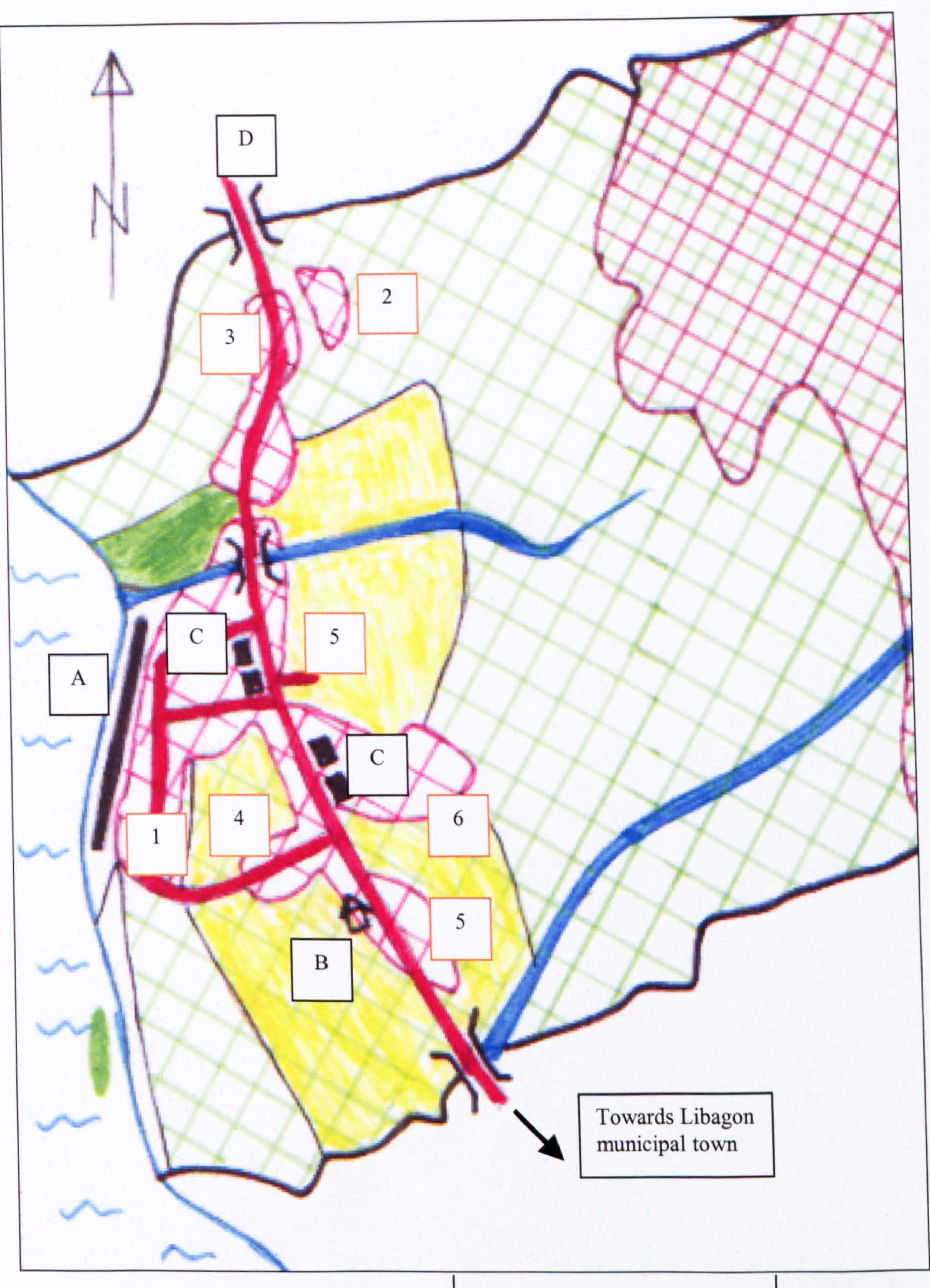
Topography:

Rice fields
Elevated areas
Plantation



Road/track
River

Figure 4.5: Plan of Barangay Tigbao



KEY TO SPOT MAP:

Barangay subdivisions:
1 - Lutao
2 - N. Korea
3 - S. Korea
4 - Barangay Road
5 - Highway
6 – Ilaya

Scale: 0 — 500m

Key features:
A - Seawall
B - Barangay Captain's House
C - Community buildings
D - Municipal highway.

Topography:
Rice fields
Plantation
Elevated areas
Mangroves/ Nipa palm

Road/track
River
Sea

4. Project Case Studies in their Contextual Setting

This chapter introduces the case studies in their contextual setting, with a focus upon the issues that arise in the research findings presented in Chapters 5-7. In Chapter 1, the Philippine National Red Cross (PNRC) is introduced as an actor promoting vulnerability reduction as a key policy objective. Projects have been formulated within the context of broader programme initiatives to better prepare for the occurrence of hazard-related disaster situations. In the two projects studied,[1] PNRC's focus is upon reducing vulnerability to the effects of typhoon events. Indeed, the Philippine islands experience an average twenty typhoons a year, eight to ten of which are turbulent and destructive. On average, it is reported that two million Filipinos suffer yearly from their effects (PNRC, 1994).

The Philippines is also a country stricken by poverty. Categorised as lower middle income,[2] in 1997, 51.2 per cent of the Philippine rural population (and 22.5 per cent of the urban population) was below the poverty line (World Bank, 2001:281). A staggering thirty per cent of Filipino children under the age of five were found to be malnourished during the period 1992-1998, while life expectancy was 67 and 71 years for males and females respectively (World Bank, 2001:277). Whereas vulnerability cannot be exclusively tied to poverty, it is clear that vulnerability and socio-economic status are linked. Therefore vulnerability cannot be understood without exploring poverty issues.

Poverty is concerned with access to resources and with the *quality* of that access. With the Philippines remaining a largely rural and agriculture-based economy, cash income provides only part of the picture. Livelihood strategies for a large proportion of the population have remained primarily subsistence-based. The Philippines is a country traditionally rich in natural resources such as timber (including valuable hardwoods), metal ore and minerals, off-shore fishing grounds and fertile agricultural lands. However, access to such resources has been skewed in favour of a powerful and wealthy minority. The

[1] The two PNRC projects studied are the Integrated Community Disaster Planning Programme (ICDPP) and the Community-Based Disaster Preparedness Project of Disaster Management Service (DMS-CBDP).

potential for conflict over access to resources has always been present and periodically flares-up. For instance, conflicts have taken the form of indigenous minority protests over large-scale (usually government sanctioned) exploitation of hereditary lands and resources by outsiders. Similarly, land reform has featured prominently on the political agenda for the last two decades, and has provided a focus for various degrees of political activism by assorted people's organisations (POs), Non-governmental Organisations (NGOs) and other (often outlawed) groups. Stress on natural resources and their users, has been heightened by pressures associated with environmental degradation, declining fish stocks and high population growth rates. All of these factors have implications for local vulnerability, and are key themes of this thesis.

The chapter commences by introducing the physical and human geography of the Philippines and case study areas in Section 4.1. This section focuses upon important issues of climate and typhoon incidence (Section 4.1.1), natural resource use and depletion (Section 4.1.2), population pressure, migration trends and ethnic diversity (Section 4.1.3), and livelihoods diversity and complexity (4.1.4). The chapter then overviews key areas of social organisation (Section 4.2). These include the local government structure and local social hierarchies (Section 4.2.1), as well as the evolution of social norms and values (Section 4.2.2). Next, the supporting structures, objectives and outputs of case study projects are presented in Section 4.3. The barangay project sites (Mayabig and Tigbao) are then introduced in Section 4.4. This section includes summary descriptions of each barangay, which include points of similarity and difference. Finally, chapter outputs are summarised in Section 4.5.

4.1 Geography of the Philippines and Case Study Areas

The Philippine archipelago stretches 1,840km north-south between 4°9' and 21°7' north of the equator. The archipelago is comprised 7,107 islands.[3] The nation is bounded by the South China Sea to the west and north, the Pacific Ocean to the east and the Celebes Sea

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[2] According to World Development Indicators, World Bank (2001).
[3] Only 1000 of these islands are inhabited.

and coastal waters of Indonesia to the south (DENR, 1999). The total land area of the Philippines is 29.7 million hectares (Steinberg, 1994). My case studies are located on two of the sixteen larger islands, Mindoro and Leyte.[4]

4.1.1 Climate and Typhoon Incidence

The Philippines has a humid equatorial climate, with high temperatures and heavy annual rainfall. The mean annual temperature is 27°C, with the highest temperatures recorded April-June, and the lowest temperatures occurring December-February (DENR, 1999). Annual rainfall ranges between 5,000 millimetres in the mountainous regions of the country, and less than 1,000 millimetres in sheltered valleys (DENR, 1999). The sheer volume of rain falling over relatively short periods is responsible for serious problems of soil erosion, and leaching (Steinberg, 1994). The average annual humidity is high at approximately 82 per cent (DENR, 1999).

The *amihan* or Northeasterly monsoon winds prevail from October to February. Pacific trade winds ensure that the wind blows from the east March to May, before the *habagat* or Southwest monsoon period commences in June, continuing to September.[5] The Philippines lies in the circum-Pacific belt of typhoons, earthquakes and volcanoes. The country's location in the Northwest Pacific basin ensures a high incidence of typhoons. This area is accorded the highest percentage of typhoon development in the world, producing approximately 40 per cent of typhoons globally. Regional variations apply, however the main typhoon season occurs between June and December, during which time the average frequency is one typhoon per month (DENR, 1999). Both the case study areas – Mindoro and Leyte – fall within typhoon-prone areas of the Philippines. On average Mindoro experiences three typhoons in two years, while Leyte experiences an average five typhoons in three years (DENR, 1999).[6] The typhoon seasons in Oriental Mindoro and Southern Leyte occur from May to June and October to December. In both Provinces, rainfall is unevenly distributed throughout the year, with the highest concentrations of rain falling October - January (Province of Or. Mindoro, 1997; Province of So. Leyte, 1997).

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[4] Illustrated in Figure 4.1 (previous).

[5] El Niño – Southern Oscillation is also as prominent factor periodically altering philippine climate patterns.

[6] For further details of typhoon occurrence, refer to Appendix A.

Typhoon *Ruping* in 1990 is considered one of the Philippines' most destructive typhoons to date with maximum wind speeds of 240km per hour. *Ruping* caused an estimated 10.85 billion Philippine Pesos[7] worth of damage (DENR, 1999). Typhoon occurrence is associated with damage to property and infrastructure. Flash flooding, causes soil erosion, landslides and leaves silt and stone deposits in its wake. Typhoon winds and rain cause direct damage to crops and property, while storm surge tends to gain momentum after the height of a typhoon has passed and can last for several days. Storm surge threatens coastal communities and properties, and prohibits the resumption of fishing activities (Province of Or. Mindoro, 1997; Province of So. Leyte, 1997).

4.1.2 Changing Use and Depletion of Natural Resources

Much of the Philippine terrain is mountainous, rising to a maximum height of almost 3,000 metres. The Province of Southern Leyte in the Eastern Visayas Region is characterised by relatively flat lands along its coastal areas and rugged, mountainous lands in the interior. Oriental Mindoro Province is located in the Southern Tagalog Region of the Philippines. The island of Mindoro is also mountainous, with the Halcon-Baco mountain range running through the centre. Oriental Mindoro has fertile plains that are ideal for commercial rice growing. According to government land classifications, Southern Leyte has approximately 33 per cent forest cover and 66 per cent land-use including croplands, fishponds, idle/pasture and residential land (Province of So. Leyte, 1997). In contrast, Oriental Mindoro has approximately 6 per cent forest cover remaining and 91 per cent land-use (Province of Or. Mindoro, 1994). In both areas, forest has tended to survive on upland slopes. Deforestation has been rapid in both Mindoro and Leyte, as it has across large areas of the country.

Kummer finds that in the period 1970 to 1987, an average area of 2,097km[8] of forest cover was cleared annually in the Philippines (1992:60). Officially, all land with a slope of more

[7] Corresponds to approximately 201 million GBP (54:1 ER).
[8] Kummer unveils a complex debate about what constitutes deforestation, which types of forest cover are considered, and conflicting estimates of deforestation rates. Philippine government figures in particular stand out as substantially lower than other estimates, with 250 per cent lower rates than those provided by Kummer. Despite this controversy however, it remains clear that deforestation has been substantial and continues to be a real issue in the Philippines.

than 18 per cent is classified as 'forestland'. This categorisation provides for public ownership, and supposedly for the preservation, of existing forest resources in these areas. In practice, despite the approximately 15 million hectares of classified forestlands, in 1997, official sources estimated that only 5.4 million hectares were actually forested. Of these, only 804,900 hectares remain of old growth[9] dipterocarpaceous[10] forest that once covered the islands (DENR, 1999). This is not only the most extensive type of forest growth remaining in the Philippines, it is also the one that accounts for almost all of the country's *commercially* exploited forest resources of any significant economic value on a national scale (Kummer, 1992). Other types of remaining forest type include mangrove, native pine forest, mossy forest,[11] brushland and grassland. There also exists a category of forestland considered by regulating public authorities to be so degraded as to be "*best converted into forest plantations of rubber, rattan and bamboo*" (DENR, 1999:9). Much of the remaining second and third growth forests are officially reserved as "*best set-aside for biological diversity conservation and environmental protection*" (DENR, 1999:9). The justification given for the implementation of this conservation policy is increased recognition of the adverse impacts of deforestation on the environment, as well as shortages in raw material supply for wood-based industries (DENR, 1999). The process of deforestation has been traced to causes such as commercial logging, shifting cultivation, forest fires, natural hazard events, conversion to agricultural lands, human settlements and similar land uses associated with processes of urbanisation and increased population pressure (DENR, 1999).

Likewise mangroves, which still account for 112,400 hectares of forestland (DENR, 1999), have been seriously depleted over the last century. Mangroves occupy coastal fringes and tidal flats. In particular, mangroves favour estuarine or deltaic locations, as they develop best in fine-grained, soft organic mud deposits. They provide habitat for a range of marine life. Mangroves remain vulnerable to wave action at all stages of their life cycle and as a

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[9] *Old growth* forests are significant in that since the 1990's, an official ban has been in force on logging in these areas (DENR, 1999).

[10] Dipterocarpaceous forest is primarily made up trees belonging to the dipterocarpaceae family, which are of Malaysian origin, and of which, many species yield useful timber and resins (Collins English Dictionary, 1998; Kummer, 1992).

[11] The term *mossy forest*, is used to describe higher elevation (generally above 1,800 metres), stunted forest growth. This type of forest growth is distinguished from others largely due to its lack of commercial value, although it has a key role in terms of its water-and soil-holding function (Kummer, 1992).

result, tend not to grow on exposed stretches of coastline (Gillie, 1997). However in less exposed coastal areas, mangroves do provide coastal protection by binding sediment in their root systems, and also provide a barrier to alleviate the force of sudden storm surge in otherwise low wave energy locations (Gillie, 1997). Mangrove depletion is attributed to factors such as the use of their wood for charcoal-making and catechu[12] extraction (Kummer, 1992). Large tracts of mangroves have also been converted to shrimp and fish ponds (Broad and Cavanagh, 1993), as well as cleared to make way for coastal development of expanding urban settlements.

Aside from forestland, the other primary land categorisation is 'alienable and disposable land' which can be privately owned and cultivated. This is essentially non-mangrove land with a slope of less than 18 per cent. In 1997, 14.12 million hectares of land were registered as alienable and disposable in the Philippines (DENR, 1999). The majority of this land outside of expanding urban areas is given over to agricultural use. Expansion of agricultural land takes place mainly in upland areas, where short-season crops such as corn, replace perennial and long-fallow agricultural systems including forest resources (Coxhead, 2000). This process of evolution in upland land use, is associated with rapid increases in upland land degradation and soil erosion due to more frequent tillage, increased exposure to wind and rain damage, and nutrient depletion by nutrient greedy crops such as corn (Coxhead, 2000).

Fringing coral reefs provide protection from coastal erosion and typhoon-related storm-surge, by absorbing most of the force of larger waves (Gillie, 1997). They also provide an important fish habitat in the Philippines. However like mangroves, coral reefs are fast being degraded and depleted. This is attributed to various factors, the most prominent being upriver deforestation, agricultural activities and mine tailings that produce a high sediment load. Also certain fishing techniques have caused substantial damage such as the use of drift nets, use of cyanide to stun fish for aquarium collection, or dynamite blasting to dislodge fish from their hiding places in coral reefs (DENR, 1999; Broad and Cavanagh, 1993).

[12] Catechu is also known as cutch, and is a resinous substance that is used commercially in medicine, tanning and dyeing (Collins English Dictionary, 1998).

4.1.3 Population Pressure, Migration: Ethnic Difference and Assimilation

The population of the Philippines is growing rapidly. Official census details indicate that the total population of the Philippines in 1990 was approximately 60.7 million. By the year 2000, the population had risen to an approximate 75.3 million. It is projected that in 2002, the population will have risen to 79.5 million (NSO, 2000). The population is also a youthful one, with 38.4 per cent of the population under 15 years in 1995. 58.1 per cent of the population was under 65 years and only 3.5 per cent of the population was 65 years and over (NSO, 2000). In 1994, over 50 per cent of the population were under the age of twenty (Steinberg, 1994). These figures signify high ratios of dependants to livelihood earners and a high proportion of young people entering the labour market every year. Projections (based upon figures up to and including the early 1990s) show that rapid population growth combined with a large youthful population will require a doubling of the quantity of housing, schools and health facilities available to the population every 29 years in order to maintain a constant level of service (Library of Congress, 1991). Official sources quote a high unemployment rate of 11.1 per cent, and an even higher rate of underemployment, 21.4 per cent, in July 2000 (NSO, 2000).

Migration

Migration from rural to urban areas is substantial. In rural areas, the majority depend primarily upon access to land and natural resources for their livelihoods. Population pressures and increasing degradation of natural resources have left many with little choice but to migrate to the capital Manila and other urban centres in search of employment opportunities (Broad and Cavanagh, 1993). Many Filipinos also seek employment overseas for similar reasons. In addition to those seeking permanent residence abroad, in the late 1980s and early 1990s, more than half a million Philippine residents temporarily migrated abroad to work (Library of Congress, 1991). Many work as contract workers, nurses or domestic servants in the Middle East, the United States, Australia, Hong Kong, Singapore, Japan and Europe. These workers often send back a large proportion of any income earned in the form of remittances to family members in the Philippines.

Another, important migration route has been rural to rural. This has taken place firstly, from poverty-ridden, land-scarce areas to agricultural 'frontiers' in search of land (Steinberg, 1994; Library of Congress, 1991). A fast declining population-land ratio in the

rural Philippines had led by the late 1980s to the resettlement of thousands of Filipinos in agricultural frontiers on the southern island of Mindanao and the island of Palawan in the west (Library of Congress, 1991). Secondly, migration and resettlement has occurred between relatively high and low-productivity (excluding large-scale plantations) agricultural areas such as the Visayas (low-productivity) and Mindoro (high-productivity). Such migration patterns rely heavily upon family support networks, and are motivated by increased livelihoods (especially agricultural labour) opportunities in high-productivity areas. As well as favourable livelihoods options, such migration has also at times been motivated by security considerations in areas of conflict. Rural-rural migration patterns in this second category are evident in both case studies, and their implications are explored in Section 5.2.

A final, less visible group of temporary migrants are to be found among the growing ranks of the landless rural labourers. Such labourers have often agreed to work on specific farms for part of the year. For the remainder, many migrate following work opportunities harvesting commercial crops such as sugar, rice or fruits. Many group together in labour gangs, seeking work together (Steinberg, 1994). Many have left the Philippines to work as labourers in the Hawaiian sugar cane industry or in the Californian agriculture sector (Steinberg, 1994). Others supplement their livelihoods by seeking work as labourers in the construction industry. Workers in this group are amongst the most lowly paid and most vulnerable members of the Philippine workforce. The fluidity and diversity of this broad group with its members – slipping periodically between employment, underemployment and unemployment – makes them difficult to quantify and adds to their social invisibility (Steinberg, 1994).

Ethnic Groups

The Philippines today has emerged as an ethnically and linguistically[13] diverse nation. The Filipino people have assimilated a broad range of ethnic groups by intermarriage over the centuries; however several ethnic groups have remained distinct from the largely (though not exclusively) Catholic Filipino majority. These groups include Muslims, upland tribal

[13] In the late 1980s, there were a documented 11 languages and 87 dialects spoken in the Philippines. Eight of these, including Tagalog and Cebuano (the main languages of Or. Mindoro and So. Leyte respectively) were first languages for approximately 90 per cent of the population (Library of Congress, 1991).

groups and ethnic Chinese (Library of Congress, 1991; Steinberg, 1994). Numerous upland tribal groups continue to subsist, largely in the interior uplands[14] – most notably of northern Luzon, Mindoro, Palawan and Mindanao islands. Although diverse, these groups are often collectively referred to as indigenous peoples, or as cultural minorities. Increasingly, their rights in terms of access to services and resources – particularly land, as well as to maintain cultural practices – are being recognised. However, this is a slow process and many representative POs and NGOs have been established to represent the rights of indigenous peoples. Many tribal people have moved to lowland Filipino settlements and have adopted the social practices of their host communities. Although some are more assimilated than others, the ethnic divide remains. Indigenous peoples tend to be regarded by Filipino lowlanders as clearly distinct from their own group and as relics of the Philippine's rich history and traditions.

The primary indigenous minority group of Mindoro are the Mangyans. In total there are an estimated 51,596 Mangyans residing in Oriental Mindoro Province (8.6 per cent of the total population in 1994), and these are divided between 7 distinct tribes, each with its own dialect and customs. The majority of Mangyans still reside in remote upland settlements, with few Tagalog members. Increasingly, Mangyan people are integrating with their Tagalog neighbours. Many work as agricultural labourers on Tagalog-owned land. An increasing number have moved permanently from their upland settlements to lowland Barangay, such as Mayabig. Laws aimed at reducing deforestation on the uplands, prohibit Mangyan people from operating their customary *kaingin* system of shifting agriculture, which is often pejoratively referred to as "*slash and burn*" (Kummer, 1992:88).

4.1.4 Complex Livelihoods

In the period 1999-2000, government statistics reveal a decline in labour force participation rates in terms of percentage of the population of the Philippines.

[14] In many cases, indigenous groups have been pushed out of the fertile lowland areas by waves of "lowland" Filipino migrants over the centuries (Broad and Cavanagh, 1993). This is true of the Mangyan group of indigenous peoples who came to occupy the mountainous interior regions of Mindoro. Originally coastal fishermen, these groups migrated and evolved their ways of life to encompass upland shifting agricultural practice (Province of Or. Mindoro, 1997).

Unemployment rates have risen – although underemployment rates have fallen. A steady decline of employment in the agricultural, fisheries and forestry sectors is evident, while employment rates in the service sector have risen (NSO, 2000). These patterns are reflected in the trend of rural-urban migration discussed in Section 4.1.3. Rural livelihood strategies in the Philippines tend to be diverse, with often many different sources of livelihood for any one household unit. Also, groups of family members and/or friends group together at times to establish small business ventures. It is therefore crucial to take account not only of household capital and assets in understanding livelihoods and associated forms of vulnerability, but also of the roles played by various forms of social network and institution. It is through such networks and institutions that *access* (and quality of access) to resources is determined.[15]

Professional employment is an area in which access to supporting social networks plays a determining role. Those who have succeeded in securing themselves professional employment are local elites. Extended family contacts and family prestige contribute to securing positions as teachers and local government staff at municipal and provincial levels. However, college or university-level educational achievement is vital in order to secure professional employment, and is a key component of social mobility.

The case study barangays are largely agricultural producers. While Mayabig is primarily a rice and banana producer, Tigbao produces copra and abaca[16] as well as smaller quantities of rice and bananas. Rice is the staple food of the majority, and is an important crop in both barangays, as it is across much of the Philippines (DENR, 1999). Between the 1970s and the early 1980s, the 'green revolution' took hold of the Philippine rice sector. Rice yields increased due to the development and cultivation of high-yielding varieties accompanied by packages of chemical fertilisers and pesticides (SA Network, 1997). During the same period, the Philippine government undertook massive expansion and 'modernisation' of the national irrigation system, under the auspices of the National Irrigation Administration (NIA).[17] The 1980s however, saw the beginning of decline in the

[15] In outlining this area of access to resources, I am essentially entering the terrain of what has increasingly been defined as "social capital". This is a topic which shall be expanded upon in Section 8.1.1.
[16] Plant from which Manila hemp is produced.
[17] NIA was established in 1964 as a fundamental part of the Philippine government's drive for rice

Footnote continues on the next page

rice sector. Average annual growth dropped from 4.6 per cent during 1965-1980, to 0.9 per cent during 1980-1985 (Library of Congress, 1991). This decline is attributed to diverse factors, including economic downturn in the 1980s, tropical storms and droughts, increasing prices of agricultural inputs, declining prices of rice fetched by farmers and the drying-up of agricultural loans (Library of Congress, 1991). Population growth, increased life expectancy and fragmenting land ownership through inheritance[18] have combined to lead to decreasing plot sizes, land scarcity and increased pressures upon available lands (Steinberg, 1994). In Tigabo, the average landholding is less than ½ a hectare, while in Mayabig it is slightly larger at between ½ and 1 hectare. A significant number of households in Mayabig have landholdings of over 2 hectares. The national average is held to be less than five hectares (Hayami et al., 1990). The decline in the rice sector described above makes self-sufficiency a difficult goal for smallholders to attain.

As the rice sector has declined, numbers involved in livestock-raising have grown across the Philippines (Library of Congress, 1991). This is reflected in the increasing number of government and NGO funded micro-enterprise initiatives that support household-level livestock-raising in both Mayabig and Tigbao. Handicraft-making from locally available materials such as rattan, coconut palm and bamboo is a sector emerging to meet the requirements of export and tourist industry markets. Abaca production and processing is a recently revived sector of livelihoods activity in Tigbao. Although abaca for Manila hemp-making was traditionally produced in the region for clothes-making, this practice had all but died out over the later half of the 20th Century, as low-cost factory produced garments became increasingly available. Production has been revived to meet the increased demand in recent years of overseas markets for Manila hemp. Copra[19] production is another area developed in response to market demands.

Unlike Mayabig, Tigbao is a coastal barangay, with many community members involved in fishing or in mixed fishing, farming and/or labour. Fisheries are an important source of

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production self-sufficiency at that time (Bagadion, 1988). NIA continues to operate in the present day Philippines and the body's impact continues to be felt in the agricultural communities that form the focal point of this study.

[18] Unless agreement is reached to the contrary, land in the Philippines tends to be divided equally upon inheritance between siblings regardless of sex or order of birth.

[19] Dried kernels of coconut.

livelihood for an estimated one million people across the Philippines (DENR, 1999). According to 1989 figures, 46 per cent of the total commercial fish catch was caught by an estimated 574,000 small-scale fisherfolk, using small boats off shallow coastal waters[20] (Library of Congress, 1991). Many small-scale fisherfolks have difficulty sustaining themselves and their dependants from their catches. As fish stocks in coastal waters decline (Library of Congress, 1991; Broad and Cavanagh, 1993), increasingly fish to supplement other forms of livelihood. Broad and Cavanagh estimate the average income of small-scale fisherfolks in 1993 to be a mere $0.75-$1.50 per day. This compares to the marginally better income of $1.00-$2.00 per day earned by small-scale farmers and the average $2.50-$3.75 daily wage of factory workers during the same period. As is true in the agricultural sector, widespread inequalities are reported between commercial fishers and small-scale fisherfolks (Broad and Cavanagh, 1993).

Figure 4.6 below synthesises key factors associated with each of the broad sources of livelihood in the communities studied and other comparable areas of the rural Philippines. In particular, this table serves to illustrate both the diversity and complexity of livelihood strategies in this context.

[20] Customarily of no more than 3 kilometres offshore (Library of Congress, 1991).

Figure 4.6: Summary of Livelihoods in the Case Study Areas

Livelihood Sector	Primary Elements	Key Characteristics
Small-scale Agriculture	Commercial: rice, coconuts, abaca, bananas and other fruits, corn, pepper, nipa palm and bamboo for housing. Subsistence only: rootcrops (sweet potato, cassava), vegetables, herbs and spices. Sector divided into: Landowning farmers, tenant farmers and agricultural labourers, working for a daily rate or share of the harvest.	Agricultural production in the Philippines focuses upon key commercial crops. Rice is the staple food of over 80% of the population, and the primary crop of both study areas. Commercial crops such as rice are often retained for household consumption. Rising prices of agricultural inputs, typhoon damage and pests place considerable stress on farmers.
Fishing	Mainly sea, some river. Equipment: Palm boat, lamps and nets or hook and line. Catches: Mostly tuna, blue merlin, milkfish and small fish for drying or marinading. Also crabs, shrimps etc.	Primarily a night activity. Often combined with daytime farming or labour. Stress caused by declining fishstocks and inability to compete with ocean-going commercial fishers. Stormy weather makes sea fishing impossible, and boats vulnerable to damage.
Non-agricultural Labour	Construction industry, local house-building. Service sector (mainly urban): domestic service, shops, hotels and restaurants.	Usually requires temporary or permanent migration to urban centres and industry contacts (usually extended family members). Often paid daily rate with little job security.
Artisanal and Trade-related Skills	Mat/basket/fishcage/furniture -making. Carpentry (light materials house-building and repairs), Welding.	Artisanal is poorly paid, labour-intensive work, undertaken on demand. Carpentry is better paid but generally infrequent work. Welding is better if permanent position in successful (urban) business. Otherwise, little livelihood security. Such activities tend to be combined with farming or fishing.
Micro-enterprise Initiatives	Tricycle/jeepney drivers. Shopkeepers and traders. Livestock breeding: pigs, water buffalos, cattle, chickens. Chickens and ducks kept for egg production.	Tend to indicate a degree of livelihood security, as these require investment (e.g. in a vehicle, store building and stock). However, micro-enterprise loans are increasingly available. Livestock vulnerable to disease and flooding.
Professional Employment	Mainly, teachers, LGU staff and engineers.	Relatively secure forms of livelihood, which are often associated with increased expectations and spending, e.g. in remittances to family members and children's education.

4.2 Social Organisation

This section provides an overview of the key components of social organisation that shed light upon the research findings emerging in Chapters 5-7. Firstly (Section 4.2.1), outlines the formal local government structure, and situates barangay leaders within the local government hierarchy. Secondly (Section 4.2.2), explores the role of informal social norms and values, as well as of formal institutions of the dominant Catholic church, in shaping social relations and practices.

4.2.1 Formal Hierarchical Structures

Figure 4.7: Simple Representation of the Philippine Government Hierarchy

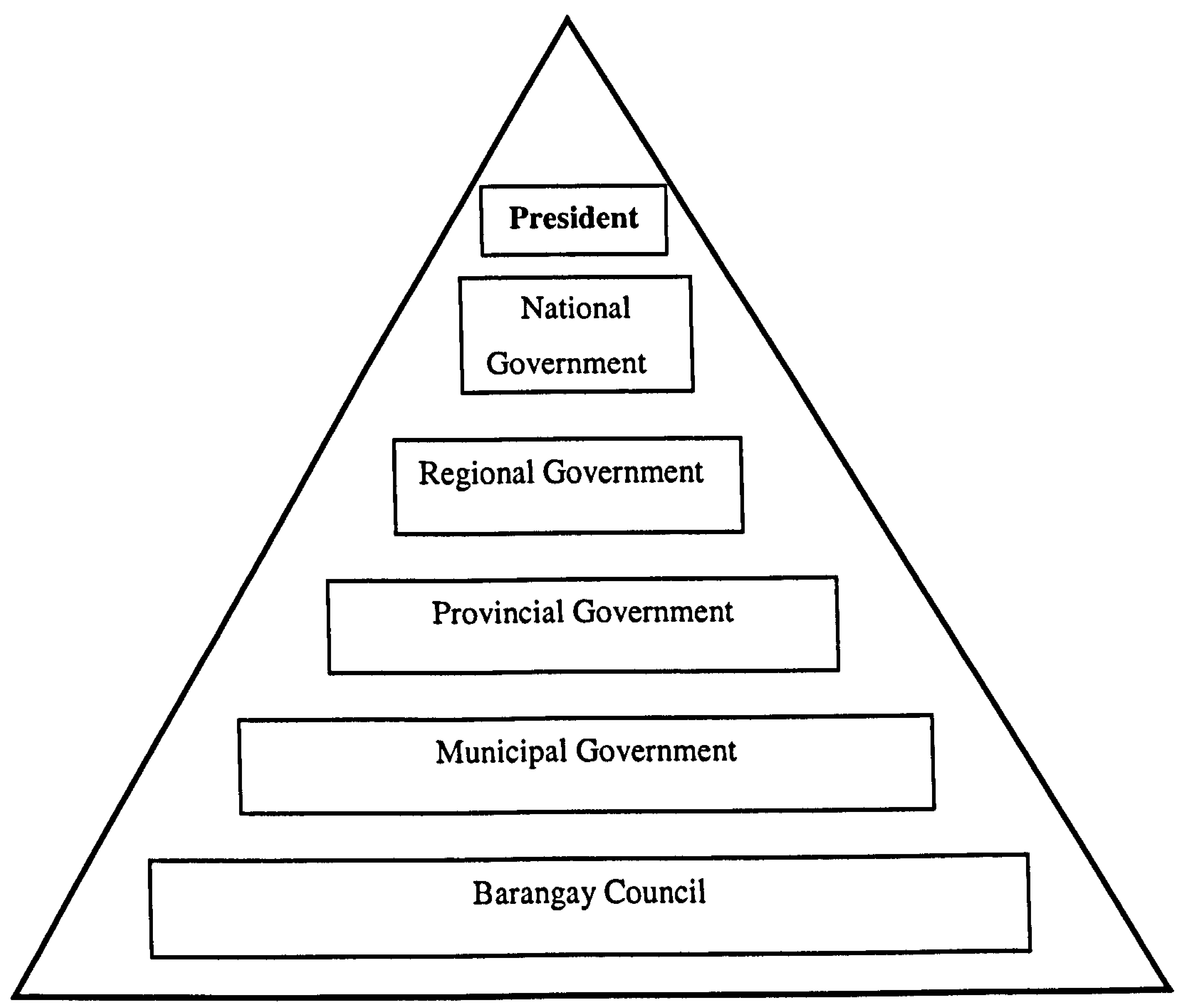

Figure 4.7 above shows the Philippine government system as a hierarchical pyramid structure, with the President and national government at the top, and barangay councils forming the lowest tier. As a rule, policy and programme directives filter down through the government system, while information (largely in the form of census data and sectoral plans) filters upwards. Lower levels of local government, have low funding levels. Therefore, project funding applications have to be made to LGUs in accordance with the level of funding required. High-cost project proposals have to be made directly to regional or national government, with appropriate recommendations from municipal and provincial levels.

This thesis is concerned primarily with the disaster management role of local government. However, it is important to view local disaster management in the context of the role

played by national government institutions in formulating the policy and programmes that filter down to LGUs.[21] The local government system comprises provincial, municipal and barangay levels. Each of the 78 provinces of the Philippines is headed by an elected Governor. Likewise, every municipality is headed by an elected Mayor, and each barangay, by an elected Captain. In addition to the offices of the Governor and of the Mayor, provincial and municipal government comprise a departmental structure reflecting that of national government. These include the Department of the Environment and Natural Resources, the Department of Agriculture and the Department of Social Welfare and Development. These provincial and municipal-level departments are primarily responsible for the implementation of national policy and programme directives. In addition, governors, mayors and captains have a degree of freedom to implement or support their own chosen projects (often infrastructural), dependant upon their ability to secure the necessary funds. Provincial, municipal and barangay levels of government are also made-up of a series of sectoral planning committees, upon which Governors, Mayors and Captains sit, at their various levels.

At the local level, the position of barangay Captain is powerful. Much status is attached to the position, and prominent local families often vie to place one of their members in the role.[22] Barangay Captains receive an honorarium rather than a full salary, and their duty to the community is full-time. All the significant problems and disputes of community members are brought to the Captain as well as many pleas for financial help. The Captain is the one who negotiates and co-ordinates with higher level government officials, fellow barangay Captains of the area, NGO staff and passing sales persons and traders.

In particular, Captains are expected to campaign to bring funding from outside agencies into community-level projects. Captains are strongly judged on the basis of their achievements in this respect. The Captain is also responsible for welcoming visitors to the barangay, and for feeding, housing and guiding them as necessary. Captains are empowered to appoint Councillors, to aid them in carrying out official barangay business.

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[21] LGU disaster management roles, as well as the processes governing the translation of policy and programme directives into practice at the local level, are explored in depth in Chapter 6.

[22] For instance, in Mayabig, political feuding between Mayabig's two dominant families had shaped local politics for generations, until the election of the current Captain who – because through his parents' marriage

Footnote continues on the next page

Together they form the various local-level committees required by LGU regulations, of which examples include Health and Sanitation, and Disaster Co-ordination. The Captain is responsible for the formation and proper functioning of such committees, for the formulation of official documents such as the *Barangay Development Plan*, for collecting census details and for the budgeting and allocation of barangay resources. Barangay officials are also responsible for holding *General Assemblies* to discuss barangay business and disseminate information to community members.

4.2.2 Evolving Behavioural Norms, Values and Reciprocal Bonds

People do not exist in isolation within their communities. Interactions between different groups and individuals are themselves crucial elements in determining levels of vulnerability. This section is concerned with the norms and values that shape social relations, and determine the manner in which reciprocal bonds are formed.

The Importance of Smooth Social Relations

As for much of Southeast Asia, in the Philippines, particularly high value is placed upon maintaining smooth social relations, with elements of difference often glossed over for the sake of the common good (Mulden, 1997). This is clearly evident within the bounds of closely-knit rural communities such as those studied, and even within political processes. Interpersonal relations are nurtured, and are the foundations upon which networks of support in times of crisis are established. Recognising the significance of such networks and relations is also crucial in understanding local-level hierarchical systems and decision-making processes.

The 'Bayanihan' System

Bayanihan is presented across the Philippines as the "traditional" way of doing things. Although, society is constantly changing, and new practices have been introduced, *bayanihan* practices have not died out. In fact, *bayanihan* systems tend to be associated by people, at all levels, with positive values, which many would like to preserve and revive

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he belongs to both families – has been able to generate unity (m47).

(Mr. R. Malibiran, 1999; Brgy. Captain S. Bautista, 1999).[23] In rural areas, the *bayanihan* system is largely associated with agricultural activities and the practice of groups of neighbours helping each other at labour-intensive times of the agricultural calendar, such as rice planting and harvesting. Harvests would be shared in due course by benefiting landowners with all those who had participated. Agricultural labourers are now commonly hired as needed and paid a daily rate for their labour. In this manner, agricultural labour relations have become more formal with reduced reciprocal ties between labourer and employer. In practice the two systems currently co-exist in agricultural practice. The reasons for, and the implications of this, are explored in Section 5.2.

In a wider sense, *bayanihan* is about those who have something to give – be it a tangible such as produce or land, or an intangible such a labour, skills or support – doing so freely at an appropriate time. They do so, safe in the assurance that their contribution shall be reciprocated in due course. Therefore, in times of calamity, community members speak of neighbours helping each other in the *bayanihan* spirit to rebuild each other's houses, or by sharing stockpiled goods. *Bayanihan* is also ingrained in the social structure of *barangay*. It is a system that upholds basic values, maintains a sense of order, and which – more controversially – underpins the hierarchical structure of society. Thus those who have most are expected to give. This can be sometimes in the form of extended credit or loans. More often it is in terms of allowing the less fortunate landless to make use of their land on which to build their houses or to plant rootcrops with which to feed their families. An individual's origins significantly determine the social networks to which one is party, and the social standing, or package, which one may inherit simply by being a member of a particular social group. This however can be superseded to an extent by entry into wider social networks. The *bayanihan* system in particular allows opportunities for the (perceived) industrious worker to engage in reciprocal relations with more established members of the wider community.

Despite the frequency of reference to bayanihan in political as well as community spheres, established bayanihan practices are being undermined by processes which reduce the level (or alter the nature) of interdependence within communities. Such processes include

[23] These two references are taken from interview materials.

urbanisation, temporary migration, the increasing importance placed upon cash income and formal contracts, and the mechanisation and increasing dependence upon commercially produced inputs in the agricultural sphere. These processes emerge in the case study examples documented in Section 5.2.

Kinship and Family

In practice, it is the family that is the most pervasive of all the social units to which an individual might belong.

> *"The moral, personal area of (everyday) life is exemplified by family relationships but also includes ties with neighbors and friends, sometimes extending to cover a known community. Beyond this area, one finds the contest for power and resources where relationships are subject to different rules...The generic element that sets the area of moral action apart is the demand of solidarity; it is persons relating to persons in which the relationships themselves are valued. For this reason, conflicts of solidarity among persons are different from conflicts of competition for power and things."* (Mulder, 1997:29-30).

In Chapter 3, I present my reasons for selecting the household and the nuclear family as primary units of analysis in this thesis. While some of these are practical reasons, I also uphold the family as a fundamental institution of Filipino life. The bonds that tie Filipino families together are stronger then any other in Filipino society (Mulder, 1997; Medina, 1991). To a large extent, an individual's status in the social hierarchy is determined by the prestige of the family into which they are born, and eventually of the family which they may link to their own through marriage (Medina, 1991). From the quotation above we see that Mulder draws considerable distinction between what he terms the orderly "*moral inner core*" with the family at its centre, and chaotic wider society, to which the individual owes relatively little responsibility (Mulder, 1997:29-30). If we see those bonds and social relations spiralling out from the family group in the centre to encompass more distant relatives, friends, neighbours and local community members, then it would be self-defeating to attempt to understand community-based social networks without including the role of the family in the analysis.

In the absence of an effective welfare state, it is the family that provides not only for the status and sense of identity of its members, but also for their support and welfare. Medina (1991), writes that no

> *"Filipino starves to death for there are always relatives who would lend a helping hand to tide him over. Relatives, whether close or distant, especially the aged and the needy, are considered the concern and responsibility of the family"* (p.50).

Mulder (1997) describes households as units within networks of related families, or the wider kinship group. Bonds between family members are in part voluntarily adopted, however they also encompass elements of obligation. Such obligations between family members can be ritual, or emotional, as well as economic in nature (Mulder, 1997:123). Economic obligations include the sending of remittances by family members who are better off, or who do not have households of their own to provide for. Family members living in urban areas are often asked to accommodate and support younger relatives, so that they can attend a school or college nearby, or look for work in the vicinity. However, patterns of assistance between family members are generally reciprocal rather than parasitic ones. For instance, when another household within the kinship group accommodates a family member, they contribute what they can in cash or kind (for instance, supplies of agricultural produce and domestic labour) to that household. Even those who have nothing to give at the time will do so sooner or later, according to the norms of *utang na loob* (debt of gratitude) reciprocity. To fail to do this would be to lose face in the community and amongst peers (Medina, 1991:51). Similarly, credit is often sought within the extended family, and generally no interest payments will be required of family members. As a rule, debts are repaid as and when the debtor has the means to do so.

Role of Religion

The population of the Philippines is predominantly Roman Catholic, interspersed with members of a variety of smaller churches and religious sects. There is also a Muslim minority which is mostly concentrated on the large southerly island of Mindanao and the island chains to the far south. Religious tolerance is high, although the Catholic Church and its representatives continue to wield considerable social and political power in the Philippines. The influence of the Catholic Church upon the daily lives of Filipinos in the lowland study areas is illustrated in the following quote. Mulder (1997) finds that, although "*Catholicism has greatly contributed to shaping lowland culture*" (p.28) in the Philippines,

> "*it has also been brought in line with social experience and the prevailing world view... The practice of religion is individual- and family-centred. It is not Church-focused... The prevailing religious mentality fosters a way of life that is focused on the family and on the life world. The family thus tends to become its own closed moral universe existing next to other such families*" (Mulder, 1997:28).

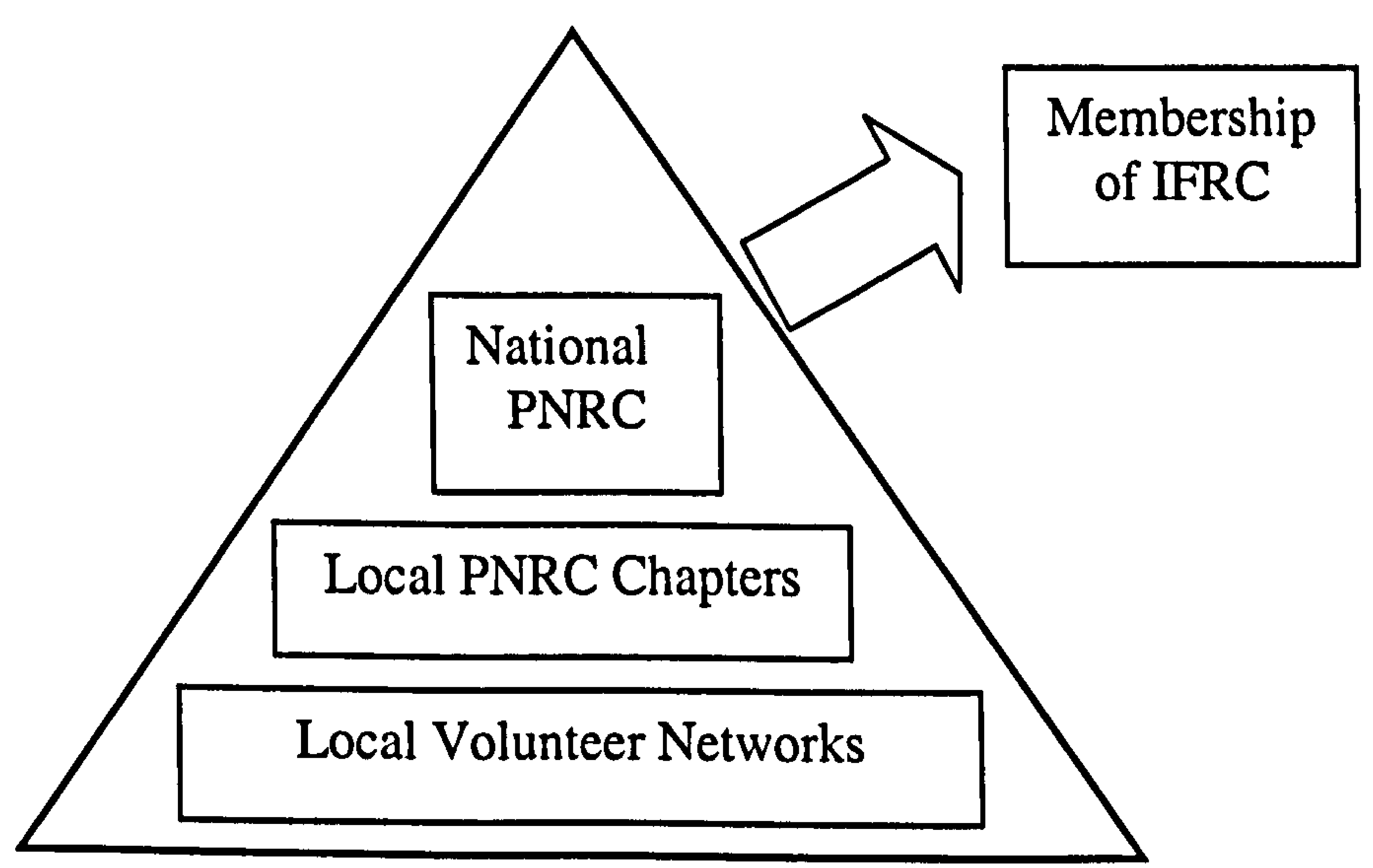
Therefore, the role of the church can be seen largely as one, which supports and upholds existing family and social bonds within the communities studied, rather than as one which transcends such relations.

4.3 The Project Context: PNRC Structure and Programmes

This section examines the elements of the organisational, programme and project structures and practices which are key to understanding the research findings presented in Chapters 5 and 6. Section 4.3.1 focuses upon issues of organisational structure and approach, while Sections 4.3.2 and 4.3.3 outline Mayabig and Tigbao case study project outputs.

4.3.1 The Case Study Projects in their PNRC Context

Figure 4.8: Simple Representation of the Philippine National Red Cross Hierarchy



PNRC is an independent organisation with a Board of Governors at its head. Like all Red Cross/Crescent National Societies, PNRC is a member of the International Federation of Red Cross and Red Crescent Societies (IFRC). Although fundamentally independent of government, PNRC is the sole representative of the NGO community in the National Disaster Co-ordinating Council. In disaster management, PNRC exercises an 'auxilliary' role to government institutions.[24] PNRC activities are undertaken by a series of

[24] This topic is expanded upon in Chapter 6.

'Services',[25] each with its own sectoral responsibilities. The Service under whose ambit the projects and programmes largely fall, is Disaster Management Service (DMS). The projects in Tigbao and Mayabig are respectively part of the Integrated Community Disaster Planning Programme (ICDPP) and the Community-Based Disaster Preparedness Project of Disaster Management Service (DMS-CBDP). DMS-CBDP and ICDPP staff are answerable ultimately to the Director for Services and the Secretary General of PNRC. Unlike DMS-CBDP, ICDPP is an externally funded 'special' programme, with its own, dedicated funding from Danish Red Cross (DRC). Successful elements of ICDPP are intended to be integrated into DMS from January 2000, at the end of ICDPP's DRC funding period.[26] As such, considerable co-ordination with the Director for Services and the Manager of DMS has been required.

Although both programmes have national level staff, including a Programme Co-ordinator for ICDPP, their activities are carried out primarily at community-level by local PNRC Chapter-based staff. The 85 PNRC Chapter offices are based in provincial administrative centres such as Calapan City (Oriental Mindoro) and Maasin (Southern Leyte) in the case study examples. Each Chapter is headed by a Chapter Administrator, who is responsible for local fundraising and networking activities, and who co-ordinates the activities of Chapter staff and volunteers. In the Oriental Mindoro Chapter, there is one staff member primarily responsible for DMS activities, and the support of volunteers is frequently relied upon. In contrast, ICDPP has a dedicated Chapter-based staff in each of its four project areas (Benguet, Southern Leyte, Palawan and Suri Gao Provinces). These include a project manager, a community development officer, a project secretary and a driver. In Southern Leyte, the ICDPP staff also included a technical officer. Frequent monitoring and reporting occurs between the ICDPP project managers, the Chapter Administrators and the ICDPP Programme Co-ordinator in Manila.

As community-based programmes, DMS-CDBP and ICDPP activities are conducted at barangay-level. Both Mayabig (DMS-CBDP) and Tigbao (ICDPP) are barangay project

[25] PNRC Services include: Youth, Safety, Health and Social Services. Primary Health Care, Blood (Donor) and Street Children Programmes are important areas of activity.

[26] In practice limited DRC funding has been extended into 2000-2001, dependent upon project completion timetables and the success of extension applications.

sites. These projects are implemented with the co-operation of LGUs at provincial, municipal and barangay levels. This is seen as key to the long-term sustainability of the projects, whose principle concern is local capacity-building in disaster management and prevention. As such, the projects are intended to function and to grow within the confines of the existing institutional set-up – particularly that of the LGUs. Training and community organising exercises are intended to encourage local-level autonomy in promoting barangay needs and implementing development initiatives through locally-based PNRC volunteers. While the primary purpose of DMS-CBDP is to train, organise and recruit voluntary response teams, ICDPP's focus is upon *steering* the communities concerned, and upon *promoting* and *facilitating* their access to LGU support mechanisms (Mr Sian, DMS). Rather than challenging elements of the existing disaster management system, the projects serve to reinforce it. Paradoxically, this is both a strength and a weakness of the two programmes, as is explored in Chapter 6.

4.3.2 Community-based Disaster Preparedness Project

This DMS programme is funded partially by Canadian Red Cross, with inputs from the Japanese Red Cross. Unlike ICDPP which is funded directly and entirely by one donor society, funding for DMS-CBDP is channelled through DMS-national. DMS has tended to concentrate upon response activities and training. However, under CBDP, they have increased the emphasis upon disaster preparedness and mitigation.

In Oriental Mindoro, the project began by identifying 14 flood-prone barangay in two municipalities (Calapan and Baco), in which to conduct disaster management training. Training sessions take place over 2-3 days, and are generally held in the barangay. Community leaders are asked to organise participants, as well as to provide a suitable location, lunch and refreshments during the training days. Training sessions include elements of disaster management theory and procedures, first aid, hazard and vulnerability mapping and planning future activities. Once trained, participants are presented with a certificate and are formally known as a Disaster Response Team (DRT), charged with future barangay-level disaster management. Emphasis is placed upon putting the training into practice through the implementation of mitigation measures. Those planned include:

- tree/mangrove planting to limit soil erosion and protect against storm-surge in coastal areas, as well as marking road evacuation routes during severe flooding;

- river dike construction and repairs;
- diverting or containing river channels;
- clearing waterways of choking water lilies and other flood-borne debris;[27]
- sand-bagging sections of a river prone causing damage to property and farmland during flooding (this is the measure proposed during Mayabig's DRT training session).

Follow-up meetings between PNRC staff and DRT members are encouraged after the initial training session. These are less frequent and productive than might be desired due to funding shortages. This topic is further explored in Chapter 6.

4.3.3 Integrated Community Disaster Planning Programme

The ICDPP project in Southern Leyte includes 6 out of the 19 municipalities in Southern Leyte. From each of these municipalities, 1 barangay has been selected. The project case study, Tigbao, is only 1 of the 14 barangays in the municipality of Libagon. Selection of these project sites required considerable local surveying and 'social preparation' (at LGU and community level) and data gathering activities prior to project implementation. In the later established ICDPP project in Palawan province, it was decided to include all of the barangay in 1 municipality, to reduce the preparatory workload of project staff, as well as the demands upon communities who will not directly benefit from the ICDPP project.

Once the 6 barangay project sites had been located in Southern Leyte, project implementation – from the community perspective – commenced in late 1997 with the training of Barangay Disaster Action Teams (BDATs), in each of the participating barangay. This training has a similar format to that of DMS-CBDP, with approximately 10 volunteers from each barangay participating. Although the training content is similar, ICDPP training is different from DMS-CBDP in that it takes place outside of the barangays concerned in a more formal setting, over a longer (approximately 7 day) period. In Tigbao, the BDAT is made-up primarily of unemployed youths, with the barangay Captain at their head. The youths were selected largely due to their freedom to participate

[27] A Province-wide initiative of the government Department of the Interior and Local Governance was carried out in Oriental Mindoro shortly after the Mayabig training. PNRC staff and DRT members
Footnote continues on the next page

in training and BDAT activities however in practice, several members of the BDAT have already migrated to urban areas in search of employment opportunities. After training and formation of the BDAT, members are charged, together with barangay officials, with the production of a Barangay Disaster Action Plan, for use within the barangay and for incorporation in LGU planning processes. ICDPP projects then continue with mapping activities. These include hazard and vulnerability mapping in conjunction with community members, as well as GPS[28] mapping carried out by project staff initially, with digital versions commercially produced at considerable cost.[29] Each project barangay is supported by ICDPP in implementing a mitigation measure, selected and planned through participatory processes. This is an integral part of ICDPP projects, designed to reinforce other capacity-building project elements such as training and mapping.

Mitigation measures carried out by ICDPP projects across Southern Leyte include:

- seawall construction;
- tree/mangrove planting to limit soil erosion and protect against storm-surge in coastal areas, as well as marking road evacuation routes during severe flooding;
- river dike construction and repairs;
- diverting or containing river channels, and clearing of silt and boulders;
- evacuation centre construction.

In the Tigbao case study, two primary mitigation measures were implemented in 1998-9. Firstly, a 210 metre length of seawall[30] has been constructed, designed to protect an expanding settlement on the foreshore area. Secondly, a hillside stream has been diverted away from farmland, and cleared of silt and boulders. These activities were carried with both community member (paid labour) and LGU counterparts (engineering expertise and heavy equipment), as well as the substantial 500,000 Pesos[31] ICDPP contribution (standard

participated.

[28] Global Positioning system.

[29] 25,000 Pesos per map (approximately 463 GBP – 54:1ER), of which there are 4 produced per project site, illustrating: base and natural resouces, economic resources/land-use, man-made resources (infrastructure) and integrated hazards/mitigation.

[30] The seawall is 2 metres high and 1 metre wide, constructed of locally gathered boulders covered with cement facing. Originally, a 150 metre seawall was budgeted for. This length was extended with LGU contributions.

[31] Approximately 9260 GBP (54:1 ER).

to each project). The Tigbao BDAT have also been supported by ICDPP in mangrove planting along the coastline.[32] More recent BDAT activities include caring for the young mangroves.[33] For the duration of the project, monthly, reports are required of the BDAT and barangay leaders by ICDPP project staff. Elements of these reports are included in monthly, quarterly and annual reports to the ICDPP national office and DRC donors. Project monitoring and evaluation is carried out during regular visits to project barangays.

4.4 Introducing the Project Sites: People and their Barangays

Sketching a physical and social map of the two project sites helps to explain fundamental groupings within each of the communities, and also the physical aspects of vulnerability.

4.4.1 Plan of Mayabig

Figure 4.4 (previous) illustrates the layout and key features of Mayabig. The barangay sprawls along a stretch of rough surfaced provincial road, linking the barangays of Baco municipality. The barangay radiates out from the provincial road in all directions. It is split into 7 'sitios' or hamlets. These serve not only as administrative units within the barangay, but also as distinct areas of residence. Sitios are linked to the barangay centre and to each other by barangay roads, which are essentially sections of rough track, which often become impassable by vehicle following flooding. The sitios are named: Alwas, Balikat, Boulevard, Centro, Greenhills, Pook and Sibagan. Two further settlements populated exclusively by indigenous minority Mangyans are located in raised areas of Sitio Centro and Balikat. Mayabig contains good arable land, the majority of which is cultivated. Most of the land is given over to rice growing, with some banana and coconut plantations interspersed throughout the barangay. Typhoon-related flash flooding is caused by water pouring off the surrounding hillsides during heavy rainfall and overflowing the river and irrigation channels that cross the barangay. Raised areas of the barangay serve as evacuation points in times of flooding.

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[32] ICDPP support included a seminar on mangroves, incorporated in a BDAT training session.
[33] For instance removing barnacle growth.

4.4.2 Plan of Tigbao

Figure 4.5 (previous) features a sketch map of Tigbao. This barangay differs from Mayabig in that most of its inhabitants reside along (or close to) a 1.4 km long stretch of the concrete highway which links the municipalities of Southern Leyte Province. This highway mainly follows the coastline, and the settlement areas of Tigbao occupy a narrow, low-lying strip between the shoreline and steep hillsides. The population of Tigbao now resides almost exclusively on the lowland coastal plain. Most of the available lowland area is used for rice paddy, while the hillsides are cultivated mainly with coconut palms, abaca,[34] bananas and rootcrops. As the hillside steeply climbs, cultivated crops increasingly give way to semi-wild flora including abaca and bamboo.[35] There are some small coconut plantations situated on low-lying areas around homesteads, or close to the foreshore, as well as small swampy enclaves of nipa palm,[36] near to the coast.

Tigbao is subdivided into three official 'puroks' (I, II and III), which correspond to the sitios of Mayabig. In Tigbao however, alongside these official subdivisions exist a series of commonly recognised settlement areas or hamlets, namely: Lutaw, Ilaya Village, Korea, Highway area and Barangay road area. Notably, Lutaw is a coastal settlement area which spills out onto the foreshore area of the barangay, while Korea (divided into 'North' and 'South' factions on either side of the highway) is situated at the far end of the barangay, on the boundary with neighbouring barangay Otikon. Highway and barangay road areas simply describe the housing stretched along the barangay's main road archeries. Lutaw is particularly susceptible to typhoon storm surge. Some flash flooding also occurs, affecting mainly agricultural land.

4.4.3 Comparing the Two Sites

Mayabig and Tigbao are of a similar size, both in terms of land area and of population. Tigbao has a total population of 1,453 inhabitants and 279 households (Tigbao, 1999).

[34] Plant yielding Manila hemp.
[35] Land situated within a one kilometer radius of the highway is privately owned and 'titled', while land higher up the hillside – although (less intensively) cultivated – is officially classified as Government managed timberland (t75).
[36] Used for roofing and house construction.

The population of Mayabig is 1,156 and 247 households (Mayabig, 1999).[37] While Mayabig's population and agricultural lands are fairly evenly dispersed across the barangay territory, the population of Tigbao and its main agricultural lands are concentrated in a much smaller, coastal area. Housing in both barangays is constructed from a mixture of light and 'permanent' (more robust) materials. Light materials used include locally available 'traditional' house-building materials such as bamboo, rattan, grass thatch and nipa palm roof, as well as occasional pieces of wood, hardboard – or even cardboard. 'Permanent' housing is usually made of locally available timbers and concrete (including hollow blocks), with tin roofing. Many houses are made of a mixture of light and permanent materials.

Barangay Leadership

In Mayabig, each sitio is represented by a member of the barangay Council who is, with one exception, resident in that sitio. In Tigbao each area of the barangay also falls under the remit of a specified Councillor. As a rule however, there is less emphasis placed upon purely representative roles in Tigbao. This can be attributed (at least in part) to the lesser degree of isolation of the different areas of Tigbao, from one other. The main function of Tigbao's Councillors is to disseminate information concerning the barangay's various 'sectoral' campaigns to each of their allotted households. In Mayabig, where the different sitios are more widely dispersed than in Tigbao, Councillors exercise a stronger representative role on behalf of the sitios, as well taking responsibility for information dissemination. In Tigbao, the administrative divisions do not entirely correspond to recognised hamlets within the barangay.

Barangay Services and Facilities

A primary role of barangay officials in both sites has been to ensure the provision of basic facilities and services within the barangay, such as day care centres, elementary schools, health centres, basketball courts and drying pavements, irrigation systems and potable water supplies. Both Mayabig and Tigbao have elementary schools, day-care centres, chapels, health centres, barangay halls, public drying pavements for agricultural produce

[37] Some of those registered on the census however were found to be living and working full-time elsewhere. These were generally the adult children of landowning families, who retained a right to vote in local elections by remaining on the census, and who could one day expect to inherit a share of the family land.

and basketball courts. Tigbao also has a small public library and reading room, as well as public latrines in one area of the barangay. Both barangays have mains electricity although in neither case do all households benefit. Power cuts are common occurrences, particularly in Mayabig. In Mayabig, most household have access to their own water supply, in most cases from a stand-pump in their yard. A number of households do not have their own pump and either use public stand-pumps where available, or share the stand-pump of neighbours or family members. A larger number of households do not have access to potable water due to their pipes not being sunk low enough or being situated too close to the river. These household also have to obtain their potable water supply from other sources, usually family and friends living nearby. In Tigbao, many household have direct access to a public water supply (piped down from the hillside) direct to their houses. They pay a fee for this service. Others have access to their own or public stand-pipes.

Transport Links

In comparison to Mayabig, Tigbao is well served by local transport links. Travel from one (inhabited) area of the barangay to another is relatively easy, as the distances are short, and the surfaced roads are good. Travel to the nearest market town, to the municipal centre, or to nearby high schools is also relatively straightforward, as the availability of cheap local forms of transport has proliferated since the concreting of the main highway in the mid-1990's. The Philippine capital, Manila, however, is far from Southern Leyte. The trip is a lengthy and expensive one, and many inhabitants of Leyte's rural areas turn instead to the facilities and the employment opportunities of urban centres on neighbouring islands, such as Cebu and Mindanao. Although Mayabig has comparatively easy access to Manila, the barangay itself is relatively remote. The roads of Baco municipality are mainly unsurfaced, and are frequently subject to flood damage. Local transport is infrequently available within the barangay, with villagers often waiting an hour or more to make the short trip to the municipal centre, and nearest market town, Baco. Even when transport is available progress over the rough tracks is relatively slow and uncomfortable.

Distinct Social Groups

In Mayabig, social distinction is drawn between the Tagalog lowland majority and the minority indigenous Mangyan groups who have migrated[38] from the uplands. There is also a group of migrants from the Visayas region of the Philippines to the south. Although distinct, members of the Visayan population tend to be integrated to a far greater extent in social networks of the barangay than are the Mangyan population.

In Tigbao, there are no resident members of indigenous populations. There is however a recognised division between families considered 'native' to the area, and those who have migrated within the last two generations from upland areas. Whereas in Mayabig, groups of migrants are relatively small and are dispersed in separate pockets, in Tigbao their residences are grouped together. In Tigbao, upland migrants occupy much of the area popularly referred to as *Lutaw*, which has been developed along a substantial stretch of foreshore, extending into the sea, mainly to accommodate the influx of migrants during times of insurrectionist-military clashes.

4.5 Summary

This chapter provides an overview of the physical and human geography, including climate of the Philippines, as well as of key social structures and institutions. These include those of the local government system, of the barangay community and of PNRC. This information is intended to aid the reader in contextualising the research findings and perspectives presented in Chapters 5, 6 and 7, which represent respectively, barangay, Red Cross and Local Government spheres. The chapter also provides an explanation of key elements of barangay life in the two study sites (Mayabig and Tigbao), with reference to barangay sketch maps.

[38] Historically, this indigenous group were lowland dwellers, increasingly pushed into the mountainous hinterlands by wave upon wave of migrants and invading forces. Mangyan permanent migration from the uplands to lowland Tagalog communities is a 20th Century phenomenon associated with changing livelihood patterns anand Government legislation concerning upland land-use.

In addition to highlighting the typhoon-prone nature of the Philippines, and specifically of the study site areas, Section 4.1 also highlights key issues that are found to emerge repeatedly in field research findings, and which significantly influence changing patterns and experiences of vulnerability. These are respectively: dramatic depletion of natural resources such as upland forest, mangroves and marine life; population pressures (particularly in relation to available land for housing and agricultural use) and related processes of migration both in-country and outside and; the diversity and complexity of (principally) rural livelihoods. These themes are fundamental to our understanding of vulnerability within the project interface and livelihoods conceptual frameworks employed by this thesis.

5. Linking Vulnerability and Livelihoods: Community Perspectives on Vulnerability and Disaster Management

Having introduced the Philippines context in Chapter 4, Chapter 5 explores barangay-level experiences of vulnerability. As well as representing a geographically defined territory and the lowest unit of the Philippine local government system, the barangay also functions as a social unit which equates approximately with "village". During my fieldwork, I investigated the relative importance placed by community members on the various forms of vulnerability manifested in their lives. In particular, I sought to compare typhoon event-centred vulnerability, with everyday vulnerability experiences. In practice, I found the two inextricably linked in rural livelihoods.

Analysis of complex community-centred networks and relationships requires some degree of simplification, particularly when the purpose is to situate and explain these ties and relations in their wider context. The conceptual framework employed is intended to provide a reflection of reality for the purposes of analysis, rather than to provide an all-inclusive overview. Building upon the project interface analysis introduced in Chapter 3, Chapter 5 develops the notion of there being differing identifiable *spheres of impact and responsibility*, within which, actors can be situated in their various capacities. These spheres contain the main components of local-level vulnerability, which I identified in the course of fieldwork. In real life situations these spheres are recognised as interacting and overlapping with one another, but are drawn apart for the purpose of analysis. They are categorised as follows: 1) Individual/Household Sphere, 2) Community Sphere, 3) Wider Sphere; and are illustrated in Figure 5.1 below.

(primarily) within the community sphere the section explores the influences of loans and credit arrangements, of civil society organisations, of difference in identities and origins and of social roles and responsibilities. These last two areas straddle community and wider spheres. Formal loans and creditors are accessed in the wider sphere, while informal loans and credit tend to be accessed at community-level. Likewise, local non-profit or *people's organisations* operate within the bounds of their communities, however (in the Philippine context) their mandate tends to be anchored to that of a wider government or NGO scheme.

Section 5.3 explores community experiences of typhoons, the impacts of these events upon community members and community coping strategies. Within the household sphere, this section examines community perspectives on warning and preparation, as well as experiences during events and in their aftermath. Section 5.4 explores community-level planning to reduce vulnerability, focusing upon: community perspectives on vulnerability, development and disaster management within the community sphere, environmental management issues and the role of barangay officials. The section ends with PNRC contributions to disaster management from the community perspective. The issues examined in the section are situated primarily in community and wider spheres. Finally, Section 5.5 summarises the chapter's findings.

5.1 The 'Community': Meaning and Scope

Before exploring community experiences of vulnerability, it is important to clarify the scope and meaning of this term *community*. In the thesis, the term *community* is employed to describe the geographically and politically defined unit of the barangay and its members.[1] In this sense, the term community is employed purely to delimit the scope and subjects of the study and contains no underlying assumptions about the nature of the two communities studied. As is true for any of the social units of which societies are comprised, local communities in the Philippines are subject to high degrees of diversity, both internally and between different community units. There are no assumptions therefore

[1] These are defined broadly as those who claim the barangay as their permanent place of residence, though

Footnote continues on the next page

of homogeneity of the community units studied, nor of commonality of interests or understanding amongst community members. This is not to imply that communities are to be considered too diverse to be capable of unified decision-making or action; simply that – like any social unit – communities have their limitations and weaknesses. The existence of elements of commonality cannot be taken for granted. Where such elements have been referred to in the course of this study, it is because they have emerged from research findings. In terms of intra-community relations, little remains static and the challenge for this thesis lies in establishing patterns or understandings of vulnerability of broader significance, in the midst of all of the messy 'real-life' detail. The purpose of this chapter is to explore the rich diversity of community members' experiences of vulnerability, and of their coping capacities and strategies. To this end, the household has been used as a primary unit of analysis, although various groupings of community members have been recognised in the course of the study where appropriate.

The second point to be made in relation to use of the term "community" concerns the "community sphere" employed in analysis. In this context, a wider definition of community is entailed, which incorporates social networks spanning out from the barangays concerned and their members. Fundamentally, extended kinship ties are included which often extend the bounds of "community" to incorporate connected friends and family working and/or residing in other parts of the Philippines or the world. Credit or other such reciprocal arrangements which directly link barangay members with outside actors, are included in this concept of community.

5.2 Everyday Vulnerability

This section on everyday vulnerability is concerned with the wide range of vulnerability experiences, as well as with unpacking the root causes of vulnerability. Factors influencing vulnerability are listed below under their various categories. This list is not intended to be an exhaustive one, rather it is intended to incorporate the main factors emerging from

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many of these may in practice be absent from the barangay for extended periods.

barangay-level research. Two key themes stand out. The first is that of complex livelihoods which, within structural bounds, are both opportunistic and adaptive. The second is that of fluid social networks as providers of support and cooperation. The importance of these elements in determining levels of vulnerability cannot be overstated.

5.2.1 Livelihoods

In the communities studied, livelihoods are concerned primarily with providing food – and where possible income – security to household members. This section explores the *capacity* of community members to manage livelihoods vulnerability as household and family units, and in doing so to respond to change and fluctuation in the wider environment. Household livelihoods vulnerability is determined by a combination of factors, the most important of these being:

1. household structure in terms of such factors as male:female and worker:dependent ratios and roles;
2. the availability and quality of access to tangible assets such as land, cash and labour;
3. access to intangibles such as informal support networks or relevant skills and knowledge of possible income-earning strategies.

Vulnerability counters the capacity of households and their members to obtain the degrees of livelihoods security to which they aspire. For instance, poor health is a common cause of livelihood stress. Often household possessions or resources such as land or boats are sold or held as security on loans to pay for treatment (t41, t45, t52). It is particularly stressful when the person requiring treatment is the primary income-earner (m46a, m13, t10, t27, t28, t38). Although the livelihood contributions of women are often less visible than those of men, female incapacity can also place considerable burdens upon household resources and family support networks (t25).

Most households are dependent upon one or two main sources of livelihood, but tend towards diversification into "sideline" subsistence or income-earning activities, to suit the needs and aspirations of household members. One community member's sideline is another's primary source of livelihood. Sources of livelihood and their relative importance for a given household vary, often on a seasonal basis, or as a result of changing

circumstances or opportunities. Example 5.1 below illustrates the versatility and mobility of livelihood strategies. It also highlights the important role played by social – particularly family – networks in this sphere.

Example 5.1:

> We do not own any land. We have five children (aged 2-14 years). We spent the first two years after our marriage living in Mindanao, working with my husband's brother in fishing. We then spent six months living and working with another brother of my husband. We worked on his land planting corn. After that we spent one year in Manila, where I worked as a domestic helper, and my husband worked in the construction industry. Now my husband undertakes any available agricultural labour in Tigbao and the surrounding area for a daily rate. On average, he undertakes waged labour three days a week. On the days that he has no waged work he helps on my mother's farm, in return for a half share of the harvest, or tends the rootcrops which they grow around the house (t62).

Agricultural production provides the primary source of livelihood for the majority of community members in both study sites. In coastal Tigbao, fishing also provides a primary – although dwindling[2] – source of livelihood. Other sources of livelihood common to both barangays are micro-enterprise, non-agricultural wage labour and artisanal or trade-related activities. In this section, I examine each of these areas of livelihood, drawing upon examples taken from community-level research.

Small-scale Agriculture

"None of my children are interested in farming..." (m42).

The agricultural sector is predominant in both barangays and has a strong subsistence element. Many grow vegetables and spices in small gardens. Those without agricultural land tend to cultivate rootcrops such as sweet potato or cassava around their homes or, where permitted, in the commercial plantations of local landowners.[3] Where households own the land upon which their house is built, they often grow coconut palms and fruit-trees[4] around the house. Rice is the primary crop,[5] and is grown both for household consumption and for sale. Most households have members involved in rice farming in

[2] The reasons for declining fish stocks in the Sogod Bay area are explored in Sections 4.1.2 (damage to fish habitat) and Section 5.2.6 under Environmental Degradation.
[3] Plantains, rootcrops and sweet bananas often substitute for more expensive food types.
[4] For instance, bananas, breadfruit, papayas, kalamansi (small citrus fruit) and mangos are commonly produced in the areas studied.
[5] Depending upon the supply of water, farmers in Tigbao sometimes intercrop rice with corn and beans (t65).

some capacity. As the quotation above suggests, it is a decreasingly profitable sector for small-scale producers. Younger generations increasingly seek alternative livelihood options where available. I have outlined the key elements of rice farming below, commencing with two examples which demonstrate the marginality of small-scale rice farming as a source of livelihood. Example 5.2 features a landowning farmer, while example 5.3 concerns a tenant farmer.

Example 5.2:

> I own a ½ hectare rice field. During a good season, I can harvest 40 sacks[6] of rice from this land. However during a poor season, the plot may yield only 10-15 sacks. We require roughly 10-12 sacks to feed 4 family members for six months, until the next harvest. Following a good harvest, I sell our surplus rice (over-and-above that owed to creditors and labourers) to traders. During poor seasons, we stockpile our harvest for household use. If we have no cash with which to buy necessities, then we will sell some of this rice to neighbours. In total, it costs (for labour and agricultural inputs) approximately 10 Pesos[7] to produce a kilo of rice. The traders pay us 10.50 Pesos[8] per kilo (dependent upon quality). Retailers sell rice to consumers at about 25 Pesos[9] per kilo in local markets, and for more in Manila (m5).

Example 5.3:

> My husband used to be a tenant farmer who practiced carpentry as a sideline. We grew rice but most of our earnings were claimed by the landowner and we were not left with enough to meet our family's needs. For this reason my husband left farming five years ago so that he could concentrate upon carpentry. He earns a lot more as a carpenter and has nothing to lose in this trade. It is better to own land – even if you don't cultivate it – than to farm someone else's (m43).

The main rice planting seasons are May and December, with harvests three-four months later (m47).[10] Severe typhoons and climatic variation such as that associated with El Nino episodes periodically disrupt cropping patterns. Community planting dates are often staggered across several weeks. This has had a detrimental impact upon harvest, as maintaining unified planting dates across the community is an important means of limiting

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[6] 1 sack holds 50 kilos.
[7] 0.19 GBP (54:1 ER used throughout this thesis).
[8] 0.20 GBP. Usually, the price fetched by farmers for their rice ranges between 2 and 9 Pesos (0.04-0.17 GBP) per kilo, dependant upon the variety and quality (largely based upon moisture content) (m20, m58).
[9] 0.46 GBP.
[10] A few farmers are cropping three times a year, although it is generally recognised that this seriously reduced the fertility of the soil (t56).

pest[11] attacks (m47, m10, t22).[12] Severe pest and disease outbreaks in crops generally, often arise following exceptionally dry or wet conditions (t43, t56). Rice seeds[13] are available from either private traders or LGU representatives of the National Food Authority (NFA). Traders charge lower prices, however the NFA extends credit to even the poorest farmers. As a result, better-off farmers tend to purchase their seed from private sources while the poor purchase theirs from the NFA (m1, m2, m5, m58). Sometimes poorer farmers will exchange better quality seeds for poor with wealthier neighbours, for short-term financial gain. In the long-term, this practice risks low yields, particularly in a poor season (m5). The majority of farmers use chemical fertilizers[14] and pesticides[15], although a small – but increasing – number favour organic farming methods.[16] In Mayabig in particular, organic farming initiatives are supported by barangay officials and some LGU and NGO actors (m20, m28, m44, Landicho, 1997). Agricultural inputs are purchased mostly from private traders, and prices are rising every planting season (m58). As a result, many farmers are using low-cost brands, and reducing the quantities of fertilizer and pesticide that they use (m42, t13, t22, t28, t32, t43).[17] Other agricultural expenses include irrigation system fees,[18] land tax[19] and – for those who do not own their own – hire of a

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[11] Common pests include snails, rodents, birds and various insects (m2, m5, m10, m20, m34, m42).

[12] Unified planting dates mean that pests are spread across farms throughout the cropping season, rather than moving from farm to farm in concentrated masses as different fields reach stages of maturity. Although planting dates have become increasingly staggered in the period since the Green Revolution (early 1970s), efforts are being made in Mayabig to reintroduce a system of unified planting dates (m47).

[13] Different rice varieties are used by farmers according to the season, weather conditions and the characteristics of their land. Quality of the end product must be balanced with criteria such as yield and susceptibility to rain damage (m1, m2, m42). High quality seed costs 12.50 Pesos (0.23 GBP) per kilo (m20).

[14] A 50 kilo sack of rice fertilizer costs 400-500 Pesos (7.40-9.25 GBP), dependant upon its brand and content (m20, m58, t28). Interest of 5 per cent is paid on inputs purchased on credit (t22).

[15] At least one (300ml.) bottle of pesticide is used per cropping season on ¼ hectare, at a cost of 120 Pesos (2.20 GBP) per bottle (m20). Dependant upon the brand, pesticide costs 500-700 Pesos (9.25-12.95 GBP) per litre (m58). Herbicide is also used at a cost of 250 Pesos (4.65 GBP) per litre (m58).

[16] The soil is being stripped of its nutrients by continuous cropping, and increasing applications of fertilizer (predominantly chemical) are required to maintain productivity. Pre-Green Revolution practices such as leaving the rice stalks to decompose in the fields are seen as a means of redressing the imbalance. However some old remedies such as the use of soap as pesticide are no longer viable, as the toxicity levels of common pests have risen significantly since the introduction of chemical pesticides (m44).

[17] For example, a sack of fertiliser costing 360 Pesos (6.70 GBP) last cropping season now costs 430 Pesos (8.00 GBP) (t28).

[18] Currently, 250 Pesos (4.65 GBP) per hectare per harvest (m20).

[19] Land taxation rates are set according to the location and the productivity of land. For instance, 450 Pesos are charged for 2.5 hectares of productive agricultural land in Mayabig. Although by law landowners are required to pay land tax, in practice, tenants sometimes pay on their behalf, according to the terms of the private agreement between landowner and tenant (m47).

water buffalo and/or handtractor[20] for ploughing. Both rainfed and irrigated rice is grown in both barangays. Most have irrigation system access, except in elevated areas. Unlike Tigbao where only transplanted rice is grown, in Mayabig, direct-seeded rice is also cultivated. Only direct-seeded rice can be grown on elevated land, beyond the reach of the irrigation system. Sometimes, direct seeding is chosen as a planting method even in irrigated fields during the dry season[21] or – as in example 5.4 below – as a means of reducing labour costs during times of financial stress (m15, m16, m18, m34, m42).

Example 5.4:

> Because of the expense, I do not always use transplanted rice even though it has a better survival rate than direct-seeded, and grows better because it is less choked by weeds. If conditions are right, I grow direct-seeded rice because we can sow this ourselves in a day without having to hire outside labour. It is still thirty days work to prepare 1½ hectares. If I am in a hurry, then I will hire more labourers (m11).

Many tenants[22] have a formal contract with landowners and most have at least an informal agreement. For example, for tenancy of a half hectare rice field, one agreement stipulates that the landowner is due 10,000 Pesos[23] and 300 kilos of rice from each harvest, for the four years of the tenancy (m29). The majority of tenants have agreed to give their landlords a fixed percentage (usually a quarter or a fifth) of each harvest (m30a, m38, m51, t24, t32, t49). However some landowners exercise their discretion in claiming harvest shares, particularly after a particularly poor season (m33, m51). The harvest percentage system is generally preferred because it is advantageous to landowners, and is less risky to tenant farmers. Fixed amount agreements tend to be favourable to tenant farmers during good harvest seasons, but can be harsh when harvests fail (m27). Tenant farming is in key respects, an insecure and restricted form of farming, as is illustrated in example 5.5 below.

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[20] Handtractors are useful for leveling rice fields (m47, t47). This is an essential process for growing transplanted rice. They also produce shallow furrows, however many fields are ploughed again using water buffalo to produce deep furrows for deep-rooted rice (t49). Handtractors can be hired privately for around 60 Pesos (1.10 GBP) an hour in Mayabig. It takes 20 hours to level and plough ½ hectare using a handtractor (m20). In Tigabo, they can be hired through the Cooperative store for a set fee of 350 Pesos (6.50 GBP) for as long as is required by one farmer (t22). A water buffalo can be hired for ploughing for 500 Pesos for two days (9.25 GBP) (t49).

[21] Direct-seeded rice is less sensitive to heat and requires less water (m42).

[22] The nature of tenancy arrangements vary considerably and – particularly where landowners and those farming their fields are close relatives – the distinction between landowners, tenant farmers and labourers are blurred.

[23] 185.00 GBP.

Example 5.5:

> The rice field we farm low-lying and subject to flooding on a more-or-less annual basis. Flooding significantly reduces our harvest[24] from this land. This land would be better suited to growing plantation trees, however as tenant farmers we cannot plant trees. Even if the practice were permitted, as tenants we would have no guarantee that the land would not be reclaimed by the landowner. We have no formal tenancy contract and in practice, landowners need give little notice and no compensation to their tenant farmers, if they wish to repossess their property (m38).

Rice farming is labour-intensive,[25] and external labour is hired on all but the smallest farms during busy periods. For direct-seeded rice, labourers are hired mostly for weeding and harvesting (m15, m42).[26] For transplanted rice, labourers are hired primarily for planting and harvesting (m15, m42, t22, t23, t49). Farmers often also hire labourers skilled in operating a handtractor or in ploughing with a water buffalo, for land preparation (t22). Often groups of labourers band together, moving from farm-to-farm as required (m6). Most agricultural labourers work regularly on one or two specific farms, which are often owned by family members (m6, m20, t24). Labourers who are indebted to another household[27] tend to work on their benefactors' land, as in example 5.6 below. Beyond such commitments, agricultural labourers are mobile, often migrating for work as illustrated by example 5.7 below.

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[24] The household would expect to harvest 2500 kilos of rice per hectare in a good season. Following flooding, they can expect to harvest only 1500 or less kilos per hectare on the same land, one quarter of which is due to the landowner, regardless of the harvest yield.

[25] 7-10 labourers are required to plant a ½ hectare in 1 day (m42).

[26] Direct-seeded rice is easily planted by members of farming households without the need to hire labourers (m42).

[27] For instance, households become indebted through having been permitted to construct their house on another's land, free of charge.

Example 5.6:

> My husband works on average one week a month as an agricultural labour – mostly on the rice farm of the owner of the land on which our house is built. He usually earns around 120 Pesos[28] a day. Every three months there is a coconut harvest and he is hired to make copra[29] for a week. He earns 800 Pesos[30] for this work. This is a good workload for a labourer (m25).

Example 5.7:

> My wife and I are both in our late twenties. We have two young children and a third due shortly. A fourth child died after birth. We both work as labourers in the rice fields, although I am the main income-earner. Since our marriage, my main concern has been to earn enough income to provide for my family. I regularly work on my mother-in-law's farm, as well as various other farms in the barangay. I have to wait until the farms that hire me, are ready. At times I can be without work for several weeks at a time, particularly following severe flooding incidents. During such times when work is scarce in the barangay, I seek work outside. For example, I have a friend in another area of the province with more high-lying land. This friend helps me to obtain work on farms in this area during times when much of the rest of the province has been badly affected by flooding, and little farm work is available. Generally, agricultural labour is unreliable work. As this is my only source of income, I am required to frequently seek work in different places, usually through our extended family network. I spend much of the time I am not working going from farm-to farm asking for work (m19).

Three systems of payment currently co-exist in rice farming. The first is the customary *bayanihan* system[31] in which neighbours group together and share each other's agricultural workloads. Landowners reward workers with a share of the crop as a matter of honour rather than by contractual agreement. This system is now only practiced exceptionally between close friends or relatives (m2). Secondly, labourers are now commonly paid a daily cash rate in the same manner that plantation workers are paid (m1, m2, m32, t22, t25, t49).[32] Thirdly, many Mayabig farmers have converted in recent years to payment of a pre-arranged percentage of the harvest (usually 20-25 per cent shared among the labourers

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[28] 2.20 GBP.

[29] Dried (mature) coconut kernels. The price of copra has recently risen from 2.50-17 Pesos (0.05-0.30 GBP) per kilo (m58). Many trees in Mayabig have been felled due to their immediate cash value for lumber (coconut trees take 10-15 years to mature enough to give a good crop of coconuts, however their pith is ready for sale after two years. The pith of one tree can be sold for 100 Pesos – 1.85 GBP, and the wood for an average 700 Pesos –13.00 GBP). This, as well as the common consumption of young coconuts, has limited copra production in Mayabig (m58).

[30] 800 Pesos equals 14.80 GBP.

[31] Introduced in Section 4.2.2.

[32] Agricultural labourers are paid between 100 and 200 Pesos (1.85 – 3.70 GBP) per day, dependent upon the going rate, task, whether or not the labourers have their own tools and other private arrangements between

Footnote continues on the next page

working each plot) to labourers who have been involved in both planting/weeding and harvesting (m15, m20, m32, m45, m46a). In practice, this system is similar to bayanihan in that labourers have no formal contract and farmers exercise a measure of discretion over payment (m29). This system is increasingly employed by farmers who cannot afford to pay their labourers until after the harvest (m45).[33] During good years, labourers can profit from this harvest share system. However, if the harvest is lost, their earlier labour is rendered value-less (m45).

Although both men and women may inherit land or become tenant farmers, agricultural labour is considered primarily man's work. Agricultural land owned or farmed by women tends either to be rented out under tenancy arrangements (where owned), or worked by male relatives and/or hired labour. Many women do join their husbands and/or sons working in the fields during busy times in the agricultural calendar such as planting and harvesting (m45). Generally this type of activity by women and younger children is considered a means of 'helping out their husband/father/household', rather than as a primary contributor to the household livelihood. Often women take responsibility for subsistence cultivation,[34] rather than the cultivation of primary crops such as rice, bananas, abaca[35] and copra.

A pattern of interdependence within both households and the wider community emerges from interviewee descriptions of differing roles in agricultural production. Single female-headed households with no adult sons are vulnerable due to their reliance upon men in the primary sphere of agricultural production. Labour has to be hired if agricultural production is to continue. Examples 5.8, 5.9 and 5.10 below demonstrate both the vulnerability and the resilience of women abandoned by their husbands. Example 5.8 demonstrates the dependence of many women upon their male kinfolk. Examples 5.9 and 5.10 are concerned with coping strategies that have gained the women concerned an exceptional degree of livelihood independence.

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labourers and farmer. The average rate is 120-140 Pesos per day (2.20 – 2.60 GBP).

[33] Refer to Section 5.2.4 on credit arrangements.

[34] This commonly includes kitchen garden vegetables and spices, as well as rootcrops such as sweet potato and cassava.

[35] Plant from which Manila hemp is produced.

Example 5.8:

> I am 28 years old and have three children, aged 1-6. We live in my parent's house. My husband works in a factory in Manila. He used to come home to us in Tigbao once a year, however I have had no communication with him at all for a year now. In the absence of my husband's support, my father took over the role of sole provider for my children and I, as well as for his existing household. My father is solely reliant upon farming to provide for this now extended family. He has no sidelines upon which to rely and as a result, even providing sufficient food for the whole family has become a strain. Providing for family members' needs in cases of emergency such as sickness, has become very difficult (t57).

Example 5.9:

> I am 32 years old and have been separated from my husband for a year now. I don't know where he is. I have three children (aged 3-10) to support. I have continued the tenancy of the farm my husband used to work, as well as undertaking agricultural labour on other farms for 100-200 Pesos[36] per day. Sometimes we get paid immediately, on other occasions we have to wait up to three months after the harvest for our pay. I need this extra income to support the children's education. I learnt about farming from my parents before I married. I can plough with a water buffalo but not a handtractor. I also know all about chemical spraying and transplanting. Usually ploughing is considered man's work, however in my experience it is much easier than cutting grass and planting, or maintaining the irrigation system bunds. I carry out general farm maintenance work myself. I hire 2-3 labourers for transplanting and handtractor use (m27).

Example 5.10:

> Since our separation, I have received no support from my husband. He went to Manila and started a second family. I own a small plot of hillside land, on which I used to cultivate coconuts for copra-making, bananas and rootcrops. I stopped planting rootcrops on this land as I got older and the work became a strain due to my age. I continue to pay a labourer to maintain the coconut and banana plantation, and to make copra. I have also been running my own roadside store for the last 11 years. My (now adult) daughter has contributed to the household when working as a secretary, and now that her employment has ceased, assists me in the house and store (t52).

As demonstrated in example 5.10 above, adult children often support their parents, and sometimes their younger siblings (m30b, t53, t55, t61). It is common for the farms of elderly parents – particularly widows – to be farmed by their offspring, and the harvest shared (m20, m51, t43, t62). At another level, landowners, tenant farmers and agricultural labourers are also bound together in their livelihoods. The same interdependence that

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[36] 1.85 – 3.75 GBP.

supports a whole variety of community members in the agricultural sphere, leaves individuals and households vulnerable to circumstances which diminish the sources of support upon which so many depend. Community relationships of interdependence are unequal, and it is often groups with low livelihood security who are most vulnerable to shocks within the agricultural system such as the widespread destruction of crops by typhoons, or stresses caused by poor harvests.[37]

Fishing

> *'In the past the fishing used to be better. Now the catch is much smaller. There are more fishermen and less fish to catch – more residents and less fish to feed them' (t18).*

A generation or two ago, fishing off the shores of Tigbao was plentiful. This was a primary factor in attracting settlers to the area. Fishing is now an unreliable livelihood activity yielding increasingly small catches (t6, t13, t21, t29, t31 t56). Fishing in Tigbao is almost exclusively sea fishing,[38] close to home in the sheltered waters of Sogod bay. Small outrigger palm boats (mostly without motor)[39] are employed. The ocean is dangerous for small boats, and local fisherfolks usually restrict their activities to the bay (31). The most important type of fishing in the Sogod Bay area has historically been for tuna. Small catches of other species are caught in the bay all year round.[40]

Most of those for whom fishing is a primary occupation own a boat. Better-off fisherfolks also own nets, cages and large lamps for night fishing (t24, t25, t31, t39, t56, t60). Others fish with hook and line, while some borrow a boat and fishing equipment, usually from an extended family member (t23, t26, t29, t32, t48, t49). In return for the loan of boat and equipment, a proportion of any catch is given to the boat owner (t27, t42). Fisherfolks

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[37] Refer to Section 5.3.3 for details on the impacts of typhoon events.

[38] In the past there used to be enough large fish and shrimps in the streams of Tigbao to make freshwater fishing worthwhile. These dwindled due to chemical pollution from agricultural inputs, until 10 years ago the streams were almost devoid of life. Since then, streams have slowly begun to restock with fish and shrimps, but are nowhere near restored to previous levels (t48).

[39] There are only three *motorised* palm boats operating from Tigbao (t33).

[40] The four main species currently caught in the Bay are known locally as: Miligoy, Bulinaw, Tugnos. Other types of marine life caught in the Bay for consumption include squid, octopus and crab (t31, t4).

must respect legal prohibitions[41] on practices held to be environmentally harmful such as cyanide fishing, coral blasting, and the use of dragnets (t71). In practice, access to marine resources is limited for those who lack the capacity or the physical assets such as boats and nets, with which to fish. The small boats cannot safely be used when the sea becomes choppy, and even when not in use, the boats need to be protected from storm-surge. Little fishing is carried out during the Southwest Monsoon[42] due to the frequent large waves and strong winds (t4, t19). As in farming, fishing is considered primarily man's work, with women more likely to be involved in the preparation and cooking of fish, or in preservation of fish by drying.

Most fishing takes place after dark, and is combined with daytime livelihood activities (t17, t18). Of the 25 Tigbao households interviewed for whom fishing is a part of their livelihood strategy, fishing is the sole primary source of livelihood for 4, while 9 practice fishing as part of a mixed livelihood strategy. For the remaining 12 interviewees, fishing is relegated to a sideline activity, although it may take predominance for short spells during the tuna season from April to July (t4, t25).[43] Scarcity has caused the price of fish to rise steeply (t5, t13).[44] Although fish provides an important source of protein, resource-poor households often sell their catches[45] in order to purchase rice, or other basic commodities (t13, t39, t67).

Where other options are open to them, many households in Tigbao have chosen to shift their livelihood focus away from fishing (t9, t35, t37, t48, t62). Local people suspect that increased siltation caused by a gravel production works operating for ten years on the Sogod river is a likely cause of the degradation of fish habitat, and therefore of declining

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[41] Regulated at the municipal level.
[42] June to September.
[43] In an average year, from March onwards, adult tuna begin to migrate from the Pacific Ocean to spawn in Sogod Bay and other sheltered waters in the region. The adult tuna return to the Pacific Ocean after spawning. After 5-6 months, once they are of sufficient size, the young tuna join the adults in Pacific waters. Tuna are most abundant in Sogod Bay during the months of April to June (t4).
[44] In the days when the tuna supply (during tuna season) was abundant, a fisherman equipped with only a hook and line could expect to catch 100-200 tuna in just 2 hours. Now, the same fisherman can only occasionally expect to catch 20 tuna, after a whole day's fishing. Sometimes, no fish are caught (t5, t13, t23).
[45] Fishermen returning from the sea are often able to sell their catches on the foreshore or along the main highway. Species such as Yellow Finned Tuna are particularly prized, and meager catches of these species are easily sold by local fishermen.

resident fish stocks in the bay (t5).[46] Migrating tuna feed on smaller fish within the bay. In their absence, tuna do not remain in the bay. The decline of fishing in the bay is blamed upon several factors, the remainder of which are summed-up in example 5.11 below.

Example 5.11:

Outside of Sogod bay, there are many big commercial fishing boats using sonar to catch the fish. Commercial boats are catching the tuna before they can enter the bay on their seasonal migration. Only motorised palm boats can leave the bay safely, and even they can have problems negotiating the strong currents of the Pacific. There are other types of fish, native to the bay, which hide deep in the corals. Destruction of the corals has all but wiped these out. The corals have been badly damaged by destructive fishing techniques. Previous generation of barangay officials tore out lumps of coral to decorate the roadside. At the time, they were unaware of the implications of their actions. The algae upon which these fish feed is no longer found in significant quantities in the bay. Every year the supply of fish in the bay is reduced (t31).

Non-agricultural Waged Labour

Non-agricultural labour is undertaken variously as a coping strategy in times of livelihood stress, and as a primary livelihood strategy over extensive periods. The most common forms of non-agricultural labour are in carpentry/house-building and in the construction industry. Carpenters tend to be self-employed and self – or family – taught. They rely upon the availability of local trade. For most, carpentry is a supplementary rather than a primary source of livelihood, often practiced during quiet times of the agricultural calendar by labourers and sometimes farmers (m31, m32, m43, m45, t37, t46).[47] Women sometimes undertake domestic tasks such as washing clothes, for wealthier community members on a piece-by-piece basis. They often seek this supplementary income periodically, during periods of particular financial difficulty (m38, t11). Construction workers are paid a daily rate, and are employed as and when required. A limited amount of construction work is available locally, and construction workers often migrate to urban areas for work (m18, m33, t21, t26, t27, t46).[48] Many community members are periodically employed in urban centres such as Manila, Davao and Cebu. These include a high proportion of young (usually single) people who send remittances home to their families (m16, m43, t24, t41,

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[46] The LGU role in relation to the operations of this gravel works is discussed in Section 7.2.3 under 'Power and the Politics of Funding'.

[47] Carpenters earn around 150 Pesos (2.80 GBP) a day (m32).

[48] Ordinary construction workers earn around 130 Pesos (2.40 GBP) a day, dependent upon the contract and their skills level.

t53, t56). In urban settings, women tend to work in domestic service, restaurants, shops and factories, while men tend to work in the construction industry and, to a lesser extent, in the service sector (m45, t6, t11, t14, t21, t38). Success in securing such work is often attributed to the support of kinship networks[49] (m46a, t3, t21, t48), as illustrated in example 5.12 below.

Example 5.12:

> My husband is a builder and a farmer. When he started in construction work he was only a labourer. He learnt masonry skills on-the-job. He has been working in Libagon this month, and is about to start on a new building job in Sogod. This work is contractual, but not constant. He is paid 200 Pesos[50] a day. Last year he worked in Manila for about nine months. He decided to go to Manila because there was no work for him in Tigbao at that time. He got the job through his cousin who is an engineer and contractor based in Manila. After a bad typhoon, prospective employers in this (agriculture dominated) area can no longer afford to pay for inessentials and tend to delay building work. Generally, he would expect to be out of work for about one month following a severe event (t59).

Men who have no access to agricultural land or other reliable income-earning opportunities often work away from home for extended periods, particularly when they have dependants to support.[51] Married women will sometimes go to work as domestic helpers either in urban areas or abroad, sometimes leaving their husband and children for several years at a time (m9, m15, t27).[52] As households acquire access to land and/or their own house through inheritance or by taking-over a portion of a (usually elderly) relative's land, migration rates substantially reduce (m28, m14, t12, t19, t40, t49). Likewise, as parents age and their children reach adulthood, remittances from working children to their parents tend to supplant the need for parents to migrate for work. Young couples often leave work in urban areas to settle in the barangay around the time of their marriage, or when they have young children to care for. This is attributed to the expense of living in urban areas[53] (t12, t19, t25, t34, t38, t40). Family members often help to provide houses for young

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[49] Refer to Section 4.2.2 on 'kinship and family' bonds.
[50] 3.75 GBP.
[51] As is illustrated in Examples 5.12 and 5.13.
[52] The salary of one domestic helper working in Saudi Arabia was 3000 Pesos a month (55.60 GBP), and this is considered a relatively low wage for overseas workers (t46).
[53] Overheads such as bills and rent are high, as are food prices. Food that is grown for free or is given away by friends and family in rural areas has to be purchased in Manila. Many young people also live with relatives or take live-in positions when working in urban areas. Alternative accommodation would often be required for married couples.

couples in the barangay (t12, t25, t34, t43, t49).[54] Social obligations placed upon young adults to provide for their parents and siblings are also reduced upon marriage (t24, t41, t53, t63).[55] Examples 5.13 and 5.14 (below) feature changing personal circumstances motivating people respectively: to take-up wage labour as urban migrants, and to forsake regular wage labour in urban areas, for rural barangay livelihoods.

Example 5.13:

> When I arrived in Mayabig at the age of 17, I used to work only as an agricultural labourer. When I married, I went to work in Manila in the construction industry. One of my cousins who is based there contacted me to let me know there was work. I needed to earn money to support my family. If we need the money, I will go back to Manila to work. Before we married, my wife also worked for about a year as a housemaid for a friend. She stopped this work when we married (m21).

Example 5.14:

> I worked as a domestic helper for one year in Negros. I then went to work in Manila as a domestic helper for about three years. I met my husband there. He is a builder by trade. He brought me to Tigbao (his birth place) when we married. His father gave us some land on which to build our house, and my husband now works on his father's farm. We receive a share of the harvest and my husband still undertakes occasional construction work. Manila is nice if you have work, but there are many additional expenses there such as rent and bills (t58).

Households dependent upon non-agricultural labour are vulnerable due to their lack of self-sufficiency. As they are not producers, they require income in order to eat. They depend upon suitable labour being 1) available and 2) offered to their members. As is illustrated in example 5.12, during times of financial stress for farmers or business people, there is less money available for activities such as house-building upon which many locally-based labourers depend (m30a, t8, t26, t27, t59). The need to seek work further afield incurs cost of its own, such as for transport and accommodation. Households dependent upon wage labour are also vulnerable to loss of earning opportunities due to the poor health or old age of primary earners.

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[54] Young couples from resource-poor families sometimes live in parental houses during the early years of marriage.

[55] This is true except in circumstances where they significantly increase their wealth in relation to that of their own family through marriage or work.

Micro-enterprise Initiatives

Micro-enterprise initiatives range from the opportunistic means of earning a little extra to support households through precarious times, to planned business investments. Investment initiatives include (m8, m9, m11, m30a, m51, t24, t29, t63):

- livestock-raising (including pigs,[56] water buffalo[57] or poultry raised other than for households' own consumption);
- fish ponds;
- small stores and cafes; and
- commercial hollow block-making;
- purchasing equipment such as handtractors for hire within the community;
- passenger and delivery vehicle driving; and
- trade in various products.[58]

Some of these activities require considerable capital investment, and tend to be established on the back of a successful livelihood undertaking such as farming, or from income earned by a family member in full-time employment (m6, m28, t22, t49, t53). Alternatively, some types of micro-enterprise such as livestock-raising have been established with the help of an initial cash injection[59] from an LGU, NGO or cooperative livelihoods scheme (m30a, m43, m46b, t75), as in example 5.15 below.

Example 5.15:

> I obtained a breeding cow under a 'PLAN International'[60] scheme. This cow only produced one calf before succumbing to disease. Fortunately, I was never obliged to repay the loan for the cow. Although my involvement in the scheme did not come to much, the sale of the calf did help us to fund our children's education (m45).

[56] Pigs are raised either for breeding or are fattened for their meat. Often households invest in a young piglet which they fatten for slaughter – generally – on an important feast or celebratory day such as a Saint's day, birthday or marriage (t18). Breeding sows are valuable income-producing commodities in which those with a little extra income will often invest. As a guide to the sums involved, one household initially purchased a female piglet to raise for breeding for 1,000 Pesos. The pigs they have raised since are worth at least 2,000 Pesos when they weigh 45 kilos and 6,000 plus Pesos when they reach 80 kilos at 6-8 months (t24).

[57] Water buffalo are used for ploughing, although their use is increasingly being replaced by mechanised alternatives such as handtractors.

[58] Examples of products traded vary widely and include agricultural produce such as fruits and copra, ice-cream and tupperware. Some of these are purchased in town and sold in rural areas by mobile vendors. Others are bought in the barangay from producers and sold in the towns and cities.

[59] For instance, a healthy water buffalo is worth around 12,000 Pesos (m43).

[60] International NGO.

When compared with the micro-enterprise initiatives of those with resources to invest, the initiatives employed by resource-poor households tend to be more labour-intensive and less remunerative, but equally diverse. In order to contribute to the household income, resource-poor women tend to sew clothes or produce food items such as rice cakes, fried banana snacks, dried fish and main dishes, which are sold locally (m9, t13, t43, t61). In Tigbao, many employ artisanal skills to supplement their income. Artisanal products made by community members include: nipa palm roofing, coconut palm floor matting, abaca thread (processed from raw fibre),[61] rattan strips (for weaving), rattan furniture, placemats made from cocowood and abaca thread, fishing cages (made from bamboo and nylon thread) and rattan basket-making (t7, t8, t25, t27, t44, t75).[62] With the exception of the nylon thread used in fish cage-making, these products are made entirely from locally available materials.[63] Products such as floor matting, baskets and fish cages are made for sale on demand within the community (t7, t8, t27). Some skills are being revived[64] in Tigbao with LGU support.[65] Micro-enterprise is promoted locally through LGU seminars, which emphasize local access to favourable export markets for products such as abaca thread and placemats (t75). As market demand for manila hemp has increased,[66] abaca processing has come to provide a valuable source of cash income for resource-poor households in Tigbao (t2, t3, t26, t75).[67]

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[61] This is the preliminary step in weaving clothing, accessories and rope from manila hemp.

[62] For example, it takes one day to make a basket from unworked rattan. Baskets are sold for 80 Pesos a piece (t7). A large fish cage takes tree days to make and can be sold for 200 Pesos (t8). Placemat makers receive 10 Pesos (0.19 GBP) a piece (t25).

[63] Materials such as rattan and bamboo continue to grow wild on Tigbao's hillsides, although such supplies are less abundant than in the past. Abaca and nipa palm are farmed locally and can be purchased in their raw state, worked, and then sold on for a higher price.

[64] Artisanal skills have been passed down through the generations, however their practice has dwindled, largely due to the introduction of cheap alternatives to local products. For instance, before the influx of cheap cotton and artificial fibre clothing, community members used to weave their garments from products cultivated locally such as abaca and coconut fibres (t71, t75).

[65] The Government Department of Trade and Industry has been providing financial and skills support (in conjunction with the private sector) in emerging sectors such as manila hemp weaving (for dressmaking) and place-mat making in Libagon (t71, t75). Abaca weaving has been practiced for two years in Tigbao, since the DTI held a seminar on the topic (t71, t75).

[66] Refer to Section 4.1.4 for details.

[67] The market value of raw abaca fibre is 20-60 Pesos (0.40-1.10 GBP) per kilo. Twenty per cent of this sum is paid to the owner of the processing machine. The next stage in abaca fibre processing involves separating the raw fibre strands and knotting them together to produce thread (on average, it takes up to one week for an individual to produce one kilo of the processed yarn). Abaca thread is sold to traders, at a market value of 200-220 Pesos (3.70-4.10 GBP) per kilo (t2, t3, t7, t11, t26).

The role of micro-enterprise initiatives in responding to changing household circumstances, and reducing overall household vulnerability is outlined in examples 5.16 and 5.17. Example 5.16 presents the strategy of a man from a resource-poor household, intended to provide for his growing family. In contrast, example 5.17 features the strategy of an elderly woman living as a dependent in her married daughter's household, to contribute to the household income.

Example 5.16:

> I have been involved in commercial hollow block making for the past five years. These blocks are commonly used in building construction, and are mostly transported outside of the barangay for sale. My aunt told me about this line of business when my wife was pregnant. The prospect of a growing family encouraged me to look for a more reliable source of livelihood than fishing, which up until then had been our main support. I make hollow blocks to order only and continue to fish when I have time. As a primary source of income, my business takes priority over fishing during busy times. There is no security in fishing. I have chosen hollow block-making as a relatively secure means of earning a cash income (t29).

Example 5.17:

> I make mats from coconut palm leaves to order within the community. Large floor mats take me a week to make (including the time spent gathering materials) and can be sold for approximately 100 Pesos a piece.[68] In this way, I am able to earn some extra income for the household (t27).

The subjects of example 5.18 recount a cautionary tale concerning their ability to maintain their investment in micro-enterprise initiatives, under adverse circumstances.

Example 5.18:

> My husband and I established a duck-raising business to supplement our main source of livelihood as tenant farmers. Farming remained our primary source of livelihood but the ducks provided a source of cash income. We also raised pigs and had established a small store. However, severe floods in 1993 caused a downturn in our fortunes. During the floods, much of our stock was drowned or swept away. Our farmland was also badly affected, and due to our lack of resources we ceased to stock the store. As a result, I took-up employment abroad as a care worker for almost two and a half years (m9).

My final example (5.19) of micro-enterprise illustrates the manner in which changing intra-household relations have contributed to the establishment of a business. The store provides

[68] 1.90 GBP.

not only a source of livelihood security, but also a means of improving the household's quality of life and of meeting evolving household consumption demands.

Example 5.19:

> We have six children. Two live at home as dependents. Of the other four children, two are married and financially responsible for their own households. The other two are working and (as single people) continue to send us money. This extra income has enabled us to establish the store. The store provides us with a cash income from which to purchase food and other commodities. In previous years we found it difficult to provide for the household's needs, especially when we had young children to look after. There were times when the children were sick and we had no money with which to buy them medicine. Before establishing the store, we had little in the way of resources with which to support ourselves. Our livelihood was unstable and this made us vulnerable. For example, a few years ago my daughter (who was at the time the only member of the family capable of undertaking full-time employment) was unemployed and searching for a job for three months. While she had no income, we "*survived*" on rootcrops. Generally, "*lifestyles are changing*". Prices of basic commodities are rising and there are more commercially produced products upon which we spend our income.[69] Income from the store ensures that we can buy these goods, and gives us greater security as we grow older (t53).

The point made about changing patterns of consumption in example 5.19 (above) is an important one. Lifestyles are changing, and subsistence-based livelihood strategies are increasingly giving way to commercially-oriented strategies. In this context, livelihood vulnerability is measured against the perceived needs and aspirations of the community members concerned.

Professional Employment

Those encompassed in this final livelihood category form a relatively well-off minority within their communities. The livelihood security of households with a professionally employed member is relatively high (m10, m41, t36, t46). Professional employment assures a constant, if not always exceptionally high, income.[70] It also offers an alternative to the increasingly marginal livelihoods available within the agricultural sector (m41). As such, professional employment is a desirable goal for children who have the ability and

[69] The interviewee emphasized that this type of additional spending was "expected" and implied that social requirements had to be fulfilled as far as possible, despite the household's lack of resources. The same interviewee also spoke of people in the community "*beautifying*" their homes for social gains. Such homes were described as: "*good to look at, but no food on the inside*" (t53).

[70] For instance, a full-time teacher's starting salary is around 4000 Pesos (74.00 GBP) a month (t46). The

Footnote continues on the next page

means to successfully complete their higher education (m15, t24, t28, t40, t46, t47). Although they may be obliged to make economies, while employed, households in this category are unlikely to descend to the near subsistence level of the majority. However, gaining a professional position is far from easy, as is demonstrated in example 5.20.

Example 5.20:

> We have three children, aged 2, 12 and 13. My wife has worked as an elementary school teacher for over seven years. I am a graduate in marine engineering, but have not managed to find a job in this field. We are tenant farmers of a ½ hectare rice field and have inherited a small coconut plantation. The main difficulties we encountered in our livelihoods are associated not with meeting everyday needs, but with exceptional needs such as providing medical care. Our priority is to provide all our children with the opportunity to take-up college education. I regret that we will be unable to finance our son's first choice of studying to become a priest, due to the fees involved (t28).

Example 5.21 (below) demonstrates the educational opportunities that a secure source of livelihood can provide to household members of all ages.

Example 5.21:

> My husband is an engineer. Our problems are not so much concerned with our everyday finances as with periodic difficulties such as the flooding of our rice fields. I was in my 3rd year of high school when we married. I did not drop out of school. Instead, I transferred to a school in the area in which we went to live, and continued my schooling for several years until my graduation. By that time I was already a mother (m10).

Nevertheless, livelihood levels depend not only upon income, but also upon household income-earner:dependent ratios. This is aggravated by the fact that professional households tend to spend above average on clothing, transport fares or fuel, and upon their children's education (m39, m40). Example 5.22 features a retired teacher who, together with her husband, has struggled to provide for the education and basic needs of their large family.

Example 5.22:

> I taught at the elementary school for 33 years. My husband is a farmer. We own a ½ hectare rice field and a few banana trees. We have 11 – now adult – children. Five of our children are college graduates and seven have found full-time work, mostly in urban areas. The biggest problem we now face is securing our food supply (m40).

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salaries of state employees are sometimes considerably delayed in their release (t17).

Households also take into account more than pure economics in determining their livelihood strategies. Family needs and social priorities in particular may override the income-earning opportunities of individual household members, as is demonstrated in my final example 5.23, below.

Example 5.23:

I have been a teacher for seven years. My husband used to work for the National Irrigation Association (NIA) before we were married. He stopped this work in order to take over the work of his parent's farm, which they had become too old to work. The farm still belongs to his parents. His brother also works on the farm (m14).

5.2.2 Formal Education: Investing in the Young

'The present generation has access to a good standard of education which opens opportunities for them to travel and find work elsewhere' (m35).

'Without access to other sources of income, labourers without land of their own cannot hope to support their children's education beyond high school' (m38).

The quotes above illustrate the dichotomy of educational provision. For those who have the resources and ability to continue their education until the end of college, there are opportunities for permanent employment outside of the barangay. Greater opportunities arise from university education for the few who attain this level. Most of the employment opportunities for high school graduates (and below) lie in the low-security, over-supplied areas of: manual labour, factory work and low skills service sector (m9, t6, t21, t47, t48 t61). Educational attainment depends in many instances, as much upon ability as upon the availability of adequate resources, through household and family networks. This section explores issues of access to education, as well as the links between educational achievement and income-earning capacities.

Both Mayabig and Tigbao have elementary schools. The six years of elementary schooling

are compulsory in the Philippines,[71] but not high school. Both elementary and high school education are available free of charge, however parents have to meet the costs of uniforms, materials such as paper and pens, and transport. Parents are also asked for voluntary contributions to the schools (t24, t64). In order to continue their education to high school or beyond, students have to choose between commuting daily to attend school or college in a nearby town, or boarding in town. For resource-poor families, such costs can be prohibitively expensive, especially if they have several children enrolled in higher education at the same time (m24, m38, t39, t62, t63). As one interviewee puts it, "*at the moment, most are just trying to put enough food on the table*" (m44). Only a minority are educated to college level and beyond, while many do not complete high school education (m24, m38, m44, t6, t8, t53).[72] While the *potential* value of education is recognised by the majority, education has less appeal to those who have little expectation of completing high school or of continuing to college. Example 5.24 below demonstrates the linkage made by community members between higher education and permanent employment opportunities.

Example 5.24:

> We have eleven (now adult) children. Of these, four do not have permanent employment, although the boys work on their father's farm. All of the unemployed children ceased their studies at high school level. Two of the seven working children are high school graduates. The others all have college degrees and are working in urban areas (m40).

In examples 5.25 and 5.26 manners by which supportive parents and ambitious students may circumvent financial obstacles to continuing education are discussed. The first example features a relatively well-resourced household, and the second, a relatively resource-poor household. The difference between their strategies, which respectively emphasize higher education leading to professional qualifications, and vocational courses, is marked.

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[71] In theory, children should be attending elementary school between the ages of 6 and 12. In practice, students continue to enroll up to the age of 18. These include those who have dropped-out and restarted their education, and also those who have had to retake years. The Headmaster of Tigbao elementary school (Mr S. Ranque) reports a low dropout rate (2.1%) at the school. On average, the school has a 68% "survival rate" for elementary students – "survival" in this sense meaning that they have completed all 6 grades of elementary school (t64).

[72] Of the 773 adults living in Tigbao, 270 have elementary level education only, 375 have high school education, 85 have college education, and only 43 are college graduates (Tigbao, 1999).

Example 5.25:

Three of my daughters are "*professionals*". One works in Libagon as a teacher, one works in electronics in Sogod and the third is a media graduate who is now job-hunting in Manila. One of my son's graduated in mathematics and now works for a company in Manila, another is studying criminology in Maasin and hopes to join the police. My other son married at the age of nineteen, after graduating from high school. He did not continue his education and he now works as a farmer in Tigbao. The fees of local state colleges are over 900 Pesos per semester. My eldest daughter had a scholarship for high school and college. We paid 8,000 Pesos per semester for her to attend the state University in Cebu, as well as 500 Pesos per semester for lodgings, and 100 Pesos a day for food and necessities. The cost of university was too great (t24).

Example 5.26:

We have three children (aged 7-10). It will be up to them to determine their own futures, however we are doing our best to support them in completing their studies. We plan to send them to the National High School. My parents live close to this school, and the children will be able to live with them during term-time. This is a vocational school which teaches practical skills such as electronics and dressmaking, that can be used directly in employment. Other schools do not teach these types of practical skill below college level (t18).

Family networks provide the greatest support in funding their members' education. Elder working siblings often help to fund the education of their younger siblings, particularly while have no dependents of their own (t22, t24). As is the case in example 5.27 below, other family members such as grandparents may provide support, while some students work in order to ease the financial burden upon family members and support themselves (m46a, t46). Example 5.28 (below) demonstrates the role played by community networks in assisting young graduates to access employment opportunities.

Example 5.27:

Six of our grandchildren live with us and we are funding their education in a private high school. Our eldest grandchild has graduated from high school. He is looking for employment in the shipping industry so that he can help to support us financially. If he is able to earn enough money then he may take-up computer studies at college (m34).

Example 5.28:

Most of the young people who have higher education leave for employment elsewhere. Those working abroad tend to invest their earnings in urban-based businesses. There are few worthwhile investment opportunities in the locality. Many go abroad, taking any job they can get. They borrow money from economically stable households to get there, and then send money back to their families. Many younger family members use the connections of those already established abroad to get there too (m15).

5.2.3 Borrowing Money and Pooling Resources: Balancing Debt and Opportunity

> *'As rice farmers, it is always possible to find another business owner who will grant us credit' (t36).*

> *'If you try to start a small business locally – for instance a store – it is certain that people will ask you for credit...' (m9).*

We have seen that financial support is available to community members through intersecting networks of family, friends and neighbours.[73] Much of this support is reciprocated according to social norms, and does not rely upon formal loan formats (m47, m50, t19, t22, t23, t54).[74] The relatively formal sources of credit explored in this section provide both support and opportunities for micro-enterprise development. As suggested by the quotes above, rice traders in nearby market towns regularly provide credit to rice farmers, while barangay-based traders provide low-level credit to a wide sector of the population. Local cooperatives often offer low cost products and credit facilities as well as saving schemes. Some are designed specifically to provide loans for micro-enterprise initiatives or to tide households over financially precarious periods. The example of a local association, collecting fees for the repayment of an international development loan, is included as an illustration of a very different form of credit facility.

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[73] Refer to Sections 4.2.2 under Kinship and the Family, 5.2.1 and 5.2.2.

[74] Sometimes loans between community, or even family, members are formalised, for instance by offering land as security on the loan (t45, t52, t54).

Local Sources of Loans and Credit

Rice farmers are the primary users of credit within the agricultural sphere.[75] Small-scale farmers regularly borrow money to purchase agricultural inputs before every planting season. Most credit is obtained from private rice traders based in urban centres (m34, m38, m40, t22, t36, t64).[76] A limited supply of agricultural inputs (usually seed) is made available to farmers on credit through the NFA.[77] Loans from traders tend to be repaid in rice after the harvest. This credit cycle locks farmers into a dependent relationship with traders. This unequal relationship favours the traders, who are accused of buying rice from farmers at a low price directly after the harvest, and then hoarding rice stocks to force the price up before they sell. The majority of farmers cannot afford to hoard their rice stocks because of their debts (m41). Landowning farmers usually provide their land titles as security on their loans, while tenant farmers are asked for a reference (usually from their barangay Captain), and often pay higher interest rates (m34, m40, m42, t36, t38). Tenant farmers sometimes experience difficulty in securing credit, which can substantially delay planting (m42). Following poor harvests, and during other financially precarious times, many farmers are unable to pay off their outstanding credit. It is usually possible for farmers to renegotiate the terms of their loans (m15, m42, t45) as described in example 5.29.

Example 5.29:

> I obtain credit from private traders at an interest rate of six per cent. Although a lower rate of interest is available from the banks, they have much stricter lending requirements and delays of several months before cash sums can be released. Rice traders simply require that land titles be offered as security on loans made. Such arrangements also carry an advantage where sums have been borrowed and a poor harvest ensues which prevents farmers from repaying the loan. In such circumstances, known customers with good repayment records can negotiate new loan terms to start another planting season (m38).

Example 5.30 focuses upon the harshness of the credit cycle in which many tenant farmers are trapped, while example 5.31 explores key differences between the availability of credit for landowning farmers, tenant farmers and agricultural labourers.

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[75] Rice farmers regularly borrow 5-10,000 Pesos (93.00-185.00 GBP) to see them through a cropping season (m34).
[76] Cash sums are commonly borrowed from private traders at interest rates of 5-9 per cent.
[77] The National Food Authority. Refer to Section 5.2.1 on *Small-scale Agriculture* for further details.

Example 5.30:

> Rice farming costs are very high. Of the average forty sacks harvested from half a hectare, we give the landowner eight sacks, while about fifteen sacks are usually promised to "*rich people*" who have extended us credit. The remaining harvest is often not enough to feed the family, and some of that will be exchanged for fish (t49).

Example 5.31:

> We own one small plot of rice paddy and we are tenant farmers of another plot.[78] We borrow money in order to farm these plots and to fund the education of our children. For this purpose, we borrow money from the rice traders at an interest rate of six per cent. Our house and land titles are granted as security over such loans. We could not offer the tenancy as security on a loan. Landless labourers are even more vulnerable than landowning and tenant farmers. Labourers are unable to borrow money from formal sources as they have no land or future harvest to offer as security over loans (m38).

In fact, some labourers are able to borrow small sums locally by offering the harvest shares they have earned through their labour as a guarantee (m45), however in comparison to farmers they have little access to credit. Although rice farmers are the biggest borrowers, others such as copra farmers also borrow funds, as illustrated in example 5.32 below.

Example 5.32:

> I am involved in copra-making on my own farm. I also buy copra from farmers across the barangay and sell the copra in bulk to a Chinese businessman based in Sogod. Local copra producers frequently borrow money from me for copra production. They are often unable to repay the sums borrowed for some time. There is nothing to be done in such circumstances. It is 'understood' that people will pay their debts when they have the means to do so (t54).

Example 5.32 introduces a commonly voiced concern of local business owners who are frequently asked to extend credit to fellow community members. Repayment rates are often very slow and they feel bound by social norms both to provide credit and to allow debtors time to repay as and when they are able. Debtors are only refused credit for necessities in their community when they have a particularly bad record of payment (t54). Local storeowners are a prominent source of credit for resource-poor local people. Small stores are scattered across the barangays, selling basic commodities such as rice, cooking oil, tinned goods, kerosene, soap, drinks and snack foods. The expectations of community

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[78] This household owns 2 hectares of land, and are tenant farmers of 1.5 hectares (Barangay Mayabig

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members and the moral obligations felt by storeowners in handling credit are examined in examples 5.33 and 5.34 below.

Example 5.33:

> "*Even if we put up a big sign saying that no credit will be granted, people will still try to get credit*". Payback terms depend upon the promises of the debtors and vary widely. Some promise payment after the harvest. It is hard for my mother as a storeowner as, "*many people are looking for credit, and many are not living up to their promises*" (t52).

Example 5.34:

> We extend credit up to about 2,000 Pesos.[79] 700 Pesos[80] is a normal amount of credit to be granted on goods purchased in the store. We do not loan cash sums to customers or charge interest. Debt repayment is very poor. Some of our debtors have died without paying off their debts. We always agree a weekly/yearly repayment rate, dependent upon individual circumstances. Some promise to pay as soon as they have the money, others will settle their debts after the next harvest or sale of copra. We do not refuse people credit, especially for food, or basic necessities such as kerosene for lighting. Refusing credit would "*make the young people hungry*" (t54).

Cooperative Ventures

Credit and preferential pricing are available through locally managed cooperatives. For instance, the Mayabig cooperative pharmacy provides its members with low cost medication (m3, m54).[81] The community Cooperative store in Tigbao was established in 1984, although its history in the Sogod Bay area dates to 1976.[82] The Cooperative is designed to benefit low-income groups by providing them goods at low prices, but is hindered by a low capital base.[83] There is too much poverty in the community for the

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Household Census 1999).

[79] 37.00 GBP.

[80] 13.00 GBP.

[81] The pharmacy ("Botika Binhi") was established in Mayabig with the support (mainly in the form of seminars) of the NGO PLAN International. Members contribute a monthly fee of 5 Pesos (0.10 GBP), and in return are entitled to a 20 per cent discount on purchases from the pharmacy. Funds have also been donated by wealthy community members (m3, m54).

[82] The Cooperative was first established in 1976, under the mandate of the *National Cooperatives*, a semi-government agency, which sets the guidelines for the running of cooperatives across the nation. At the time it was known as the Sogod Bay Cooperative, and covered a wide area. In 1984, the cooperative President transferred funds from the Sogod Bay Cooperative – now bankrupt and dysfunctional – to form the Tigbao Cooperative. The Tigbao Cooperative is one of four that have survived in the Sogod/Libagon area (t48, t64).

[83] In order to join the Cooperative, members are obliged to make a minimum 250 Pesos (4.65 GBP) deposit and pay the 10 Pesos (0.20 GBP) membership fee. If a members dies, their family automatically receive 700 Pesos (12.95 GBP) ("Death Aid"), minus any outstanding debts. 20 per cent of the Cooperative turnover is reserved for the wages of sales assistants (this post is held on a rotational basis), 15 per cent is paid to the

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cooperative to prosper, and community members tend only to use the cooperative to buy goods on credit.[84] Although managers are attempting to limit the practice of extending credit,[85] and the withdrawal of deposits, the need within the community is at times too great to refuse (t48, t64).[86]

These obstacles to cooperative growth and development are echoed in accounts of local cooperatives, established to support farmers in purchasing agricultural inputs, farm development and marketing. A primary function of such organisations is the provision of credit for agricultural inputs. In practice, many local cooperatives have collapsed due to mismanagement (m11, m16, m34, m36, t48, t64). Notwithstanding their problems, the *potential* for such cooperatives to benefit community members is demonstrated in the following example.

Example 5.35:

> After typhoon Ruping (1990), the Cooperative borrowed 156,000 Pesos[87] from the Landbank with which to provide assistance to farmers. The loan was used to purchase low cost fertilizer for sale to farmers, as well as hand tractors, to be hired out for land preparation. Both were made available on interest-free credit. Some of the debts incurred at this time remain unpaid, and this is difficult for the Cooperative. I would like to see the Cooperative develop sufficiently to be able to grant widespread credit/loans to community members which would enable them to pay for land preparation, agricultural inputs, as well as high school and college education. An Emergency Employment Agency[88] scheme is now being run through the Cooperative. Under this scheme, loans are made for agreed purposes such as micro-enterprise initiatives. In practice, these loans are often used to purchase food. In order for such initiatives to work effectively, we will need better monitoring and evaluation systems, as well proper training of participants (t64).

The stricter format for loans that is suggested in example 5.35 above is commonly

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Cooperative officers, and 10 per cent is paid to the Board of Directors. Both members and non-members are entitled to purchase goods on credit (interest-free) from the Cooperative store, however members forfeit their 10 per cent annual dividend whilst they are in debt to the cooperative, deposits withstanding (t48).

[84] Approximately one third of the Cooperative's capital has been extended to its members in the form of credit (t48, t64).

[85] Where previously there had been no credit limit (the highest debt is 4000 pesos), now a limit of 200 Pesos for members and 100 Pesos for members is enforced (t48).

[86] Cooperative members frequently ask to withdraw their deposits, an act that requires the approval of the Cooperative President, and can only be accomplished twice a year when inventories are taken. In 1999 Cooperative funds were so low that no inventories were taken and members were prevented from withdrawing their deposits in order to sustain the Cooperative (t48, t64).

[87] 2,890 GBP.

incorporated in cooperatives that support micro-enterprise initiatives. CARD[89] in Mayabig provides one such example.

Each CARD 'centre' has forty members[90] who must all be permanently resident in the barangay, have an annual income of not more than 50,000 Pesos,[91] and be committed to attending weekly meetings. All members pay 5 Pesos[92] a week towards repayment insurance[93] and receive initial training. Members are able to borrow sums for specific purposes according to strictly enforced regulations.[94] CARD loans are available for purposes deemed within the scope of the beneficiary to repay and of benefit to the household as a whole, such as for the purchase of breeding pigs or trade in products such as fish. Members are encouraged to join the CARD savings scheme, by which they deposit 10 Pesos[95] a week, the total sum of which can only be withdrawn upon leaving CARD (m23, m30a, m46b).

Other forms of cooperative bypass the obstacles associated with inclusive cooperatives by limiting their membership and/or focusing upon a specific venture. One such example is provided by the Pangi Cove Buklod (a fishing cooperative whose 29 members are based in Tigbao), which has been established under a government loan scheme.[96] The Government provided an initial loan[97] and seminars on the construction and management of fish corrals. Members share fishing duties, maintenance expenses and their catches, as well as an

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[88] This is a government agency.
[89] The Centre for Agriculture and Rural Development is an NGO which has supported the establishment of cooperatives (based upon the Grameen Bank model in Bangladesh) across the province of Oriental Mindoro.
[90] The majority of members are women.
[91] 926.00 GBP.
[92] 0.10 GBP.
[93] Insurance covers specific circumstances such as death or pregnancy (m23).
[94] There are two forms of loan: 'regular' and 'multi-purpose'. Regular loans must be repaid within one year. Each members are entitled to a first regular loan of 2,000 Pesos (37.00 GBP) and a second loan of 5,000 Pesos (93.00 GBP). Members are also entitles to a first multipurpose loan of 5,000 Pesos and a second of 10,000 Pesos (185.00 GBP), to be repaid over six months. These loans can be taken-out to cover unexpected expenses such as medical treatment. The interest rate for all loans is nine per cent, which is channeled back into CARD and service fees on the loan. Failure to repay within the specified period (with the exception of circumstances against which members are insured) ends a member's right to take out future loans. Further loans may only be taken-out after previous loans have been repaid. Members who miss a meeting or are arrive late for two meetings, automatically forfeit ten per cent of their next loan (m23).
[95] 0.20 GBP.
[96] This scheme is administered by the Technology Livelihood Resource Centre (t40).
[97] At a ten per cent rate of interest.

obligation to repay the loan (t18, t40, t45, t47).[98] Government initiatives that formally establish beneficiary groups through whom projects are implemented, and loans repaid, are common-place. One such example is provided by the government's nation-wide irrigation development scheme.

Although they have some historical president, Farmers', Irrigators' Associations (FIAs) currently function in both barangays under the ambit of a nationwide scheme of the *National Irrigation Association* (NIA) to improve irrigation systems. The funding for this scheme stems from a *World Bank* loan in the 1970s, and projects continue to be supervised by *NIA*. The dual function of the FIAs is to maintain the irrigation systems[99] and to collect user fees[100] for NIA (or its LGU counterparts) (t54, t58, t65).[101] The FIA in Mayabig has solicited funds from government and NGO sources in order to carry out repairs to the concrete irrigation channels, following successive floods. Where farmers are unable to pay their annual fees due to exceptionally poor harvests, they have been exempted. Fees have also been reduced where farmers have experienced either water shortage or water surplus on their fields. In Mayabig, FIA leaders experience considerable difficulty in collecting the rising fees from users, many of whom are already over-stretched by agricultural debts (m11, m36, m54, t65).[102] Credit is a resource that can yield livelihood benefits, however debt also features strongly in community-level vulnerability.

5.2.4 Difference in the Community

The communities studied are diverse, with many cross-cutting divisions, and strong family-centred allegiances. Several groups of in-comers emerge as distinct from the majority. These are respectively, the Mangyan and Visayan populations in Mayabig, and the upland migrants in Tigbao. The factors which make these groups different are their: livelihoods,

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[98] Within the first week of operations (during the tuna season), their nightly catches have varied, from negligible amounts to 29 kilos (t40).

[99] Labour is provided by community members who are selected by the FIA President and are paid for their labour (m42). FIA officials are also responsible for any planned extension or improvement to the irrigation systems (m54).

[100] Fees for use of the water system in Mayabig are 500 Pesos (9.25 GBP), per hectare served, per cropping season (m54). In Tigbao, the fees are one sack of rice per hectare irrigated, or the cash equivalent (t65).

[101] These fees are channeled through NIA to the *World Bank* in repayment of the original loan (t54, t58, t65).

access to resources, relations with members of the wider community and their levels of formal education. These factors are all related, and tend to reinforce one another.

In Mayabig, the small resident Mangyan community[103] are distributed between two (exclusively Mangyan) settlements and function as a semi-autonomous unit. The original Mangyan group settled in Mayabig approximately twenty years ago. They now have little contact with others of the same tribe who have remained in the uplands, and although they have retained their own dialect, they no longer practice *kaingin*[104] farming. They have their own leaders, who represent the Mangyan community in barangay affairs (m58). Outside of work, the Mangyan tend to remain largely within their own circle, and have limited contact with other community members, although they will participate in community initiatives, usually providing manual labour (m58). Literacy rates are low amongst the Mangyan people, and few of the Mangyan children living in Mayabig attend school (m53). The Mangyan work almost exclusively as agricultural labourers. They tend to work together as a group of labourers, on farms across the municipality, including the landowner on whose land their houses are built (m1). Mangyan's are considered unskilled in lowland farming techniques and tend to be employed in lower pay areas such as planting, harvesting and general maintenance, rather than in the preparation of land for rice planting. Mangyans consider it "*unacceptable*" when farmers attempt to pay them less than other labourers for the same work (m52, m53).

The Visayan migrants settled in Mayabig due to the availability of income-earning opportunities (m21, m25, m26, m32, m47). Many of the current population were originally sent to live with relatives in their youth (m21, m32). Others came with their families who encouraged them to marry into the community (m25).[105] The first of these migrants built their homes on land owned by relatives resident in the barangay. Later migrants were granted permission to build their homes on the land of plantation owners of the area, to whom they are not related (m24, m25, m26).[106] They have no enforceable 'right' to live on

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[102] This was the case for all farmers in Mayabig following the December 1998 floods (m54).
[103] Around twenty family units.
[104] Shifting agricultural system.
[105] Once this goal was achieved, their families returned to the Visayas (m25).
[106] A small plot of land is not completely beyond the means of settlers once they are earning, however land is

Footnote continues on the next page

this land, however their presence is accepted as long as they maintain respectful relations with their landowner. Although they are not required to work exclusively on landowners' farms, in practice they show their gratitude by "*helping*" on the plantation when needed.[107] They are otherwise free to work as regular labourers as opportunities arise. This system is a form of *bayanihan*, which upholds local hierarchical arrangements and values (m1, m47). Visayan migrants participate in barangay meetings and social events, and are well integrated in their host community (m47).

In Tigbao, many of the barangay's problems are associated with Lutaw area and its resident upland migrants (t33, t67, t68, t70). There are also "*native*" people (by birth and by family origin) living in this area, but so strong is the association of Lutaw with upland migrants, that they are often overlooked. Generally, the upland migrants of Lutaw participate in community affairs and events, and are more integrated than the Mangyans in Mayabig. However, the upland migrants of Tigbao are less well received within the community, and are often portrayed by key barangay actors as holding back community development. A typical (outside) representation of Lutaw and its inhabitants is paraphrased in the following example.

Example 5.36:

> These migrants from upland areas tend not to be very education-oriented. Their levels of hygiene are poor and they are not used to using latrines. A recent "*Clean and Green*" scheme municipal evaluation, placed Tigbao eighth among the fourteen barangays of Libagon. This is due to the low standards of Lutaw area. During the first year of the present barangay Captain's administration, three public latrine units were constructed in Lutaw area. However, sanitation remains poor and there are many stray animals. This area is a "*shame*" to the barangay and its people (t64).

Many residents of Lutaw are relatively[108] resource-poor. Cases of child malnutrition and infant mortality are most frequently found in this area, and family sizes are above average (t3, t6, t8, t19, t33, t67). Literacy rates amongst upland migrants are relatively low.

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scarce, and landowners prefer to retain all that they own for family use (m26).

[107] For instance, one resident described 'helping' the landowner and his workers by taking food, refreshments and cigarettes to them on request (m24). Sometimes they will work for the landowner for less than the going rate, as a means of reciprocating the aid they have been given (m47).

[108] 80 per cent of the population are living close to or below the poverty line in Tigbao (t71, Barangay Captain and Councillors).

Although most children now attend elementary school, there are more children from this area who fail to complete high – or even elementary – school, than from other areas of the barangay (t6, t10, t11, t21, t15, t17).[109] The houses of Lutaw are constructed either on, or close to, the foreshore area. Many are raised on stilts, to provide protection during high tides. The houses close to the foreshore are built with the permission of the local landowner (t3, t8). Houses constructed upon the foreshore are officially on government-owned land. Some residents of Lutaw pay rent to the landowner (t21).[110] The majority of houses are constructed of light materials, which frequently have to be repaired or replaced following typhoons (t3, t6, t7, t8, t10, t14).[111]

5.3 Typhoons and the Community

Community member accounts of typhoons[112] focus upon lifetime experiences of events. The oldest experiences recounted were of flash flooding in Tigbao during 1955. This was an unexpected event, which badly affected one area of the barangay. Three people were killed, while many properties and much agricultural land was destroyed (t63). Although flash flooding regularly occurs following heavy typhoon rains, an event of the severity experienced in 1955 has not since occurred in Tigbao. In contrast, typhoon storm surge is a constant threat to the growing coastal population of Tigbao. Inland Mayabig experiences severe flooding[113] on a regular basis, the impacts of which are mediated by the experience of the population in dealing with such events and the existence of high-lying safe-havens within the barangay. The oldest severe events recounted in Mayabig, took place during the 1970s (m3, m34, m42). Many livestock were drowned, and houses that had been

[109] Many upland migrant families have been used to children being absent from school for days at a time due to the difficult mountain terrain (particularly during the rains), and the greater distances to and from school. Many have not yet fully adapted to regular school attendance. This is also true of other households who have led relatively transient lives (t64).

[110] One interviewee pays 5 Pesos a month for rent of their house's plot (t21). Landowners will sometimes allow relatives and friends to build their houses upon their land without charge. It was recently agreed in a public meeting that residents of whom rent is required should pay the landowner 10 Pesos a month (t75).

[111] This topic is explored further in Section 5.3.3.

[112] For details of typhoons occurring in Southern Leyte and Oriental Mindoro, refer to Appendix A.

[113] It frequently takes one to two days for flood levels to subside (m3).

constructed on the riverbank were washed away (m3).[114] In each barangay, agricultural lands, crops, infrastructure and private property are subject to substantial typhoon damage. The livelihood repercussions of such damage are often felt for months after the initial events. Sections 5.3.1, 5.3.2 and 5.3.3 below, respectively explore preparation for typhoons, experiences during events, and their aftermath.

5.3.1 Warning and Preparation

In Mayabig, the main concern of community members during the typhoon season is flooding which occurs on an almost annual basis (m41). As flash flooding is caused by rain falling in the mountains, it can sometimes be difficult for community members to gauge the likelihood of flooding in lowland barangays such as Mayabig.[115] At times when little rain has fallen in the barangay, the first warning may be a change in the colour of the river water, which leaves only a few minutes to safely evacuate the immediate riverside area. It is this first flush of floodwater that is most dangerous, particularly when it occurs without warning after dark (m41). When water levels rise, community members know that flooding is imminent and many will evacuate themselves without need of warning from barangay officials. Community members know from experience which areas are flood-prone (m28, m30a). All typhoons and areas of low pressure that come near the Philippines are tracked by PAGASA,[116] and warnings are broadcast on television and radio. As ownership of both radios and television sets has become increasingly widespread, these have become primary warning mechanisms for barangay members. It is now normal to receive two days warning before a typhoon, and regular updates including an indication of the storm's severity[117] (m1, m29, t9, t17, t61, t63).

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[114] No houses have since been built on the riverbanks in Mayabig (m3).

[115] The incidence of flooding in Mayabig has increased in both frequency and severity since the occurrence of the 1994 earthquake. Municipal government staff in Baco confirm that the earthquake had caused much of the land of the municipality to sink by 1 metre. Prior to the earthquake, 3-5 days of continuous rain were required to cause flooding in Mayabig. Since the 1994 earthquake, only 1-2 days of continuous rain is enough to cause flooding (m16, m27).

[116] Philippine Atmospheric, Geophysical and Astronomical Services Administration.

[117] Local-specific typhoon impacts are difficult to predict because "*every typhoon is different*". Factors such as wind speed and rainfall vary significantly (Mrs R. Perez Philippine Atmospheric, Geophysical and

Footnote continues on the next page

Household preparations carried out when a typhoon is imminent include, ensuring that children are safe, putting new batteries in flashlights, moving valuable possessions to safe places[118] tying-down galvanised iron sheet roofing with rope[119] (m29, m38, m40, t35, t36, t63). Livestock are often taken to higher ground or left to run free[120] (m27, m28, t2, t9, t21). Stockpiling emergency food provisions[121] is an important preparation (m3, m32, m33, t19, t35, t36). Equally important are forms of preparedness that are incorporated in everyday practices, such as growing produce[122] for household consumption (example 5.37), and felling trees[123] that endanger people and their properties during high winds (see example 5.38). Both of the examples below contain descriptions of the importance of specific practices learnt from experience.

Example 5.37:

During December 1998, there were two floods. The first was not serious but the second was unexpectedly high. It took us by surprise. We had very little in the way of food stocks in the house. Because the previous harvest had been poor, even our rice stocks were low. We could not buy supplies because we were trapped by the floodwaters. Our house in on a hill and became an evacuation centre for five neighbouring households, and their livestock too. We ended up eating mostly bananas as that was all we had. The worst floods I remember were in 1972. The flooding lasted for two whole days and in that time we consumed all our rice. I've learnt the importance of keeping the house well-stocked from these experiences. It is important to grow not only rice, but also coconuts, bananas, vegetables and rootcrops so that we can be self-sufficient if necessary (m28).

Astronomical Services Administration (PAGASA), personal communication: 1 July 2001).

[118] This applies particularly to flood-prone households in Mayabig, and coastal areas of Tigbao which are prone to storm-surge and/or flooding. Valuables such as electrical goods and rice stocks are stored in high places or on second floors where available (m9, m29, m38, t19).

[119] This system is commonly used in Tigbao, on houses made of strong materials such as wood and concrete. It does not tend to be used on houses made of light materials as it would endanger the whole house rather than just the roof (t36).

[120] Particularly in Lutaw area of Tigbao.

[121] Foods that require little or no cooking are of most use during events, such as dried fish, rice, canned goods and noodles (t36).

[122] Such as rootcrops, vegetables, coconuts and bananas.

[123] Tall coconut palms in particular are in danger of being felled by high typhoon winds. Felled trees are worth around 800 Pesos (14.80 GBP) (m58). Old coconut palms that have lost their productivity are often felled and replaced with new trees. However in Mayabig, many trees have been felled due to their immediate cash value for lumber. For this reason, copra production in Mayabig is limited (m58).

Example 5.38:

> There used to be many more tall trees around the houses here before the 'super typhoons' of the 1980s. Our house was hit by two falling coconut trees and the nipa roof was destroyed. Since typhoon Bising in 1982, we have started to prepare for typhoons by felling the taller trees. This helps to protect us and our properties (t63).

5.3.2 Weathering the Storm

'During severe events, people within the community help one another through their difficulties' (m35).

The quotation above echoes the sentiments of many community members (t6, t9, t22). It demonstrates the potential for unity that emerges during adverse situations such as these, which affect entire communities. In Mayabig, flood levels experienced in residential areas during the December 1998 floods range from ankle to shoulder-level (m10, m34), while river and irrigation system flooding causes substantial damage to agricultural land in both communities (m9, m10, m14, m21, m36, t25). Example 5.39 describes the worst flooding experienced by a household in a flood-prone area of Mayabig.

Example 5.39:

> In 1973 the water level inside one house rose to over six feet. During the flooding we stayed on the roof of our house for two days with our pig, chickens and dogs. Even though the Councillor wanted to evacuate us, we refused to leave our house (m34).

Households normally choose whether to stay in their houses or to evacuate, according to safety-related criteria. People are most likely to remain if their houses are constructed of robust materials such as concrete blocks and wood that can be expected to withstand the typhoon (t35, t36, t60, t61). In flood-prone areas, an important criteria is whether the house has a suitably raised platform or a second floor on which household members can shelter from the floodwaters. Those living in such houses are most likely to remain, even against the warnings of barangay officials (m33, m34). Decisions to stay or to evacuate are also taken on the basis of household experience of past events, including the extent to which their own (or neighbouring) properties have been flooded, or damaged by typhoon winds, landslides, falling trees or storm surge. Sometimes, women and children are evacuated leaving the male head of household to look after the property (m29, m38).

Elderly and infirm community members often rely upon the assistance of family and neighbours (example 5.40), while community leaders provide the ultimate source of help (example 5.41).

Example 5.40:

> I am used to floods and have always managed living here. My vegetables tend to suffer, but otherwise the effects are not too bad. In December 1998, I was stranded in my house by the rising floodwaters, which were lapping over the top of the raised platform in my house. One of my daughters lives in the barangay with her husband and they came to bring me to their house. We had to wade through several feet of water (m30b).

Example 5.41:

> During the December 1998 typhoon, our house was flooded, and we had to be taken by boat to higher ground, along with several other families in this area of the barangay. The Councillor alerted the Captain and asked for us to be rescued (m21).

Those evacuated, take refuge in designated evacuation centres such as school buildings and churches[124] (m30a, t3, t6, t10, t21, t26), or in nearby private houses made of robust materials (usually concrete, wood and galvanised iron roofing) situated on higher ground (m1, m28, m37, t36, t60, t61). In Mayabig, community members use felled banana trees to construct rafts with which to negotiate the floods (m37, m41). In areas of Tigbao where wind damage rather than flooding causes the greatest concern, many shelter from falling trees and other wind-born debris in the basements or safe areas of solid houses (t63). Those whose houses provide little protection for their possessions (for example households from Lutaw) often take their valuables to evacuation centres as illustrated by example 5.42 below.

Example 5.42:

> We always evacuate during typhoons because of the danger of storm surge. We pack-up our valuables and evacuate to the school building on higher ground. We also take rice and a kettle with us. Before a water supply was installed in the school building, we used to have to carry water too (t19).

When no cooking facilities or pre-cooked goods are available during floods, households often fall back on their supplies of bananas (m32). Securing rice stocks is a priority in

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[124] In Mayabig, 40 people sheltered in the church during the December 1998 floods (m30a).

flood-prone Mayabig. If the rice becomes wet, its quality and value are badly affected (m9, m38). During severe flooding, many households have no secure place to store their rice above the floodwater levels and sheltered from heavy rainfall (m37, m38). Mayabig is also frequently cut-off from the municipal town and provincial capital by flooding. During serious floods, the water currents are strong, and vehicles cannot pass. Often, barangay members wait two or three days after the rain has stopped before they can travel outside of the barangay. There is a danger during severe events of food supplies running low (m42). The following example illustrates how concern for property coupled with the unpredictability of flooding and typhoons can lead to dangerous situations.

Example 5.43:

> I was caught out during the December 1998 floods. We evacuated the house and I took the children and our valuables to an evacuation centre on the hill. I returned to the house to rescue our chickens and pigs, but the water rose again suddenly and I was trapped in the house for eight hours waiting for the flood to subside. The current was too strong for a boat to reach me (m27).

5.3.3 The Aftermath

'The floods make us all poor' (m11).

As suggested by the quotation above, the livelihood impacts of typhoons and associated flooding are acute, and have repercussions throughout the community. I have summarised these impacts in table 5.1 below. In this table, the short-term direct effects of events are separated from indirect effects, viewed in the medium to long-term.

Figure 5.2: Livelihood Impacts of Typhoon Events in Mayabig and Tigbao

Livelihood Category	Encompasses	Direct Effects	Indirect Effects
1. Agriculture	Rice, coconuts and bananas, rootcrops and vegetables, other cash crops (fruit trees, construction materials, Manila hemp).	Crops damaged or destroyed, trees blown down, rice fields flooded, irrigation systems damaged.	Once floods subside: • Silting over of rice fields can delay replanting by several months, while the availability of resources and seasonal timing can both influence decisions as to which type of rice, and system of farming, will be used. • Destroyed trees and plants are no longer productive, and even where these are replanted, there will be a substantial period without returns for labour until these reach fruit or crop bearing maturity.[125] • Repercussions in terms of agricultural labour requirements and payment systems. • Increased borrowing for most, and lending for wealthier community members and landowners – especially those involved in trade and local politics.
1. Livestock	Pigs, poultry (chickens, ducks), water buffalo.	Drowning, flying debris causing death or injury, eggs lost during flooding.	Loss of breeding stock affecting future assets, loss of feed, or of future capacity to provide adequate feed for livestock.
1. Fishing	Commercially valuable: includes tuna, blue merlin, and crabs. (Mostly) for own consumption: small fish and other sea food.	Damage to boats and equipment; lost opportunities to fish due to high seas.	Loss of livelihood during time-lag between end of storm surge and fixing or replacing damaged boats and materials. The duration of this time-lag will depend upon the availability of resources and skilled labour to carry out necessary repairs or replacement.
1. Other	Most commonly: Drivers, carpenters, artisans (making baskets, fish cages, shrimp and crab pots, mats, furniture), shop keepers and traders.	Unable to practice trade during typhoons and flooding.	Post flooding mixed effects: • Although the need for certain services – particularly those of skilled carpenters – is likely to be increased, in practice, for the majority of community members, less resources than ever are available within the community to pay for such services due to livelihood losses. Many will fall back on their own abilities where they can, rather than paying for the services of skilled carpenters or artisans. • Local demand for inessential services or produce will be diminished for some time after typhoons or flooding. • Store keepers can expect to sell less, and are at the same time under increased pressure to extend credit to impoverished family members and customers.

Housing constructed of light materials is frequently damaged or destroyed by typhoon winds and storm surge (m21, t6, t7, t10, t11, t21).[126] Those who can afford to, build their houses of robust materials, in (relatively) safe locations and with features such as raised platforms and low roofs (t52, t54, t63). Although most of the damage could be repaired within a week, in practice lengthy delays take place in acquiring the necessary materials.

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[125] For instance, banana trees take one and a half years to reach crop bearing maturity (m11, t38), while coconut palms (which tend to be grown from seed) take five years (t14, t46).

[126] Houses made principally of light materials tend to be favoured by the resource-poor as they cost far less to construct than houses made of concrete. Estimates for the construction of light materials houses range from 1,000 to 15,000 Pesos (18.50 to 280.00 GBP), while an average size concrete house costs around 300,000 Pesos (5,560 GBP) to build (t6, t7).

This is partly due to demand outstripping supply for materials such as nipa palm for roofing in the aftermath of typhoons (t17). Most significantly however, the resource-poor households that tend to reside in such houses lack the means to purchase the materials they require or to pay for the services of carpenters. This situation is compounded by the lack of income-earning opportunities available within the community, in the aftermath of a severe typhoon, as documented in table 5.1 above. As a result, many households delay the repairing or rebuilding of their houses until they have the necessary resources (t6, t13, t14, t22, t30, t39). Some economize by using materials collected from the wild,[127] and carry out the work themselves, rather than hiring carpenters (t3, t6, t8, t11, t17, t27). Where possible, households often live with relatives until their own house is repaired (t21, t30, t48, t63). Family members within the community are often unable to offer financial assistance as they have themselves suffered considerable loss to their livelihoods (t10).

Housing and property damage compound livelihood stresses associated with typhoons, however it is in the agricultural sphere that the worst (direct) effects of natural events are manifested (m21, t23, t26, t49, t50, t51).[128] This is demonstrated in examples 5.44 and 5.45 below.

Example 5.44:

Our house was badly damaged during the December floods. We plan to repair it if we can find the money to do so. In the meantime, our friends advised us to move into the Farmers Association Building. It is safer for our grandchildren here. My husband is now sick in hospital. We spend what money we have on his treatment. Our plantation was damaged during the December floods. The banana crop was worst affected. We will replant the smaller trees that were washed out by the floods. Flooding in the agricultural sector is our biggest problem. After the floods we cannot earn much income (m13).

[127] Such as wood and cogon grass for thatch roofing (t6, t8).
[128] Households with the resources to do so, will move from more to less hazard-prone locations. Such moves tend to be motivated by extreme experiences during specific events (m6, m38, t14, t25, t51, t63).

Example 5.45:

> My rice fields have been flooded twice during 1998 and I have had to replant twice. Plants that survived the floods were attacked by rats after the waters receded. My entire crop was destroyed. In some areas, fields were left covered in thick silt, in others the plants had been completely washed out. We have always experienced flooding but not as frequently as nowadays. The floods are making us all poor. We spend so much planting and then the floods come, and we have to start all over again. Our coconut and banana crops were also affected. We lost some of our banana trees. We used up all of our resources, including our food stocks, in repairing the damage and replanting. We needed cash to pay the labourers. Floods are one of the worst problems we have to deal with. Even minor floods can be hugely damaging. They are usually followed by snail outbreaks (m11).

Rice crops are particularly susceptible to floods, which can decimate yields (m6, m9, m24). For instance, a farm producing forty sacks during a good season yielded only fifteen sacks[129] from the crop affected by the December 1998 flooding (m5).[130] Retreating flood waters leave rice fields covered in silt, gravel and sometimes boulder deposits, to a maximum depth of around three feet (m2, m15, m34, m36, t13, t23). Bulkier debris has to be cleared, either by hand, or occasionally using machinery on loan from local government sources, before the fields can be prepared and replanted (m20, t23, t30, t42, t45, t48). Fine silt deposits are normally left to be broken-down by rainfall, as they cannot be effectively cleared by hand (m2, m42). It can take several years for land damaged by floods in this manner to regain its previous level of productivity (m18, m20). In fields affected by flooding, but not subject to silt deposits, young rice plants are easily washed out of the earth and damaged (m5, m11, t47, t49, t56). Many young crops were destroyed and had to be replanted following the December 1998 floods in Mayabig (m9, m11, m39, m40, m42). Replanting necessitates the adjustment of cropping seasons, which if pushed forward into the rainy season, increases the likelihood of further flood and pest damage (m10). Mature plants are more likely to survive flooding, however heavy rains and winds in the middle of the cropping season cause poor harvests. If the crop is mature, and heavy rain is expected, farmers will harvest immediately (m5, m30b, t49, t50, t56). Rather than the occurrence of flooding, it is the variability of climate patterns and the timing of flooding that makes

[129] One sack is 50 kilos.
[130] 1 cavan is equal to 50 kilos.

farming difficult (m5).[131]

All farmers suffer from typhoon damage and tenant farmers more than landowners, in that tenant farmers bear both costs and losses. One landowning farmer dismissed his tenants following the December 1998 flooding in Mayabig, as he found the tenancy arrangement no longer viable (m36). Worst of all is the position of those agricultural labourers who work for a share of the harvest[132] (m45, m46a, m46b). Example 5.46 (below) explores a labourer's perspective.

Example 5.46:

> I regularly work on my mother-in-law's farm, as well as on any other farms where work is available. My mother-in-law's farm was badly affected by the December flooding. It was left covered in water and silt. Less than half the crop was left. We only harvested about eight sacks, when usually we would harvest twenty.[133] Her land is still waterlogged because of the damaged irrigation system. There is not much work on the low-lying farms, as most were affected by the flooding. I have been looking for work on high-lying farms. There is one that employs me sometimes but it is only two hectares, and requires just six labourers. I am not always employed there (m21).

After severe flooding, labourers who work for a harvest share may not be paid their full quotas, although they may be compensated for this following good harvests (m29). Depending upon the scope of damage and the season, labourers may be in demand for replanting activities following severe flash flooding. Where fields are waterlogged, transplanted rather than direct-seeded rice is grown, which means that more labourers will be hired for planting (m34). However, where fields are drier, farmers in Mayabig will often replant direct-seeded rice to save them the immediate cost of hiring labourers for planting (m16, m18, m34).[134] After partial flood damage, farmers harvest a surviving crop, employing a reduced number of labourers (m11, m24, m33, m35, m36, t26). On balance, the demand for agricultural labour tends to be reduced following a severe typhoon (m12,

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[131] The same farmer argues that "*years ago*", the seasons used to be more clear-cut. This year the temperature has risen too early and the fields are too dry. La nina also extended the flooding period (m5). An elderly former farmer confirms that farming has become increasingly hard and that yields are diminishing in normal years, and not just during El Nino/la Nina cycles (m30b).

[132] This system of payment is wide-spread in Mayabig, but not Tigbao. Refer to Section 5.2.1 under *Small-scale Agriculture* for further details.

[133] Each sack is 50 kilos.

[134] Refer to Section 5.2.1 under *Small-scale Agriculture* for further details.

m33, m31, t19, t26). As one interviewee puts it:

> *'After flooding there are always far too many workers chasing too little work. The rice often has to be replanted after floods – those are hard times. If no farm work is available then there is no work' (m25).*

Plantation crops such as coconuts,[135] bananas and abaca are prone to wind and, to a lesser extent, to flood damage (m2, m24, m11, t13, t44, t56). The upland plantations of Tigbao are subject to substantial damage caused by flash flooding. Debris (including boulders) carried by floodwater causes considerable damage, as do landslides triggered by the heavy rains (t55). Such damage has a negative impact upon the demand for agricultural labour, particularly in the copra-producing and abaca processing sectors (m24, t19, t46, t54, t56). Experience of typhoon damage has also discouraged many farmers from investing in previous levels of plantation maintenance or in improvements, for fear of wasting their investment (t55, t75).

Table 5.1 (above) demonstrates that the effects of typhoons on predominantly agricultural communities have repercussion for almost all community members. For instance, the business of traders in agricultural produce can be badly affected by a poor harvest (m10). Traders in other products, and those practicing trades such as carpentry and welding generally expect to see a downturn in trade in the weeks and months following a severe typhoon, particularly where harvests have been badly affected (m30a, t59). This situation is to an extent compensated for by livelihood diversification strategies. Many make use of social networks to seek work outside of badly affected areas (m2, m12, t11, t26, t29, t46). Consumption patterns also alter. During periods of livelihood stress, households rely increasingly upon low value home grown produce such as bananas and rootcrops (m36, t22, t47, t48).

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[135] Strong typhoon winds can fell coconut trees or snap their tops off. They are then cut up and sold as lumber for 90-100 Pesos (1.70-1.85 GBP) per tree (t13, t54, t75). Newly planted coconut palms take five years to grow from seed (t14, t46).

Other typhoon impacts which reinforce those described above, include:

- rising prices, and sometimes shortages, of necessities such as food and medecine (m30b, t11, t17);
- outbreaks of influenza, fever and dengue (m2, m3);[136] and
- irrigation system failure due to damage and blockages (m21).

5.4 Community-level Planning to Reduce Vulnerability

> *'The economic condition is very low in Tigbao and is further reduced by disasters' (t75).*
>
> *'Standards of living within Mayabig are rising. The number one obstacle to development is calamities – especially floods' (m47).*
>
> *'I have no time for activities such as the organised river cleaning – however good the outcome – because I cannot afford a day without paid work' (m26).*

The first two quotations above illustrate the relationship between livelihoods, development and typhoons/flooding from the perspective of community members. The main challenge to barangay officials is to implement community development plans and maintain existing services and infrastructure with limited funding (m35, m50, m58, t71).[137] The priority of most community members is to achieve or enhance their family's livelihood security, as witnessed in Sections 5.2 and 5.3.3. As illustrated by the last quotation above, prioritisation of livelihoods can significantly detract from the will or ability of a large sector of the population to participate (unpaid) in community-based activities (m58, t73).[138]

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[136] For instance, there was a minor outbreak of dengue fever in Jan 1999, following the Dec 1998 floods in Mayabig (m2).

[137] For example, in 1999 the total income of barangay Tigbao from the Internal Revenue Allocation was 401,589.66 Pesos (7,437 GBP), of which 139,092 Pesos (2,576 GBP) are reserved to pay the Captain's 'Honorarium' and the remainder is allocated to a variety of funds for barangay development, the maintenance and improvement of barangay resources, insurance and administrative expenses (Tigbao, 1999).

[138] Many community members in Mayabig participated in waterway clearing activities (under the banner of the "*Linis Ilog*" campaign) promoted by LGUs (m33, m34). This activity is also referred to in Section 7.2.1, under *Local Capacity-building Focus*). Those who did not participate included the elderly and infirm, those with other employment opportunities or commitments or those claimed to have been poorly informed of the activity or little affected (m10, m24, m40, m42, m43, m45). The activity is widely considered a success which barangay leaders plan to repeat (m10, m27, m28, m29, m32, m39). The activity reduced the risk of

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This places the onus upon barangay officials to organise repairs and development and to bring the necessary funding into the barangay. Whilst recognising that barangay initiatives are in practice greatly influenced by government programmes (and the availability of funding from government sources), it is important to relate such initiatives to the community perspectives on vulnerability and development, explored below.

5.4.1 Community Perspectives on Vulnerability and Development Priorities

Vulnerability is associated at barangay level with poverty, poor health (affecting ability to work), and population growth.[139] Barangay officials also cite "*laziness*" and dependence upon others (usually relatives) as a source of vulnerability for a minority of community members. "*Calamities*" such as typhoons add a further burden to the lives of community members (m44, m47, t71, t75). Shortage of income-generation opportunities is considered the primary source of vulnerability for the majority in both Mayabig and Tigbao (m35, m36, m44, t71).[140] Example 5.47 (below) illustrates the type of initiative that many community members would like to see implemented locally. In contrast, example 5.48 presents a (commonly echoed) local official's perspective, which argues for respect of the existing social hierarchy, and places the responsibility for increasing the standard of living upon community members themselves.

Example 5.47:

> I would like to see income-generation opportunities and training for out-of-school youths – in particular for young girls. This would enable them to earn incomes of their own rather than remaining dependant upon their parents. They could be training in commercial activities such as dressmaking, manicuring and cooking. Such training would have to be followed-up with investment in – for instance – a beauty parlour or barbers shop. I think it is important to target the girls, because they are more responsible than the boys and will not gamble their money (m14).

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flood damage and dengue outbreaks, and – as a secondary benefit – improved fishing (m10, m24, m27, m28, m29, m46a, m46b).

[139] Although birth control is increasingly promoted by health workers take-up rates remain low in rural areas. This is largely attributed to the rejection of contraceptives by the predominant Catholic church (t71).

[140] Refer to Sections 5.2.1 and 5.2.3 for details on current micro-enterprise initiatives and opportunities.

Example 5.48:

> There are no vulnerable groups within the community except those with poor health or disabilities. There are a few families who have the health and ability to work a full day but no determination to do so. They are a liability to the barangay and are always asking for help. There is a "*trickle-down effect*" of wealth within the community. As the living standard of wealthy community members rises the poor are "*pulled-up*". Relations are good within the community – the wealthy and the poor need each other. Rising wealth for some, leads to more work for "*lower classes*". Relatives in particular tend to help each other across the wealth divide (m47).

Remittances from family members working in urban areas or overseas[141] provide regular support and/or a source of emergency funds for many (t71, t75). Increased migration trends have altered livelihood and vulnerability patterns within the communities studied, and are associated locally with an increased standard of living for those who benefit (m44, t71, t75). Barangay officials find that standards of living have been improved by developments such as the availability of birth control, road improvements which increase access to urban centres, as well as by various government and NGO projects (m44, t75). Funding to support micro-enterprise is particularly sought by barangay officials. For instance, in Tigbao 40,000 Pesos[142] have been allocated for the support of initiatives such as commercial ginger production[143] and hog-raising (t71).[144] This is a rotating project whereby each participant receives an interest free start-up loan which, once repaid, is allocated to another participant (t75). The selection of participants for such initiatives is a potential source of local conflict,[145] as is demonstrated in example 5.50 below.

Example 5.49:

> It is important that participants in such schemes are selected from across the community. If any one person is alone responsible for the selection of participants, then their selection is bound to reflect their "*own biases and sympathies*". It is fairer for participants to be selected by all members of the barangay Council. There are different allegiances operating within the community and questions would be raised if some of each Councillor's "*people*" were not selected for such projects (t75).

[141] The widespread work-related migration of Filipinos abroad commenced in the 1970s-80s (t75).
[142] 740.00 GBP.
[143] Ginger is currently worth around 80 Pesos (1.48 GBP) per kilo (t71).
[144] 20,000 Pesos (370.00 GBP) has been allocated to livelihoods initiatives from the barangay's IRA, while 20,000 Pesos of Municipal Aid has also been contributed. 20 households have participated in the scheme to date (t71).
[145] Similar difficulties were encountered in the selection of beneficiaries of the PLAN International (NGO) community project in Mayabig by local representatives from within the barangay (m12, m32).

Much of barangay development in recent decades has focused upon infrastructural development, such as the construction of community roads, irrigation systems and buildings (m12, m35, m44, t68, t73, t74). Flooding is a major cause of infrastructural damage, particularly in Mayabig. Post-flooding repairs constantly drain local resources (m35, m37, m44, m58).[146] Barangay resolutions requesting funding are submitted to the Mayor for sums of up to 50,000 Pesos.[147] Requests for sums over 100,000 Pesos[148] are submitted direct to national representatives (m58, t71).[149] Preparatory measures such as the planned construction of a dedicated evacuation centre in Mayabig[150] are a local priority, however disaster preparedness is not a priority funding area for government. It is consequently much harder to identify and access funding for mitigation and preparatory measures unless these can be tied into wider development initiatives (m50, m58).[151] In Mayabig, it is hoped that planned irrigation system developments, intended to protect flood-prone farmland and housing by controlling sudden influxes of water, can do just this (m30a, m35, m37, m44, m50).

5.4.2 Key Projects and the Role of Barangay Officials

Where funding for barangay projects is unavailable or delayed, barangay officials seek low-cost (usually temporary) alternatives, such as the construction of bamboo – as opposed to concrete – bridges (m50). Contributions to local projects often emanate from several sources and can take various forms. It is the role of barangay Captains to co-ordinate such initiatives. For instance, past irrigation system improvement in Mayabig has included the construction of a small dam.[152] The organisation of this project took three months, with contributions from four different agents providing respectively: materials for construction

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[146] For instance, the December 1998 floods in Mayabig caused considerable damage to sections of road and the irrigation system (m1, m50). An irrigation dike that had been constructed only four months before the flooding was badly damaged (m35).

[147] 925.00 GBP.

[148] 1,850 GBP.

[149] Barangay captains may – for instance – take pictures of flood damage and submit these with funding requests to the appropriate authorities. For higher level funding, requests may be submitted to a member of Congress or a Senator with local connections (m58, t71).

[150] The estimated cost of such a centre is 400,000 Pesos (7,407 GBP) (m58).

[151] Funds that are specifically set-aside for response and rehabilitation cannot be spent on disaster preparedness (m58). Refer to Section 7.1.4 for details of local government funding systems for disaster management.

(PLAN International),[153] heavy machinery and fuel (NIA),[154] labour costs (Low-income Upland Communities Project),[155] construction supervision (Sangguniang Bayan)[156] (m58). The NGO PLAN International (PI) has provided assistance to many households in Mayabig,[157] (m9, m30a, m32, m35, m42, m43).[158] At community level, PI has contributed to irrigation system repairs, provided educational equipment and tree seedlings, supported organic farming initiatives and provided seminars on communication skills, childcare and environmental care (m4, m20, m34, m35, m37, m44). PI operates participatory projects, the main outputs of which are shaped by community representatives, who, like barangay officials in relation to community institutions and resources, act as 'gatekeepers' to the community (m37, m50). These representatives aim to develop ongoing project elements that were commenced with PI funding, but are experiencing difficulty in pooling funds from within the community for such purposes (m12, m37, m43). Such community initiatives – like the cooperative ventures explored in Section 5.2.3 – tend to be held back from developing independently by the widespread reluctance of households or individuals to invest their own resources in communal projects (m12). This culture of reluctance has also affected PNRC community-based projects, as is explored in Section 6.5.3.

In addition to planning and securing external funding for community projects, barangay officials exercise key regulation and information dissemination roles, in line with government policies and programmes (m1, m35, m50, t67). This has led to increased local awareness of environmental management issues such as deforestation and marine habitat depletion (t75). For instance, the nation-wide campaign to eliminate illegal logging has been underpinned at barangay-level, where tree-felling on government managed (or untitled) land has been restricted to that required for limited local house-building. Other

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[152] Known locally as the "CORE DAM".
[153] An NGO that has been actively involved in community development in Mayabig.
[154] The National Irrigation Association. Refer to Sections 4.1.4 and 5.2.3 for further details.
[155] LIUCP operates under the ambit of the Government Department for the Environment and Natural Resources. The project is designed to "*protect and conserve watersheds through the improvement of the vsocio-economic conditions of upland people*" in Mindoro (Ramos in LIUCP, 1995:1).
[156] The Municipal Council/legislature.
[157] PI is drawing to the end of its operations in Oriental Mindoro, but is in a much earlier stage of operations in Southern Leyte. PI deliberately excludes professional households from their schemes, and targets low-income households (m10, m39, m40, t49).
[158] PI assistance has taken the form of housing materials, water-sealed latrines, water pumps, water buffalo and educational assistance through the foster parent scheme

local information campaigns are concerned with aquatic resource conservation,[159] sanitation,[160] nutrition,[161] and with combating excessive drinking and gambling[162] (m47, m75, t33, t71).

Government campaigns often include (limited) funding for local project implementation. Provincial governments are involved in upland reforestation initiatives, and in some instances tree seedlings (such as mahogany) have been provided for planting in lowland areas (m41).[163] Health and sanitation funding has been released to selected households within selected barangays, including Tigbao. Seventy-seven resource-poor households in Tigbao have been provided materials for the construction of household latrines under the CIDSS programme of the DHWD. Recipient households are expected to provide sand and labour (t33). The municipal government has also provided a budget for the provision of one meal per day for malnourished children in Tibao. The programme is implemented by barangay health workers (BHWs) and officials (t33).[164] In all such initiatives, it is barangay officials who act as the gatekeepers to the community, determining (within LGU guidelines) for whom and where funds are spent.

5.4.3 Environmental Management Issues: Beyond the Community Sphere

Many environmental management issues extend outside of the community sphere. Awareness of remote causes of local problems such as the impact of the gravel works on the Sogod river[165] is rising. Other such issues include commercial deforestation and marble

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[159] Community-level provisions include enforcing the prohibition of environmentally harmful fishing practices and preventing accidental poisoning of waterways – occasionally caused by farmers washing their sprays in rivers and killing river life (t71).

[160] Sanitation campaigns include recommendations on waste disposal and disease prevention (m47, t71).

[161] Nutrition campaigns promote the cultivation of vegetables in kitchen gardens (m47, t71).

[162] Excessive drinking and gambling are pursuits associated with male unemployment (m14, m15, m75).

[163] Often community members are expected to provide the labour for planting themselves. Sometimes the LGUs supervise planting and/or provide labour (m41).

[164] The resident BHWs weigh children on a monthly basis in order to monitor levels of malnourishment. Under the scheme, parents of children declared malnourished are required to bring those children (and no other children of the family) to communal meals served in a public building on a daily basis. The feeding programme in Tigbao ran from February to March 1999 before the budget ran out. Parents (especially mothers) of malnourished children are advised on nutritional issues, and in particular on the cultivation of vegetables in kitchen gardens (t33).

[165] Explored in Section 5.2.1 under *Fishing* and Section 7.2.3 under *Power and the Politics of Funding*.

quarrying on the mountainside above Mayabig (m37, m41). Firstly, commercial deforestation is linked to the increased incidence and severity of flash flooding in Mayabig (m37, m41).[166] Although much damage has already been done, logging bans are increasingly enforced and little large-scale illegal logging has taken place in the area for the last three years (m41).[167] Secondly, marble quarrying in the uplands of the Mayabig watershed took place over a ten year period, and was halted three years ago. Marble dust mixed with the silt deposited on rice fields during flooding, was hardening the silt, and causing a serious problem to farmers (m41). Quarrying is also associated with a potential destabilisation of upland slopes which could result in landslides or an increased risk of flooding from upland lakes and streams (m37, m41). Although quarrying operations were halted under considerable pressure from the municipal population, the site continues to be guarded and maintained by the company involved. If a Government permit were to be granted, then quarrying would recommence (m37, m41).

5.4.4 The Disaster Management Role of Barangay Officials

> *'Although areas of the barangay are heavily affected by flooding, we have not yet experienced a life and death situation' (m50).*

Disaster management is provided for within the local government system in several ways. Firstly, each barangay retains a small Calamity Fund, which can be accessed to provide relief to community members in the event of LGU officials declaring the barangay calamity-stricken. Barangay officials are also entitled to use five per cent of the barangay Internal Revenue Allocation,[168] which is annually retained for use in such circumstances. They are not however entitled to delve into barangay general funds for such purposes.

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[166] Businesses such as bakeries for instance, require a continuous supply of charcoal for fuel (m41). The upland Mangyan population also clears trees, principally for agricultural purposes, however their impact has always been relatively small (m41). Now the smoke of Mangyan fires is rarely seen on the hillsides around Mayabig (m41).

[167] One interviewee suggested that when the logging trucks could no longer get through, some took to transporting logs clandestinely by river at night. The practice of illegal logging is best revealed during floods when logs are swept downstream, causing considerable damage to people, property and infrastructure. This last occurred during flash flooding in 1994 (m41).

[168] The IRA allocation for each LGU is determined according to criteria such as population size, land area and economic income. The larger each of these, the larger the share accorded. For example, in 1999 the total

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Secondly, limited aid may be made available from provincial and/or municipal government sources following extreme events upon request, and according to funding availability. This tends to take the form response and rehabilitation support. Relief goods have occasionally been distributed, particularly in Tigbao following severe natural hazard events, however no government assistance is available to individual households during periods of livelihood stress such as those associated with poor harvests (m1, m50, t9). PNRC also provides some relief goods and assistance in badly affected areas (t12, t13, t40, t45, t46, t75). Such assistance cannot however be relied upon, and it is household's own responsibility to stockpile emergency provisions (m35).

During flood events, motorised boats have been provided to flood-prone inland barangay in Baco municipality for evacuation purposes. In practice, the municipality owns only two boats to cover twenty-seven barangays (m50). During the December 1998 floods in Mayabig, the provincial government stepped-in and hired boats privately. These were distributed to flooded barangay – including Mayabig[169] – by municipal governments (m1, m28, m35). LGUs have also occasionally provided heavy equipment, for instance to remove debris blocking the Alag river in Mayabig or to remove heavy silt and debris deposits from rice fields in Tigbao (m1, t23, t38). Notwithstanding such gestures, LGUs are generally under-resourced, and barangay officials sometimes experience difficulty in approaching high-ranking government officials to request assistance (m50).

Thirdly, the Barangay Disaster Co-ordinating Councils (BDCC) established by local officials, produce plans for the management of typhoons and flooding, as well as other hazards.[170] In addition to proposing future projects or preparatory measures, the BDCC plans designate those responsible for various elements of hazard management (t75).[171] BDCC members have also been involved in typhoon warning, awareness-raising and evacuation within their communities (t45). After events, barangay officials evaluate and report the situation to appropriate authorities (m44). In Mayabig, after storm warnings

income of barangay Tigbao from the Internal Revenue Allocation was 401,589.66 Pesos (7,437 GBP).

[169] One motorised boat was sent to Mayabig during the December 1998 floods.

[170] Other hazards commonly planned for include earthquakes and fire.

[171] Refer to Section 7.1.2 for an overview of the role of the Disaster Co-ordinating Councils.

have been issued for the area, radio contact is maintained between the barangay Councillors, who are each responsible for monitoring flood levels in their sitio, warning each household and – eventually – recommending evacuation (ml, m43, m44, m50). In Tigbao where barangay officials do not have access to radio equipment (and where all the inhabited areas of the barangay are relatively accessible), officials prepare for an expected typhoon by calling a public meeting to warn community members and to raise awareness of safety issues (t75).

Fourthly, barangay officials are responsible for disaster planning and initiatives of their own. For instance in Mayabig, barangay officials have invested in two small palm boats of their own to aid evacuation during floods and to distribute emergency supplies.[172] In the future, they plan to fit one of these boats with an engine (m3, m28, m38). During severe flooding, the boats are used by the Captain and Councillors to access flooded areas of Mayabig.[173] Barangay officials offered to evacuate those trapped by rising flood waters by boat, however some community members were reluctant to leave their property (m28, m29, m43, m44, m50).[174] This despite the fact that at the high of the flood, water currents became too strong even to use the motorised boat (m50).

[172] One of the boats is stored at the Captain's house in Sitio Centro and the other is stored at a house in the elevated SitioGreenhills (refer to the barangay plan in Section 4.4.1).
[173] During the December 1998 floods, the Captain went by boat first to areas considered most vulnerable to flooding, and then to each area of the barangay in turn (m50).
[174] Many would not evacuate until the floodwaters had risen significantly, while a few refused to evacuate altogether.

Key Local Disaster Management Issues

From their collective experience of flooding, barangay officials in Mayabig have identified a series of six key disaster management issues, which they have either already addressed or plan to address in the future. These are as follows.

1. **The reluctance of many community members to evacuate from their houses until flood levels have risen to dangerous levels.** Such decisions tend to be based upon past experiences of flooding incidents. Many are reluctant to leave property and livestock during floods unless to do otherwise would place the lives of household members at risk. This reluctance to evacuate early places additional pressure upon barangay officials to monitor and ensure the safety of community members scattered across a wide area. A partial (though not altogether satisfactory) response of barangay officials has been to request that those refusing official's advice to evacuate, sign a waiver[175] that releases officials from their duty of care with respect to these community members (m59).
2. **The shortage of food supplies experienced during events, particularly in private houses that serve as evacuation centres.** The problem is exacerbated by the custom of relatives relying upon the hospitality of house owners rather than bringing their own food supplies, even in the situation of emergency evacuation. This tendency is partially countered by information dissemination on the importance of stockpiling emergency food supplies (m59).
3. **The maintenance of communication links during events.** Although radio equipment has greatly eased this problem within Mayabig, once the power supply is cut,[176] there is no means of recharging radio batteries. Officials have responded by ensuring that radio equipment is charged as a preparatory measure (m59).
4. **How barangay officials can best balance their responsibilities towards the community at large with their family responsibilities.** From their experiences of the December 1998 floods, barangay officials have decided to first prepare their own households for future flood events, before carrying out their responsibilities towards the rest of the community (m35, m50, m59).[177]

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[175] Such waivers are valid for insurance purposes (m59).
[176] As experienced during the December 1998 floods (m59).
[177] During the December 1998 floods, because they were particularly severe, the Captain was kept busy

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5. **The inability of some (especially older) community members to swim.** This includes one of the Councillors who, during the December 1998 floods, chose to remain in (relative safety) to care for his family and property, and to delegate his community responsibilities to his swimming son. Barangay officials have decided to encourage all community members to learn to swim as a safety precaution (m59).
6. **The introduction of centrally planned evacuation routes, central monitoring of the availability of supplies, and advance local warning systems.** Such measures are intended to improve the capacity of barangay officials to manage emergency situations, through increasing their prior knowledge of what is happening in the community at large (m28). This issue provides the focal point of example 5.50 below.

Example 5.50:

> Sometimes it is difficult to warn everybody. During the 1998 floods, I was stranded in my own house and couldn't get out to warn others. In any case, people will often only evacuate once the floodwaters have risen. Barangay officials are also unsure of where many people have evacuated to, and to how well stocked different evacuation centres are. This makes it difficult to plan where to take any incoming supplies. I would like to draw-up lists in advance of community members assigned to each of the evacuation centres. We need to work on planning and clarifying our advanced warning system (m28).

5.4.5 The Philippine National Red Cross Projects: Perspectives from the Barangay

> *'As a member of the BDAT, I know how to prepare myself and my neighbourhood and how to help them' (t70).*

This section explores the impacts of the PNRC case study projects of the Integrated Community Disaster Planning Programme (ICDPP) and the Community-Based Disaster Preparedness Project of Disaster Management Services (DMS-CBDP). The evolving PNRC approach to disaster management is explored in Chapter 6, from the PNRC perspective. The purpose of this section is to examine the PNRC activities in Mayabig and Tigbao, from the perspective the barangay officials responsible for disaster management,

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travelling through the worst affected areas of the barangay by boat. In the meantime, his own house was flooded and his wife was left alone to care for their property. Fortunately, she was assisted by neighbours, however this incident has significantly influenced planned future disaster management procedures (m50).

project participants and intended beneficiaries.

Many community members in both Mayabig and Tigbao had little knowledge of the disaster management training aspect of the PNRC projects, although most were aware of the implementation of (or planned future) mitigation measures (m16, m10, m33, t32, t41). In Tigbao, members of the BDAT have been allocated relief functions in the BDCC (t75). In contrast, in Mayabig, many of those who already had BDCC functions such as barangay Councillors and health workers participated in DRT training (m35, m59). We saw in Section 4.3.3 that the BDAT in Tigbao is composed primarily of unemployed youths, headed by the barangay Captain. The youths were selected by barangay officials as those with fewest commitments and therefore as those most available to attend the training sessions (held in nearby towns) and ultimately to "*serve the community*" during emergencies (t70, t75). In Mayabig, DRT training was considered of particular importance to barangay officials, as the primary managers of emergency situations.[178] On-site training in the barangay (as previously experienced) is the preferred option of current DRT members, although community members might agree to attend training sessions held outside of the barangay,[179] for up to five consecutive days, at an appropriate time of year.[180] On-sight training has the advantage of allowing for focus upon barangay-specific issues (m59).

Reactions of DRT and BDAT members to their training are largely positive, PNRC follow-up contact has been good and further training sessions would be well received (m1, m3, m35, m43, m50, t70, t75). In Mayabig, most of the barangay officials who received DRT training used some of what they were taught during the December 1998 flooding. The DRT taught skills and procedures that were employed include: community-wide monitoring of the situation, typhoon warning and information dissemination mechanisms, stockpiling of necessities and evacuation procedures (m1, m3, m35, m43, m59). Although

[178] DRT training attendance was limited to three from each sitio of the barangay, as more wished to attend than could be accommodated (m59). Some barangay members feel that it would be good for barangay youths to also have the opportunity of involvement with PNRC (m3).

[179] It would always be difficult to find community members willing to attend a training session held in a distant venue.

[180] Particularly in relation to the agricultural calendar (m59).

other DRT trainees may be involved in preparatory or mitigating measures, they are unlikely to be actively involved in during-disaster management, which has remained the realm of the barangay Captain and Councillors. Other community members (including DRT members) are occupied during events with caring for their own property and families (m45). Although disaster management procedures are remembered, the first aid skills taught in the October 1998 DRT training are only partially remembered and could only be applied with confidence by those with previous training such as the barangay health worker featured in example 5.51 below (m59).[181]

Example 5.51:

> The DRT training was useful, especially emergency response and First Aid. We weren't affected badly enough to put the emergency response elements of our training into practice during the last floods (December 1998). Some other areas of the barangay were worse affected. I've attended so many different training sessions already that my memory is blurred as to the specific content of PNRC DRT training. For instance, we received training before setting up the community pharmacy and also in waste management practices (recycling) from the Municipal Health Officer (m9).

In Mayabig, DRT training has "*increased awareness*" in the community of disaster management issues and practices. Training has also fostered "*unity of purpose*" among participants (m38). Where previously the community simply reacted to floods as and when they occurred, since the training, barangay officials have focused upon preparedness (m3, m44, m50, m59).[182] Letters were sent to the daycare centre about preparation for flooding, as well as to the school, church and houses in elevated areas, requesting that they be prepared as evacuation centres (m59). Barangay officials intend to make further improvements to disaster management practice, with reference to their own experience (m35).[183]

In Tigbao as in Mayabig, preparedness is considered the most important element of disaster management (t75). Before the ICDPP project, the people of Tigbao generally associated the PNRC with relief activities (t32, t37, t39, t40, t44, t75). The BDAT has increased

[181] During the December 1998 flood, there were no injuries that required the use of first aid skills (m59).

[182] Preparations include the purchase of boats for use during flooding and information dissemination (m3, m59).

[183] Suggestions include providing a form of identification for DRT members, acquiring a motorised boat for the barangay and purchasing supplies of first aid materials such as bandages (m3, m59).

awareness of the ICDPP project aims and disaster management issues within the community generally, through their information dissemination role (t70, t75). The participants generally gained most from the sections on disaster management procedures and the allocation of roles and responsibilities in disaster management[184] (t75). The Captain and BDAT trainees also "*learnt the importance of community organising activities*" (t75). The inclusion of environmental management issues (such as mangrove conservation) was an important addition to disaster management training (t34, t37, t70, t75). The BDAT training sessions were fun and informative for participants who enjoyed meeting with others from outside their community, as well as learning disaster management and community organising skills. Many described experiencing forms of 'empowerment' in the course of the training session which was expressed variously as "*increased confidence*", being "*convinced of the power that individual BDAT and community members have*" to change their situation, "*learning about things..that touch upon the lives of community members and myself*" (t70).

In practice, BDAT members report mixed reactions to their information dissemination drives.[185] For instance, few community members – even from the most affected Lutaw area – attended a meeting on mangrove planting. Those attending tend to be those who are already supportive and receptive to the ideas presented, rather than those with objections, or who lack understanding of the issues. Informal information dissemination was found to work best,[186] with friends and neighbours often the most receptive (t70). Asides from information dissemination, BDAT activities have included assisting in the implementation of the ICDPP mitigation measures (including fundraising activities), mangrove planting and maintenance[187] as well as the production of reports for project monitoring and evaluation purposes (t70).

The seawall constructed under the ICDPP project in Tigbao was well received by community members.[188] The seawall's value in dissipating the force of storm surge upon

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[184] These include information dissemination, evacuation, health and sanitation, distribution of relief goods and repairs to infrastructure and public property (t75).

[185] Topics have included the role of mangroves and the causes and prevention of dengue fever (t70).

[186] BDAT members found that offering drinks during gatherings increased interest and attendance (t70).

[187] Barnacle growth is periodically removed from young mangroves to promote their growth (t70).

[188] The construction of the seawall as a mitigation measure under the ICDPP project in Tigbao is further

Footnote continues on the next page

the residential coastal strip of Lutaw is widely recognised. Notwithstanding frequently expressed "*gratitude*" for the project and mitigation measures, several community measures questioned elements of the seawall's design and construction (t3, t12, t18, t31, t32, t33), as in example 5.52.[189] Many of the residents of Tigbao are anxious that the trench behind the seawall be filled. The collection of water behind the wall is expected to weaken the structure and cause damage to houses situated behind the wall (t3, t18, t31, t33), as voiced in example 5.53.[190] The Captain is seeking funds from government sources for this purpose, although he does not expect to access these in the immediate future (t70). Examples 5.5.2 and 5.53 demonstrate that critics of the seawall tended to be little involved in its construction. Although such concerns do not represent a majority view of the scheme, the fact that such concerns are being voiced after the construction of the seawall suggests a failure of the community-based approach to satisfactorily address all such concerns as were raised within the community, during and prior to construction. Example 5.54 below explores the difficult process – as experienced by barangay officials and BDAT members – of engaging the participation of community members in the seawall construction and in continuing or maintaining the project.

Example 5.52:

> I was involved in constructing the seawall for only four days. I feel that the seawall is "*not good enough*" to withstand a typhoon as it is too low and the area it protects is still very dangerous. I don't think it brings any benefits. It's presence makes it difficult for us to take our boats out to sea. Proper calculations were not made in the seawall construction. Water is collecting behind the wall. One of the houses has already been made unstable by this water – my house is also vulnerable. The collected water could also be dangerous to children. It needs an outlet so that water does not sit behind the wall like this. It would help if the trench could be filled (t31).

Example 5.53:

> I wasn't involved in the seawall construction as I was busy with farming. Only

explored in Section 4.3.3.

[189] For instance some suggested that a higher wall would have prevented damage to property altogether, and even prevented the need for evacuation of the area during typhoons. Others suggested that outlet pipes were required to prevent the collection of water behind the wall, or questioned the depth of the foundations or the curved shape of the wall (t3, t12, t18, t32).

[190] The wall has not been designed to withstand water collecting behind it, and as such is not adequately reinforced on the land-facing side (t70). This assertion is supported by the Municipal engineer responsible for the design – and for supervising the construction – of the sea wall, as explored in Section 7.2.3 under *Scarcity and Policy Prioritisation in Spending Funds*. This is seen as an opportunity to create a cemented "multi-purpose pavement" that could be used as a basketball court and drying area for agricultural produce (t70).

those not involved in farming and other activities participated. From my own experience of construction in Manila, the seawall's foundations were not deep enough. They should have been constructed to a depth of one metre but due to constraints they were only constructed to a depth of half a metre. The seawall "*adds to the beauty of the area*" but does not provide real protection from very large waves (t32).

Example 5.54:

Workers were paid a low daily rate of around 75 Pesos[191] for their labour gathering and hauling boulders for the construction of the seawall. It was difficult to recruit workers during the early stages of the project because the need for semi-voluntary participation was poorly understood. Some complained that they had not been informed of the project and the opportunity for work, despite the fact that a public meeting had been held on the subject and that Councillors had been instructed to disseminate the information to each of the households for which they are responsible (t58). Others complained that the pay was too low. They expected to be paid a minimum of 100 Pesos[192] a day. In fact the pay had been set deliberately low in order to limit the number of workers to twenty. The seawall project commenced with only about fifteen workers because most felt they would be losing out on more remunerative livelihood activities. As the project got underway, greater understanding of its aims and objectives were reached. A community member was appointed to manage the labourers, many of whom now wished to work on the project every day. Councillors took turns to provide snacks to the workers during their breaks. These were paid for partly from the proceeds of a benefit dance (which also raised funds to purchase shovels) and partly from Councillors' personal contributions. This gesture also helped to inspire the workers with participatory spirit. After a few weeks of implementation people became very co-operative to the extent that they were quarrelling about who should be picked to work. Mediation was difficult. Now the people of Lutaw are asking for an extension of the seawall to protect the whole residential coastal strip. If the seawall cannot be extended then mangrove plantations would also be very welcome. Generally, people "*feel very fortunate to be the focus of the Red Cross project*". Next financial year, we are planning to set aside approximately 5,000 Pesos[193] for maintenance of the seawall from barangay funds (t75).

Although many community members place greater faith in concrete constructions such as the seawall, the role of mangroves in providing protection from typhoon storm surge is recognised (t31, t32, t34, t37, t75). Mangroves are also associated with increased fish stocks and protection from coastal erosion, as well as providing wood for furniture-making[194] (t19, t32, t37). Some hold strong opinions on the placement of young mangroves, and are particularly concerned that suitable breaks be left for boats to pass (t18,

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[191] 1.40 GBP.
[192] 1.85 GBP.
[193] 95.00 GBP.

t21, t45, t70). Much of the suspicion among community members of mangrove planting initiatives, stems from a previous DENR[195] activity in Tigbao in which mangroves were planted by government employees without prior consultation (t18, t21). As one local resident puts it, '*DENR forgot to ask the people what they wanted before planting the mangroves. If they had consulted us, then we would have ensured that spaces were left for boats to pass*' (t18). For another community member, mangroves provide a more long-term solution to the threat of storm-surge and coastal erosion than the construction of seawalls: '*waves are already overflowing the seawall which is vulnerable to deterioration and cracking. In comparison, mangroves are long lasting and durable*' (t37). While the first quote highlights the necessity of engaging in negotiations with community members in implementing such local initiatives, the second demonstrates a changing understanding of environmenal issues and of relatively low-cost protective measures. Local information drives concerning the benefits of mangroves have helped to overcome the suspicions bred from past experience. However, from the perspective of coastal residents, information has to be supplemented with meaningful local-level consultation if such future initiatives are to succeed.[196]

5.5 Summary

The research results presented in this chapter are concerned with vulnerability at the barangay level, and experiences of disaster management. Chapters 6 and 7 explore constructions of, and strategies to alleviate vulnerability at the meso level, from Red Cross and Local Government perspectives, respectively. Chapter 7 includes an 'alternative perspective' to that associated with dominant social and political structures, provided by NGOs representing an indigenous minority group. Although each of these three Chapters (5, 6 and 7) complement each other and each contains important findings in its own right, Chapter 5 is fundamental to understanding the vulnerability experiences of local

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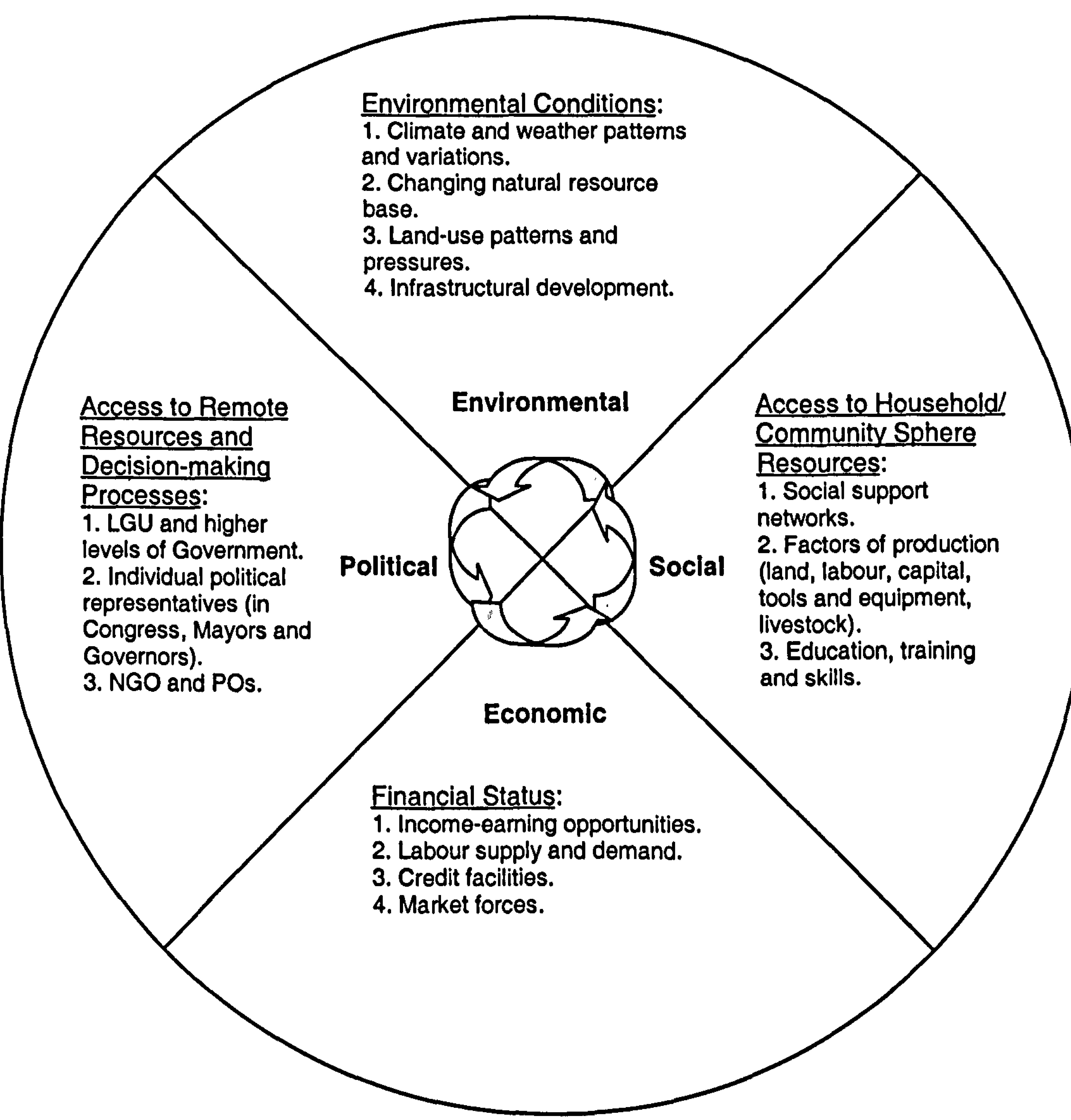
[194] Unlike hardwoods, mangroves take only 5-6 years to mature (t19).
[195] Department of the Environment and Natural Resources.
[196] The ICDPP perspective on mangrove plantation is discussed with reference to the DENR initiative in Section 6.3.4 under *Representations: ICDPP Approach versus LGU Approaches.*

community members.

The findings of this chapter support the concept of *underlying* vulnerability, which underpins the analytical framework of the entire thesis. Comparison of everyday and typhoon event-centred vulnerability experiences during fieldwork served to clarify the areas in – and the extent to – which vulnerability is addressed by different types of collective action, approach and social institution. The findings presented in this chapter however, confirm the artificiality of conceptually distinguishing between different types or manifestations of vulnerability. Such distinction contrasts sharply with community members' more integrated constructions of their own vulnerability experiences which are found to centre around the broadly interpreted area of livelihoods. At the barangay level, livelihood strategies have as their basis the key elements of capacity, security and opportunity. The community-level vulnerability findings presented in this chapter are summarised in Figure 5.2 below, which emphasises the importance of access to a wide range of resources in both addressing and determining vulnerability levels. Note that these resources include formal and informal social institutions and support networks. This relationship between livelihoods and vulnerability is introduced in Section 2.1.3, and forms a central theme of the synthesis of my research findings from community, Red Cross and Local Government perspectives in Section 8.1.

Figure 5.2: Overview of Community-level Vulnerability Findings



The analysis of disaster management practices and institutions of both PNRC and LGUs contained in this chapter reveals the severe restrictions experienced by community actors in shaping disaster management and vulnerability reduction initiatives. One the one hand, considerable responsibility is placed upon local officials for community wellbeing and development, and on the other substantial decision-making powers and resources are largely vested in outside agents. This weighted relationship between community and LGU/PNRC actors itself contributes to the extent to – and manners in – which community actors can hope to shape community-based projects and their outputs. This theme is explored further in subsequent chapters.

6. The Evolving Philippine National Red Cross Approach to Disaster Management

In Chapter 5, we considered the various perspectives on vulnerability, natural hazards and related issues, expressed by barangay-level community members and their leaders. This chapter is concerned with Philippine National Red Cross (PNRC) perspectives on the disaster management programmes and projects concerned. It explores formal representations of project objectives and outcomes, as well as organisational actors' various strands of discourse surrounding vulnerability reduction in the context of the PNRC projects studied. In Chapter 6, I examine the PNRC organisational framework. This exercises a pivotal role in shaping and giving meaning to the vulnerability reduction strategies that arise from community-based projects. I also look at the case study projects, and programmes of which they are part, in the context of PNRC's evolving approach, and current debates surrounding PNRC's disaster management role. The chapter draws upon views expressed in discussions and interviews, as well as upon my field observations. This type of information both enriches and (at times) contrasts with the official narratives prevalent in formal documents.

In looking at different viewpoints on how the projects and broader programmes are intended to develop, several key issues present themselves as points of 'discontinuity' around which debate and negotiation between actors of various viewpoints are centred. It is these issues that provide the structure of this chapter, with the themes of conceptualising vulnerability and the objectives of community-based approaches running through the whole. In the case of themes such as: 'delimiting vulnerability' and 'mitigation measures', discontinuity is to be found largely (although not exclusively) in the arena between the community and PNRC spheres. However, other themes arise from discontinuities in

several different arenas,[1] or in arenas internal to PNRC[2] or between the organisation and its donors.[3]

In presenting the issues outlined in this chapter, I have drawn upon the proceedings and findings of the July 1999 DMS-ICDPP Workshop, Manila. This is because the workshop took place at the time my research was in progress and touched upon many of the same issues that were identified in my fieldwork. The workshop placed emphasis upon the opportunity presented by ICDPP[4] to experiment with relatively new approaches and to learn from the experiences gained, at a critical period of change for ICDPP and DMS.[5] It is in this spirit that I hope my own findings can contribute to ongoing evolution within PNRC, as well as to wider disaster management initiatives. What follows is not intended to be read as a negative indictment of ICDPP, DMS or of the projects studied – both of which were in many respects successful and innovative, and were held up as such by many of those interviewed at the local level. My goal is to provide an accurate analysis of the messy reality of the processes of community-based project and programme development.

In this chapter, I outline the key areas and issues that have arisen from my study of the projects concerned. Section 6.1 explores the manner in which the 'imposed' disaster management framework of PNRC has shaped local vulnerability reduction initiatives. In Section 6.2, I unpack vulnerability reduction strategies associated with the projects, in the context of the evolving disaster management role of PNRC. Section 6.3 explores project and programme processes of learning and accountability, and looks at the relationship between the two. Finally, Section 6.4 is concerned with key issues of sustainability, and the future directions of ICDPP and DMS.

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[1] This is true for themes such as 'mapping' and 'training'.
[2] For example, 'standardisation of processes and procedures'.
[3] In particular, this is true for 'programme sustainability'.
[4] Integrated Community Disaster Planning Programme of the Philippine National Red Cross.
[5] Disaster Management Service of the Philippine National Red Cross

6.1 Vulnerability Reduction within a Disaster Management Framework

One of the major strategies of PNRC is to develop and implement programmes aimed at *reducing vulnerability* (PNRC, 1994). Yet vulnerability has proved a hazy and difficult concept to grasp, in contrast to the very real physical manifestations of natural hazards. The PNRC Secretary General, Mrs Loyola, stresses that all programmes and services of PNRC should be increasing capacities, and reducing vulnerability within target communities. This is upheld as the primary measure against which PNRC strategies and activities are to be evaluated (PNRC, 1999). However in practice, greatest emphasis has tended to be placed upon 'problems' or 'hazards', and tangible outputs, rather than upon their implications and relative importance for local people.

6.1.1 Delimiting Vulnerability

Both ICDPP and DMS are concerned primarily with disaster management (PNRC, 1999). The case study projects are representative of a shift in focus away from disaster response and largely reactive management, towards disaster planning, mitigation and preparedness activities. Masing (the previous ICDPP Co-ordinator) claims that ICDPP minimises the detrimental effects of environmental and natural disasters, strengthens the coping capacity of communities to deal with changing circumstances and conditions, and reduces their vulnerability to future disasters. Masing attributes these successful impacts of ICDPP to:

> "*the promotion and development of disaster awareness as a sustainable part of community development; disaster planning methods and tools made available to the community; and a participatory process involving all communities of the local government units for disaster planning and emergency response integrated into the overall community development process*" (1999:202).

The ICDPP Benguet pilot project provides an example of the confusion that can be caused by differing understandings of – in this case – disaster mitigation measures, and exemplifies differences in underlying definitions of vulnerability. Here, the donors Danish Red Cross (DRC) had stipulated that "disaster mitigation" measures should be incorporated in the projects. In evaluation exercises, the project was held to be unsuccessful in implementing disaster mitigation measures, and thereby in reducing local communities'

vulnerability *to disasters*. Measures implemented under the project were dismissed as not properly concerned with disaster mitigation. However, in the eyes of local participants, local government actors and Red Cross Chapter staff the measures taken had been successful in reducing vulnerability (PNRC, 1999). These mitigation measures included a livelihood project and the construction of public latrines, while infrastructural improvements were concerned with the construction or improvement of mountain footpaths and bridges. Footpaths and bridges contributed to the prevention of accidents or falls. They also reduced the time required to walk to and from market, thereby increasing access to sources of livelihood, and increasing the time available for farming and family-related activities. The establishment of public latrines contributed to health and sanitation improvements (PNRC, 1999).

In my two case studies, physical and social aspects of vulnerability to natural hazard events are being addressed by projects in the following ways:

1. Physical vulnerability – mitigation measures, evacuation and relief
2. Social vulnerability – community organising and capacity-building in disaster planning and preparedness activities.

This event-centred focus has shaped the community-based projects from their outset. The primary mechanisms by which this is accomplished, are explored below.

6.1.2 Community Access and Social Preparation

Firstly, the limited availability of PNRC resources for community-based programmes such as those studied require that only a limited number of participants from a limited number of barangays be selected. In order to minimise the potential for conflict within the wider community, DMS selects participants from barangays judged (according to PNRC criteria) to be particularly vulnerable communities (Mr Sian, DMS). The criteria employed to select participating barangays include the assessment of local hazards, past experiences of

'disasters', local resources and levels of LGU co-operation.[6] These criteria which shape project constructions of community vulnerability, are pre-defined and publicly enforced by PNRC, largely in an effort to be seen to act fairly.

Secondly, 'social preparation' is a tool employed by PNRC in the early stages of community-based projects to establish a shared understanding of the nature, remit and objectives of projects from their outset (Mr Sian, DMS; ICDPP, 1998b). Social preparation can be considered a necessary and "*continuous process consisting of information, education and community activities, trainings, core group formation, and joint planning. Social preparations should not be applied at the community level only, but also for institutions involved in Red Cross operations*" (Basaen, 1999:5). In fact, social preparation is extended to include all the "*units/groups, agencies, organisations or individuals at various levels and from various sectors concerned or involved in the same undertaking*" (Basaen, 1999:5). Basaen emphasises that the process of social preparation should serve to equalise capacities of the "preparer" and the "one being prepared" (1999:5). However, social preparation also serves to focus projects and their objectives according to the priorities and understandings of the implementing organisation.

6.2 Evolving PNRC Role: from Relief to Preparedness and Mitigation Focus

We saw in Section 5.4.5 that at barangay level, PNRC is known principally as a charitable distributor of relief goods. Although PNRC continues to maintain its role in rescue, relief and rehabilitation, community-based disaster management has a different focus. Whereas PNRC's traditional relief and rehabilitation role is interventionist and aid-oriented, community-based disaster management focuses upon enhancing the capacity of local communities to themselves prepare for and manage hazards and disaster situations. In the

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[6] Although barangays which experience significant hazards and have limited resources with which to change their situation are considered particularly vulnerable (and therefore likely to be selected for projects), the will of LGUs and barangay officials to co-operate in PNRC initiatives is also an important criteria in the selection process.

projects studied, only limited PNRC resources were made available for the implementation of preparedness and mitigation measures, while – particularly in the case of ICDPP – substantial inputs were solicited from within the communities concerned, and from local government units (LGUs) (Mr Sian, DMS).[7] In this manner, PNRC has become significantly less of a 'giver' and more of a 'facilitator' vis-à-vis local actors in community-based projects.

The sections below explore firstly, the evolution of PNRC's community-based disaster management role, and secondly, key PNRC project elements designed ostensibly to increase local capacities and to facilitate local initiatives.

6.2.1 The Many Hats of PNRC: Identifying Appropriate Roles

Debate about the most appropriate role for PNRC in community-based initiatives can be framed in terms of a series of options, which – although not mutually exclusive – can be simplified as follows:

1. Working in co-ordination with other agents (especially LGUs); PNRC specialising in its own areas of expertise such as disaster preparedness and disaster management, with a particular focus upon informational lectures about natural disasters, and how they should best be prepared for, and reacted to. PNRC can be seen in this respect to be moving into gaps left by government agencies in areas of PNRC specialisation.
2. Expanding into relatively new areas of activity, for example, livelihood programmes and/or measures, to allow for a more holistic approach to vulnerability reduction.
3. Playing more of an advocacy role, facilitating the campaigning of community priorities to appropriate agencies/bodies.

Option 1) in the box above, illustrates the approach (more or less) presently adopted by PNRC. In contrast, option 2) offers means of addressing vulnerability at the community level according to desires or needs for wider vulnerability reducing measures as expressed within the community. However, doubts have been expressed as to the wisdom of incorporating – for example income-generating elements – into DMS projects (Mr Malibiran, ICDPP). Whereas DMS has little experience of implementing such schemes,

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[7] Refer to Sections 4.3 and 5.4.3 for further details of the CBDP-DMS and ICDPP projects.

other PNRC divisions such as Social Service have experience, and would be better disposed to implement these types of project (Mr Malibiran, ICDPP). My final option, 3), is concerned with advocacy, which is already undertaken by both DMS-CBDP and ICDPP. However advocacy is not the main focus of either programme at present, and – were it to become a central part of PNRC initiatives – would risk compromising Red Cross principles of political neutrality.

Current PNRC community-based approaches focus upon local capacity-building, with a view to ultimately reducing the 'need' for PNRC inputs such as resources, facilitation and advocacy. However in practice, both DMS-CBDP and ICDPP tend more towards a service-delivery approach than to one focused upon long-term capacity-building or the 'empowerment' of communities and their members to implement their own initiatives independently.[8] Local capacity-building[9] is restricted for the most part to awareness-raising activities and the establishment of teams of community-based volunteers, intended to be active in disaster management. This position reflects PNRC's long history as a provider of 'services' such as disaster response and disaster management education and training. Current community-based approaches have emerged within the organisation as a hybrid approach of service provision with some principles of community development introduced.

6.2.2 Advocacy and Network Strengthening Roles

This section places the case study projects in the context of the evolution of the key areas of PNRC activity: advocacy and network strengthening. Both are strongly linked to PNRC's relations with government. ICDPP's ability to gain the support of LGUs for its community-based projects is a major strength, and ICDPP's relations with LGUs generally are "*very positive*" (Mr Malibiran, ICDPP). Mr Sian (DMS) claims that "*LGU officials need to be persuaded that PNRC is not only concerned with fundraising, but is also a source of support to LGUs*". Even when addressing localised barangay concerns, it is important to keep provincial and municipal officials informed (Mr Sian, DMS).

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[8] Refer to Sections 2.2.1 and 2.2.3 for discussion of the notion of empowerment, in the context of community-based approaches.

[9] The capacity-building role of PNRC is explored in Section 6.2.3 below.

Networking – particularly with LGUs – offers the advantage of support, in terms of personnel, funding and other resources. Admittedly, working together can at times be difficult where there is a political agenda involved. Even if PNRC is not concerned with political matters, others involved can put their own "colouring" on initiatives. Those involved in politics can "*raise a lot of issues*" out of community initiatives they are involved in (Mr Sian, DMS). Although the Philippine government is held to generally respect the politically neutral role of PNRC (Mr Sian, DMS; Mr Malibiran, ICDPP), Mr Sian hints at a certain dichotomy in PNRC claiming neutrality, whilst at the same time lobbying LGUs for funding and support for its projects. By all accounts, developing such a role while continuing to adhere to fundamental principles of the Red Cross Movement such as neutrality requires sensitive management of relations with government and other political actors. For example, PNRC would generally take the precaution of suspending project activities around election times to avoid becoming caught-up in electioneering (Mr Malibiran, ICDPP).

It is in this light that DMS has been at pains to clarify respective roles in the service's relations with LGUs. Hence the inclusion of formal memoranda of agreement in community-based projects. Mr Sian cites the example of DMS relief operations during the 1998 drought in Mindanao. During the drought, DMS was involved in the distribution of water to affected communities. However, this was on the understanding that responsibility for the provision of this vital service would be returned to the appropriate LGUs as soon as possible. In reasoning this decision, a distinction was drawn between the *targeted* provision of relief supplies and the provision of a *general service* such as water supply for the population at large (Mr Sian, DMS). The former was considered the proper area of activity of PNRC, while the latter belonged to the realm of LGU responsibility. Thus official representations of the role of PNRC as an auxiliary of Government with defined areas of responsibility are reinforced. Even in relief activities, PNRC does not so much step in where Government capacity is superseded, as take on its officially endorsed role.

Overall, Mr Sian holds that it 'pays' to work closely with LGUs. These bodies are now more powerful than ever,[10] and it is important for PNRC to remain a part of decision-making processes. Once such PNRC involvement has been established it remains simply to maintain good rapport with LGU actors (Mr Sian, DMS). I started this research on the premise that shifting paradigms within the NGO community have been largely responsible for PNRC embarking upon such community-based programmes. The other side of the story however is that the political system in the Philippines increasingly favours the use of community-based approaches – LGUs are themselves increasingly attempting to implement broader programmes through community-based projects, with varying degrees of success. This becomes all the more poignant when we consider that a decade or two before, such initiatives were often viewed by the military and government officials, with suspicion of being communist insurrectionist linked (if not led), and involvement could be dangerous (Constantino-David, 1992; Hilhorst, 2000).[11] Insurrection survives, and, on the basis of my interviews and discussions with local people, this legacy of association is not yet laid to rest in the Philippines. However, for a well-known and respected institution such as PNRC, the political climate for involvement in community-based initiatives has never been more favourable. This is true both on the domestic front and amongst the international donor community.

Even more enlightening is the perspective that PNRC also seeks to gain a handle on decision-making processes through closer involvement with LGUs. Sustaining relations with LGU actors is very much the responsibility of local Chapter staff based in their various provinces. As such, one could argue that decentralisation of the Philippine Government, combined with PNRC desire to remain involved in government decision-making processes, has in itself precipitated a form of decentralisation within PNRC.

In abstract terms, co-ordination with other NGOs is generally represented within PNRC as something positive. In practice, few have many such experiences to share, and where they do the issue of 'appropriate' roles for those NGOs concerned tends to lurk within their

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[10] In this dialogue, Mr Sian is referring to the decentralisation process of the Philippine government system, resulting from the 1991 Local Government Act (Republic of the Philippines).

[11] This was particularly true during the period of Marshal Law under President Marcos, from 1972-1986.

discourse. One example where PNRC did work alongside other NGOs in a disaster context was during the 1998 drought in Mindanao. During the drought, PNRC was "*empowered*" by the Government to sustain relief systems for over three months. Other NGOs were involved in the distribution of their own relief supplies. They were "*allowed*" to carry out this work in their own way, but all such activities were "*co-ordinated*" by PNRC. PNRC also co-ordinated with the government Department of Social Welfare and Development regarding the Mindanao situation. As a result, part of PNRC's co-ordinating role was concerned with upholding the decision to which the government Department and PNRC were party, that relief assistance was to be needs and not loss-based; and excluded commercial establishments (Mr Sian, DMS). The PNRC stated role as a privileged auxiliary of government not only designates PNRC's role vis-à-vis Government; it also affirms PNRC status in the disaster management area, vis-à-vis other NGOs. This exclusively accorded role of PNRC is justified as paraphrased in the following: '*the Government prefers to work with PNRC because it has a better network nationally and more long-term commitment than other comparable organisations active during disasters*' (Mr Sian, DMS). Thus, if NGOs other than PNRC wish to enter designated disaster areas, they are requested to co-ordinate with PNRC (Mr Sian, DMS).[12]

6.2.3 PNRC Capacity-building Focus

Local capacity-building under the two programmes is centred around the activities of training and education, mapping local hazards and resources, and the planning and implementation of mitigation measures. These three areas of activity are explored below, from the perspective of PNRC actors.

Capacity-building through Education

From the PNRC perspective, training is not only a central pillar of local capacity-building, it is also an important element in strengthening local government and civil society institutions. The training process not only spreads awareness of hazards and disaster

[12] It is outside the scope of this thesis to investigate the disaster management role of NGOs other that PNRC. As such, I add the caveat that the perspective presented above reflects that of PNRC actors, with all of the

Footnote continues on the next page

management, but also serves to provide PNRC with a continuous source of locally based volunteers (Mr Sian, DMS). Recruitment for training and project participation is primarily the responsibility of the communities concerned, and community decisions on this front are endorsed as far as possible to avoid imposing PNRC criteria in the selection process. However, programmes such as ICDPP do provide guidance to community leaders in the selection process. This guidance encourages cross-sectoral representation within voluntary bodies trained and established under PNRC projects (Mr Malibiran, ICDPP; ICDPP-Leyte project staff).

Both programmes promote the organisation of locally-based disaster management teams. Mr Malibiran (ICDPP) represents the introduction of *formal* training to ICDPP as a successful element of local capacity-building. This reflects DMS's relative strength in providing disaster management training. All DMS field staff undergo a fifteen-day course. The contents of this course reflect DMS's traditional focus upon disaster relief, although wider aspects of disaster management are incorporated. Once trained, locally-based staff themselves become trainers of local community groups within their areas (Mr Sian, DMS). Trained DMS staff "*mobilise and motivate*" local people, with a view to creating a "*rippling effect*" in the wider community (Mr Sian, DMS). In providing training for a few local groups in selected (high-risk) municipalities, it is hoped that LGUs, on seeing the benefits of such training and awareness-raising initiatives, will attempt to replicate the initiatives in areas not covered by PNRC. In some instances, LGUs have indeed provided funding for further PNRC training sessions to be carried out within their areas of jurisdiction (Mr Sian, DMS). In order for this 'rippling effect' to be sustained, emphasis is placed upon encouraging local 'ownership' of community-based projects, which includes not only barangay communities, but also LGUs.

Mapping as a Vehicle for Capacity-building

Project actors use informal sketch maps to identify local hazards and resources around which disaster preparedness and mitigation plans are formulated. At the donor's request, ICDPP took this process a stage further, with the production of digitised maps by PNRC

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inherent biases, discussing PNRC roles and activities, and is by no means intended to provide an overview of

Footnote continues on the next page

staff, Red Cross volunteers and a commercial mapping company. Aside from members of the BDAT and the Barangay Captain in Tigbao, other members of the community expressed little knowledge of – or interest in – such activities. In short, the mapping element has a tenuous connection with the rest of the project.

Discussing the mapping element of ICDPP, Masing (1999) claims that the very process of gathering information about natural hazards and vulnerability allows ICDPP the opportunity to *assess* local people's perceptions of their vulnerability. This statement implies that ICDPP holds a set of criteria by which vulnerable people's own perceptions of their vulnerability and related needs may be assessed. Masing explains that community perceptions of vulnerability are considered "low technology", and in need of "*validification*" by "high technology" – more scientific approaches to mapping vulnerability (1999:202-3). While I have nothing against marrying low and high technology forms of knowledge and solutions where appropriate and useful, I find it difficult to accept the claim that "low technology" local knowledge requires validification by "high-technology" study. I find no evidence that suggests this type of 'validification' was either necessary or significantly added to local understandings of vulnerability. In fact, the most plausible justification for the inclusion of this high technology mapping element of ICDPP, is that the maps themselves might in the future prove a useful resource to Government and PNRC actors in responding to disaster situations, and in environmental or disaster management planning. This is the main value attributed to digital mapping by PNRC staff (Mr Malibiran, ICDPP). However, the cost of producing such digital maps is prohibitively expensive to barangay-level, municipal or even provincial government.[13]

In fact, the digital mapping element of ICDPP may be of greater benefit to PNRC than to the communities involved in ICDPP. Mapping skills accrued during the course of the project are vested in ICDPP staff, increasing their human resource attributes (Mr Malibiran, ICDPP). The *potential* value of this element of ICDPP to both the staff involved and to PNRC, is unquestioned. However, the benefits to the communities involved are far less clear. This situation would appear to be at odds with underlying

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NGO involvement in disaster management in the Philippines.

principles of the community-based approach employed by ICDPP. To all intents and purposes, the digital mapping element of ICDPP exists largely separate from the rest of the programme, not least to more community-centred elements such as disaster planning and mitigation measures.

[13] Refer to Section 4.3.3 for details of digital mapping under ICDPP.

Mitigation Measures as Capacity-building Elements

The planning and implementation of mitigation measures provides an ideal opportunity to increase the capacity of LGU and PNRC actors to work together (Mr Villacrusis, DMS-Mindoro). Having a project, budget and expected output to aim for provides vital agents to bring the parties together, united in at least some of their goals, and serves to smooth relations between different groups of actor. In a sense, the existence of an LGU approved project with a respected supporting organisation, serves to *legitimate* its component mitigation measures in the eyes of those being asked to contribute. The fact that PNRC has a high profile across the Philippines and has a history[14] of long-term presence in the provinces in which community-based initiatives have been introduced, itself serves to legitimate such projects and their components.

Mitigation under the case study programmes takes the form of community-driven operations, implemented with PNRC support *for* LGUs (Mr Sian, DMS). Benefiting communities have the motivation but lack the capacity to implement more ambitious schemes which fall within LGU remits. ICDPP's approach to mitigation in particular is underpinned by the premise that LGUs have the capacity, and can be motivated to act by aware communities (Mr Sian, DMS).

However mitigation measures under the case study projects have in practice had to be shaped within the bounds of a programme framework and relations with the LGUs concerned. Access to funding and other resources for the implementation of mitigation measures influences not only the relationships and relative negotiating power of different groups of project actors (for instance, community, PNRC and LGU), but also sets limits around possible project outputs. In the Tigbao project, community actors were asked to decide upon a disaster mitigation measure of a scale manageable within project and local budgets, which could be expected to substantially benefit the community. After negotiations between ICDPP, LGU and community actors, a course of action was agreed upon. Initially, the community proposed mitigation in the form of the construction of a kilometre-long stretch of river channelling and control as their first priority. However,

ICDPP actors quickly judged it impractical within the project budget to pursue this scheme (Mr Atienza and Mr Cabarubias, ICDPP-Leyte).[15] With PNRC support, barangay officials unsuccessfully sought additional funding from the municipal Sanguniang Bayan[16] and the provincial government.[17] As no such funding was forthcoming, community officials appealed to PNRC to fully fund the initiative, whose scope was adapted according funding availability (ICDPP, 1998a). Considerable negotiations were required before a compromise could be reached and a course of action agreed upon (Mr Atienza and Mr Cabarubias, ICDPP-Leyte).[18]

6.3 Meeting Targets: Learning versus Accountability

In community-based projects, programme-based constraints – such as those imposed by timeframes, available budgets, human resources or donor stipulations – have to be balanced with the expressed needs or wishes of community actors. PNRC project actors are held accountable not only to other project actors, but also within PNRC and to project or programme donors. Although community actors tend to focus upon the medium to long-term impacts of projects, formal accountability within the framework of PNRC programmes focuses PNRC attention upon the accomplishment of project and programme targets such as training sessions held, maps produced and mitigation measures completed. In Section 2.2.6, I introduced the notion of experiential learning as an integral part of community-based projects. In practice, the institutional processes supporting formal accountability have tended to foster a culture in which positive project experiences are promoted while negative experiences are either suppressed or channelled into programme learning processes. Such learning may be applicable to future projects, but is of little benefit to the project from which it emerged. In the sections below, I look firstly at PNRC's tendency to focus in evaluation processes upon the completion of physical project

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[14] Note that this history of the PNRC can also carry negative implications in as far as expectations based upon past experience of the organisation and its areas of activity or approach, can be difficult to overcome.
[15] The ICDPP total (non-negotiable) budget for mitigation measures had been pre-set at 500,000 Pesos (approximately 9,260 GBP – 54:1ER) per barangay project.
[16] Municipal council and legislative body, whose role is discussed in Section 7.1.1.
[17] The funding powers and roles of these government bodies are discussed in Section 7.1.4.

outputs. Secondly, I explore processes of learning within the case study projects and programmes.

6.3.1 Physical Outputs or Underlying Objectives?

It is common for those caught up in the day-to-day running of projects to become focused more upon their physical outputs than upon meeting less tangible underlying objectives such as the reduction of vulnerability. This tendency (common to many different types of actor) runs contrary to the effective and deep-rooted implementation of the type of process-based learning approach discussed in Section 2.2.6. Where mechanisms for operating a learning process approach are not adequately incorporated into project and programme frameworks, it discourages project actors from undertaking anything but superficial analysis of an ongoing project. Deeper analysis tends to be relegated to later evaluation phases, and any lessons learned are applicable only well after the events which sparked them.

Within ICDPP, tangible mitigation measures are upheld as the principle success of ICDPP in the barangay (Mr Atienza, ICDPP-Leyte). Likewise, the provision of PNRC training tends to be assimilated with capacity-building in both programmes without any real assessment of the outcomes. Evaluation in terms of underlying objectives would require asking: to what extent, and how effectively project outputs such as training and mitigation measures are being translated into practice, and what are the eventual impacts of these measures, particularly (although not exclusively[19]), in terms of reducing vulnerability within their respective communities. In addition to physical outputs, vulnerability impacts can also be seen in the areas of changing disaster management practices, levels and forms of social organisation and changing attitudes. In particular, project success can be measured in the following terms

- increased awareness of the local population of environmental hazards and of how they can be prepared for and mitigated against;

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[18] Refer to Section 4.3.3 for a description of the project mitigation measures that were eventually agreed.
[19] In assessing the impact of such initiatives it is important to also take account of positive and negative consequences (some of which may be unforeseen) in other areas such as livelihoods and social relations.

- increased dynamism in the local disaster management system;
- community initiatives which build upon social preparation or post-training activities

(PNRC, 1998).

In practice, pressure of meeting programme deadlines and funding restraints makes it difficult for PNRC to implement follow-up activities (Mr Villacrusis, DMS-Mindoro). Even in ICDPP projects, where post-training mitigation measures are an integral part, there remains uncertainty as to how much on-going support participants will be granted in the future. On one occasion, the failure to include expenses for follow-up activities in an annual funding application to PNRC, Manila led to severe limitations in such activities during that year (Mr Villacrusis, DMS-Mindoro). Project momentum suffered as a result of this situation, which was caused not only by a lack of foresight on the part of the budgeter, but also by the inability of service support structures to respond to unplanned, ongoing project requirements within a timeframe appropriate to a reflexive community-based approach.

There are important differences between regular PNRC volunteers and those recruited to participate in community-based projects such as ICDPP, where funding for barangay projects is available. In such circumstances, the recruitment of 'volunteers' from within the community can be seen as a prerequisite for accessing PNRC funding. Project actors' motivations for participation are likely to differ from those associated with regular volunteers. This in turn has implications for the continuation of community-based initiatives.

Characteristics or weaknesses such as those described above are exacerbated by the overriding PNRC emphasis on tangible project outputs, which encourages PNRC project actors to categorise initiatives as 'successfully' completed, before their vulnerability implications and other impacts can be seriously evaluated.

6.3.2 Experiential Learning within the PNRC Framework

Above, I present the case that over-emphasis of tangible project outputs causes important issues and project outcomes to be neglected. However PNRC actors are also subject to

pressures which make it expedient for them to present project outputs in a positive light, and to relegate the discussion and incorporation of project-based learning experiences to fixed programme phases of evaluation. These two key forms of pressure are respectively explored in the sections below.

PNRC Bias towards Programme Survival

Section 6.4 explores issues concerned with project and programme sustainability, including the uncertainty of ICDPP's future – and that of its staff – at the time of project implementation in Tigbao. Although in some respects demoralising for project actors, this climate of uncertainty contributed to PNRC actors' efforts to prematurely demonstrate the success of the programme, and thereby the value of both ICDPP and its staff. This situation was compounded within ICDPP by events in Benguet province, the pilot project site of ICDPP. In the Benguet projects, failure to satisfy donor requirements and an unsatisfactory (external) evaluation of project outputs caused funding to be substantially and prematurely withdrawn from the projects in this area (PNRC, 1999). Viewed in this light, positive portrayal of project outputs may become a matter of – not only programme but also project – survival.

As a rule, PNRC displays a bias towards *programme*, as opposed to project sustainability. Once PNRC inputs are completed and (PNRC defined) targets have been met, the programmes ostensibly move on to new project sites, providing only limited continued monitoring and support to the old. PNRC demonstrates considerable capacity to incorporate lessons learned from project implementation experiences in the ongoing programme, as demonstrated in the following example. From the experience of implementing the first two ICDPP projects (Benguet and Southern Leyte Provinces), it was decided not to persevere with the approach of selecting only one barangay of each chosen municipality, in which to implement a project. Rather, in the two new project areas (Palawan and Suri Gao del Norte), it was decided to extend ICDPP projects to *all* the barangays of a given municipality. This change of approach is intended to increase the support of LGUs for ICDPP projects in their jurisdiction (Mr Malibiran, ICDPP).

As positive as such programme learning may be, individual projects also benefit from the inclusion of incremental learning processes as an important element of their sustainability

and of local capacity-building (Chambers, 1983; Korten 1980). Although such learning processes are – in theory – a fundamental part of community-based approaches, in practice they have tended to receive far less emphasis by PNRC (as opposed to community) actors, than programme learning processes, which are of greatest benefit to the organisation.

Information Extraction and Dissemination: Room for Learning?

One of the problems with experimental (or pilot) initiatives such as ICDPP is that they are associated with a tendency to focus upon organisational learning, to the detriment of participant or project beneficiary learning (Johnston and Clark, 1982). This is particularly true where (as in the PNRC projects) they employ an orthodox project cycle approach of planning, implementation, monitoring *then* evaluation. Whereas feedback to donors and up the PNRC hierarchy through accountability mechanisms tends to be strong, feedback to community actors is relatively weak, and comes too late to benefit ongoing initiatives. Thus the knowledge and understanding gap between PNRC, donor and community actors is blamed for many of the problems associated with ICDPP's project in Benguet. In this case, apparent 'failure' – from the donor viewpoint – was not considered to be failure from the perspective of the community, or locally based PNRC staff (PNRC, 1999).

Both ICDPP and DMS-CBDP projects rely upon a combination of information gathering and dissemination, primarily through the mediums of community surveys and the training of community volunteers. On the one hand, community surveys are a tool used by PNRC actors to extract information from community members in a PNRC-designed format. This information is employed by PNRC primarily in project site selection and social preparation stages. Training on the other hand, is first and foremost, a means by which PNRC seeks to educate and raise the awareness of community members to the risks associated with local hazards (such as typhoons) and of disaster management practices, with emphasis on planning, preparedness and mitigation. Although training sessions are intended to encourage discussion and sharing of ideas within the disaster management framework established by PNRC, there is limited scope for inclusive and ongoing project learning that can be practically applied outside of these training sessions. This is due in part to factors which have already been discussed such as time and financial constraints as well as programme emphasis upon meeting performance targets. Project and programme structures tend to segregate information extraction, and information dissemination

elements. This segregation in itself tends to discourage inclusive project learning. For accountability purposes, progress reports are required of community and project actors by PNRC and programme donors (in the case of ICDPP). Such reporting is a formal project requirement, but it does not in itself provide a forum which can bring together the different groups of project actor, for timely sharing and discussion of the issues and experiences raised. Generally, unless an issue arising demands urgent action (i.e. it threatens to disrupt project targets), reports are filed in PNRC Chapter and Headquarter offices to be drawn upon during formal evaluation phases of programmes. Although locally-based PNRC project staff fulfil an important informal role in monitoring project progress, offering support and discussing issues with prominent community actors, current programme constraints are such that there is limited scope for incrementally building upon such project learning for the benefit of the individual communities concerned.

6.4 Future Directions for ICDPP and DMS

In the last section, we saw that organisational learning and programme objectives have tended to be prioritised over those of individual community-based projects. This section explores two key areas of contention for PNRC, which have contributed to the shaping of PNRC programmes as discussed above. I look firstly at the area of project and programme sustainability, and secondly at the long-term incorporation of ICDPP in DMS.

6.4.1 Sustainability

In ICDPP, funding from the donor, DRC, has been made available for planning and implementation phases, but not for substantial post-mitigation, monitoring and evaluation. This position is based upon an assumption that PNRC can continue the projects without continued DRC financial input. However, from ICDPP's perspective, finding appropriate levels of financing in order to continue elements of the programme under the ambit of DMS, and provide necessary support to communities to sustain ongoing projects, poses a significant challenge. Applications will have to be made to external funding agents. It is expected that increased support will be sought from present PNRC donors such as Danish Red Cross, Canadian Red Cross and Japanese Red Cross societies (Mr Malibiran, ICDPP).

Considerable time and effort is required of staff to put together good funding applications, with no guarantee of any return. ICDPP will also be losing its privileged status as a 'special', externally funded programme, with a sole donor, as well as a clear timeframe and budget. ICDPP's role and remit within DMS is less certain, and dependent upon the directives, efforts and will of more actors than has previously been the case. ICDPP will lose the advantage of having its own, earmarked pool of funding, and will have to divert time and energy to applying, both internally and externally, for funding in order to continue.

One particular difficulty associated with current external funding arrangements under DMS is that the three principal donors each employ different models within which their support is framed. As a result, they tend to provide support for different programme elements, such as capacity building, infrastructural development and community-based approaches (Mr Malibiran, ICDPP). The implications of this for ICDPP are that it will be harder to comprehensively plan and develop future programme directions. ICDPP will be subject to the same constraints that comparable DMS initiatives are currently. Some of the strengths of ICDPP may unfortunately owe as much to security of funding as to the actual approach adopted, and it may prove difficult to sustain such initiatives in the absence of previous levels of funding security.

Programme Time Constraints

The ICDPP timeframe is very short by today's standards in the sustainable development field. Generally, community-based projects such as those initiated under ICDPP are funded for a minimum of five years. The donor's withdrawal from the project is considered "premature" by staff, and has left ICDPP with a dilemma as to how best to address the issue of project sustainability. Such decisions ultimately rest with the donors, who justify the relatively short timeframe on the grounds that PNRC has the capacity to sustain ICDPP and other such projects without outside assistance. Neither PNRC nor the Philippines are prioritised as recipients of DRC assistance (Mr Malibiran, ICDPP). This has meant that considerable pressure has been placed upon the programme and its staff to meet implementation objectives before the DRC funding deadline is reached. In turn, this has left staff with little scope to invest time and energy in sustainability issues.

Project 'Hand-over' Ceremony

Both ICDPP and DMS are concerned with promoting community 'ownership' of projects. In practice, this has entailed investing responsibility in community actors, for the maintenance of project outputs and project sustainability generally. Both of the projects studied employ (to varying degrees) elements of social preparation, education and participation to this effect. Both projects have established trained teams of barangay-based volunteers in whom, with the approval of barangay leaders, primary responsibility for maintenance and sustainability is vested. ICDPP also employs the mechanism of the project 'hand-over' ceremony. To give some social context, such ceremonies are common place in the Philippines, and are generally employed in recognition of achievements such as graduation from educational courses, or – as in this case – project completion. They also serve as a means of bringing community members together in celebration, and as a means increasing political standing of key actors involved, who in a sense are advertising there own achievements and contributions. Public ceremonies serve as a means of networking with (and possibly establishing the basis for future barangay projects or contributions to ongoing initiatives from) key outside political actors invited to attend, such as the municipal Mayor or provincial Governor.

Not withstanding the commonality of such ceremonies in the Philippines context and the purposes they serve, it remains a slightly jarring concept in the context of community-based projects. This is because such projects are by their nature designed at the outset to be shaped and carried out – as far as possible – by the community concerned, for that community. Community-based project success is judged not only by levels and quality of community participation, but also by the degree of community ownership which such participation is intended to entail. Does a project which is already (in theory) community owned and driven, require a ceremony purporting to transfer ownership from an outside supporting agent (PNRC) to the community?

In the case of the Tigbao project's hand-over ceremony, organisational and programme prestige and profile-raising were clearly goals. The ceremony and accolades attached provided evidence which could be employed in legitimising both programme and project, not least in the eyes of donors. Making a good impression of successful project implementation was first and foremost in the minds of community leaders, who went to

some lengths to have the residential area[20] surrounding the seawall cleaned up especially for their prestigious visitors. Barangay officials assert that

> "*Only when all job specifications and quality controls of mixtures and materials are thoroughly checked as acceptable, may the project be turned over and endorsed for acceptance by the people of Barangay Tigbao through its council officials*" (ICDPP, 1998a).

Here, barangay officials are asserting their authority and responsibility to ensure that project outputs meet quality requirements, before these can be accepted as properly completed, and endorsed to the community at large. Thus, it is the responsibility of barangay officials to ensure that acceptable standards are met by implementers before barangay responsibility for ongoing maintenance will be accepted.

Whatever different actors may hope to gain from a hand-over ceremony, the assertion that the project itself was intended primarily to benefit the community concerned is not called into question. What the ceremony in fact achieves – over and above potential political profile-raising, as well as organisational and community-unifying gains – is the symbolic transferral of *control* and *responsibility* for ongoing maintenance and future sustainability to community actors. This is endorsed in the Tigbao seawall project proposal submitted to ICDPP by barangay officials. This document avers that

> "*Sustainability and maintenance of this project will be the concern of the barangay Council through its continuing allocation of budgets to be set aside for the maintenance of said dike... in case of greater damage, we will also seek assistance from the Municipal Council*".

In view of the meagre financial resources available to barangay officials for such projects, this is a considerable responsibility to take on.[21]

Retaining Project Momentum

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[20] This area, Lutao, is commonly represented in the Barangay as both the poorest and dirtiest area.

[21] For example, in 1999 the total income of barangay Tigbao from the Internal Revenue Allocation was 401,589.66 Pesos (approximately 7437 GBP), of which 139,092 Pesos (approximately 2576 GBP) are reserved to pay the Captain's 'Honorarium' and the remainder is allocated to a variety of funds for barangay development, the maintenance and improvement of barangay resources, insurance and administrative expenses (Tigbao, 1999).

One problem facing community-based disaster management projects is that of waning interest in areas where there are no recurring disasters. Under such circumstances, continuous follow-up is required to maintain community interest in the projects and levels of participation (Mr Atienza, ICDPP-Leyte; Mr Sian, DMS; Mr Villacrusis, DMS-Mindoro). Another setback experienced by ICDPP in particular, was associated with migrating locally-based participants. Even trained and committed volunteers could often find themselves migrating in search of employment a few months or even weeks after training. Mr Sian describes this as an "*uncontrollable*" element of the projects, while Mr Atienza suggests that trained teams of volunteers be supported in recruiting new members as a continuation of local capacity-building. With reference to ICDPP's problems in this respect, Mr Malibiran finds a solution in more careful selection of volunteers recruited for training (Mr Malibiran, ICDPP). This infers a stronger role for ICDPP actors in recruitment decision-making, which has been primarily the domain of community leaders. In practice, selection of volunteers for training within the ICDPP programme has been an area of considerable negotiation between community leaders and ICDPP actors, largely due to the format of the training provided. We have seen in Sections 4.3.3 and 5.4.5 that community leaders in Tigbao considered the out-of-community training sessions ideal for underemployed youths (the very group most prone to migration) and far less suitable for livelihood-earners or those with home-based caring (or other) responsibilities.

In incorporating information gathered locally on hazards and resources, in processes of development planning, ICDPP does succeed in extending its projects' impacts beyond the period of PNRC involvement. Development planning is the responsibility of barangay Councils within the Philippine local government system. Under this system, plans are produced locally and then (in theory) filtered upwards through the local government system. LGU mandated disaster preparedness elements take the form of planning warning and evacuation procedures, as well as allocating responsibilities and outlining procedures in *relief* and *rehabilitation* activities. The DMS line is that disaster planning in terms of desired *mitigation* measures and awareness of local hazards should also be incorporated in barangay (and higher level) development plans. Without disaster planning which identifies forms of local vulnerability and hazardous areas, it is likely that valuable resources will continue to be situated in hazard-prone areas (Mr Sian, DMS). Come the next flood, Mr Sian argues, and development in that area will be effectively "*back to zero*". The emphasis

here is upon careful situation (and if necessary relocation) of valuable resources, and the planning of future development with reference to hazards and the likely impacts of different forms of development. Within this narrative, protection of resources is emphasised, with disasters portrayed as setting back development. Ultimately, this narrative upholds disaster preparedness, mitigation and prevention, as key elements of sustainable development, in a manner which fits the conceptual framework outlined in Sections 2.1.3 and 8.1.1.

6.4.2 Absorption of ICDPP by DMS

The planned absorption of ICDPP by DMS was the single biggest issue relating to the two programmes under discussion at the time of my fieldwork in 1999. As in all research which claims to provide a snapshot of particular projects or programmes, a timeline has had to be drawn, beyond which new information about the projects or programmes studied, has not been included. Therefore, information and analysis contained in this chapter are centred upon data available during the time of my fieldwork during 1998-1999; as well as discussions and perspectives represented by those interviewed, observed and involved in discussions during this period. This section is concerned not so much with eventual outcomes of integration, as with the processes shaping discourse and debates around this fundamental issue.

Meeting Disaster Management Service 'Half Way'

Within PNRC, DMS does not stand alone, but rather interfaces with aspects of each of the other PNRC services' work. During disaster situations, all the PNRC services contribute to the overall effort, which is managed by DMS (Mr Sian, DMS). In terms of human resources, PNRC volunteers with different services can be drawn upon as a pool of manpower, while Safety Service and Community Health and Nursing Services often have an important role to play in responding to emergency situations. Likewise, Social Service staff may become involved in stress debriefing and tracing relatives. All the physical resources of PNRC such as warehouses, vehicles and communications equipment and systems are integrated. During disaster situations, PNRC also habitually co-ordinates with Government Departments such as Health, Social Welfare and Development. In such circumstances, both PNRC and Government roles are well defined, and "*known*" to all those involved (Mr Sian, DMS). Prior to the initiation of ICDPP in 1994, a previous DMS

programme experimented with a community-based approach to disaster planning and preparedness in Bicol region. This project lacked ICDPP's 'high technology' mapping element. Its strength was that this was an integrated initiative, in which PNRC was only one of several supporting partners (Mr Malibiran, ICDPP).

From the perspective of Mr Sian, the primary focus of DMS – as of the Philippine government – remains post-disaster relief. As an auxiliary of the government, however, DMS is also concerned with promoting issues of disaster preparedness, mitigation and prevention. DMS is involved in lobbying the government for the reallocation of part of their funds currently set-aside for relief and rehabilitation, towards preparedness, mitigation and prevention. This would represent a move away from a largely reactionary approach to disasters. ICDPP is a pilot project and has been expected from its outset to, "*somewhere along the line*", meet "*half-way*" with DMS (Mr Sian, DMS). From this assertion, we can ascertain two key tenets of the DMS position. Firstly, DMS is a permanent, established service of PNRC. In contrast, ICDPP is an experimental, externally funded initiative, which is intended to promote learning, test practices and to contribute to processes of institutional evolution. Thus before ICDPP can be subsumed by DMS, an experimental period of autonomy from the established service is required, in order to ascertain the areas in which ICDPP is effective. Secondly, in order for ICDPP to be absorbed by DMS, and to fulfil its potential in contributing to processes of institutional learning and evolution, compromise will be required on both sides. Hence DMS and ICDPP will be required to meet each other 'half way'.

One important area of compromise lies in the absorption of ICDPP staff. It is clear that there is not enough available funding for DMS to be able to absorb all ICDPP staff (Mr Malibiran, ICDPP). Difficult decisions remain as to who to retain, and this issue has increasingly risen to the forefront as the end of the programme looms and absorption processes are outlined. Generally, project and programme processes have been coloured by uncertainty. Initially, this uncertainty was centred upon the future of the programme and its projects. As these issues have been resolved, a new form of uncertainty as to who could expect to retain their positions has emerged. In this manner, programme and project sustainability issues have merged with staff concerns regarding the sustainability of their own and their colleagues' positions. Such circumstances have had a negative impact upon

the overall momentum of the projects concerned, as well as upon the general atmosphere in both ICDPP and the PNRC Chapter offices in which they are based.

According to Mr Malibiran, three major ICDPP procedures are to be absorbed in the integration process. These are: 1) social preparation, 2) community resources mapping and 3) the implementation of community mitigation projects. It is recognised that appropriate support systems are already in place within DMS (Mr Malibiran, ICDPP). The primary focus of the absorption process therefore, from this perspective, is to retain the ICDPP *procedural model*, the main elements of which are explored in the sections below. Emphasis in this respect is placed not so such upon *what* ICDPP does, as upon *how* it is done.

ICDPP Strengths to be Incorporated

The focus of DMS training at all levels has been "*to open eyes and increase understanding of what constitutes vulnerability and hazards*" (Mr Sian, DMS). ICDPP's strength is to increase awareness of available resources and of local hazards, using a participatory, community-driven approach. Although DMS has been involved in some community-based initiatives, the service's approach is generally far more top-down. Unlike in the wider NGO community, in the DMS context, such community-based initiatives are considered highly innovative. Much of ICDPP's strength in this respect is attributed to the effective use of lengthy[22] 'social preparation' phases. It has been agreed that this element of ICDPP should be incorporated into future DMS programmes. Notwithstanding, there is uneasiness within DMS as to the potential extra burden of adopting such processes (Mr Malibiran, ICDPP).

The successful implementation of community-level *mitigation* measures is considered a major strength of ICDPP (Mr Malibiran, ICDPP; Mr Sian, DMS). Success is attributed to gaining the support of LGUs for the projects. Implementing mitigation measures under the programme is also seen as a means of building upon the training provided to community members. It is a weakness of DMS (as opposed to ICDPP) that a high proportion of

resources are invested in training, but not in follow-up activities. As such, the momentum and purpose gained through training, is to an extent lost (Mr Malibiran, ICDPP). Putting aspects of training into practice is a means of continuing the learning process, as well as of local capacity and confidence-building. Whilst recognising the strength of this element of ICDPP, doubts have been expressed within DMS as to the feasibility of sustaining ICDPP-style projects at previous funding levels. Mitigation measures in particular have been singled out in discussions as a particularly high cost area by DMS standards. Nevertheless, there is support from higher levels of PNRC for continuation of ICDPP-style mitigation measures, within DMS. This support is associated with another narrative within the hierarchy of PNRC, described as "*think big attitude*" (Mr Malibiran, ICDPP), although funding issues are yet to be resolved.

ICDPP Skills and Technology

A more contentious area is that of the use of mapping technology within ICDPP. In Section 6.2.3 we explored the issues surrounding the role and use of high technology by ICDPP. The benefits of implementing such an approach are dubious, as we have seen, and are particularly difficult to justify because of their proportionately high cost within the programme. Nevertheless, from Mr Malibiran's perspective, it is clear that the technological element of ICDPP *should* not be abandoned, and that appropriate skills should be transferred to DMS staff. He suggests that GIS use be institutionalised within PNRC. However, Mr Malibiran also expresses an opinion (which he emphasises is not representative of the official line) that the high-technology mapping element of ICDPP is not only very expensive but also difficult to maintain and use. Nevertheless *potentially*, such mapping could prove a useful tool in planning processes (Mr Malibiran, ICDPP). Whilst acknowledging the contention surrounding the high technology mapping element of ICDPP, Mr Malibiran also emphasises the importance of maintaining and building upon technology-related skills which have been introduced to PNRC through ICDPP. He compares the introduction of digitised maps to the widespread introduction of computers into the organisation in the early 1990s. What was considered high technology when new, soon came to be seen as a 'basic tool'. Likewise, digitised maps are likely to be in

[22] Whereas DMS social preparation phases typically take 3-5 days, ICDPP style social preparation takes

Footnote continues on the next page

widespread use in the future. Digitised mapping may have been of questionable value to community and other local actors concerned with the projects, however the digitised mapping skills acquired may be of substantial value to PNRC in the future (Mr Malibiran, ICDPP).

In this narrative, much of the value of digital mapping is attributed to contributions to the human resource skill base of PNRC. Although this may in part be influenced by the pending absorption of ICDPP by DMS, and associated financial pressures to scale down programme activities as well as ICDPP staff employment, it is nevertheless a valid point. Whether or not there is consensus as to the appropriateness of including digitised mapping in community-based initiatives, the fact remains that certain skills and knowledge have been obtained which could potentially be effectively employed and developed within PNRC. Although of little benefit to local capacity-building initiatives, the mapping element of ICDPP has contributed to PNRC organisational capacity-building.

6.5 Summary

This chapter has been concerned, firstly, with the organisation framework within which vulnerability reduction strategies are formulated, given meaning and generally shaped within the community-based projects studied. Secondly, it is concerned with debates surrounding appropriate organisational roles, as well as evolving approaches to disaster management. Its findings have wider general application to community-based approaches and vulnerability reduction strategies.

Formal programme roles and objectives as set out in official documents, provide a basis for the community-based projects and programmes studied, however the representations of PNRC actors have added considerably to our understanding of the processes by which projects are shaped in practice. Thus, the mechanism of social preparation (also referred to as community organising) is employed ostensibly to ensure a full measure of local

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several months.

involvement, and that local perspectives and priorities remain central to community-based projects. However, social preparation phases also serve as a mechanism for enforcing organisational understandings of the nature, remit and objectives of projects from their outset. In this manner, local participants are given free rein in project negotiation processes, within the bounds established by Red Cross[23] actors. Much of this narrowing of the project scope centres upon a pre-determined focus on 'event-centred' vulnerability, which emphasises *direct* physical and economic manifestations of vulnerability. This event-centred focus is not based upon PNRC actor understandings of vulnerability, so much as upon donor stipulations, and a long tradition of PNRC practice, which combine to delimit actors' interpretations of programme and project remits.

Discontinuities between the ideals of a community-based approach and that currently adopted by PNRC, are associated largely with the organisation's continuing 'service-delivery' orientation, which is itself a key component of PNRC's role as an auxiliary to government in the disaster management field. The programmes studied represent a shift away from disaster relief focus, towards greater emphasis upon disaster preparedness, mitigation and prevention. Whereas relief has always been a primarily service-oriented area, preparedness, mitigation and prevention have been increasingly addressed by participatory, community-based approaches. In practice, the approach currently adopted is an amalgamation of the two. This is a primary reason why project capacity-building mechanisms are limited to activities with fairly rigid formats. One example is the formal 'training' of community volunteers. PNRC's continued service-delivery orientation is reflected in the tendency for project evaluation to focus upon tangible project *outputs* such as training delivery and the implementation of mitigation measures, rather than upon project *impacts*. It is also reflected in the tendency – particularly at higher levels of PNRC – to focus upon *organisational* benefits and learning curves.

Discontinuities between community-based approach ideals and practice are also caused by donor pressures for the implementing organisation to conform to expectations within a set timeframe, to budget and to reporting requirements. This is particularly true in the case of

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[23] Includes PNRC and Donor Red Cross/Crescent National Society actors.

ICDPP. DMS experience indicates the difficulty of shaping programmes to suit the requirements of sets of donors that each fund different elements of a given programme.

In exploring the different roles adopted by PNRC in the field of disaster management, I conclude that whatever foci are employed in future initiatives, community-based approaches should prioritise self-defined community needs beyond the limits of current 'bounded' projects. Whether this be through expanding PNRC departmental remits, or through increased co-ordination between PNRC services or with external NGO or LGU actors, is a matter for both internal judgement (which in many instances will have to be made on a case-by-case basis) and project negotiation processes. Whereas I recognise that financial, time and evaluatory constraints and requirements will always apply to some degree, greater emphasis should be placed upon *project* impacts and long-term sustainability, over and above that of the programmes of which these projects are part. Programme learning is important to donors, organisational actors and future beneficiaries, and is key to an incremental learning process approach. However, the employment of community-based approaches by organisational actors, carries a responsibility to local participants to provide appropriate levels of support to foster positive and sustainable impacts beyond the implementation of physical project measures. The ultimate act of writing off a 'difficult' project for the good of the programme as a whole may be justified in organisational terms. However, this act also entails negative impacts both within the community concerned and between community and external actors involved in the project, which are likely to have repercussions for future initiatives and relations generally within the area. Abandoning an ongoing community-based project is to write off the efforts of all who have participated, and may even be viewed as having written off the community itself, in a fundamentally disempowering manner. This action should be treated as a last resort for use only in extreme circumstances where project negotiation processes have failed.

7. Vulnerability Reduction within the Local Government Framework

Perspectives of, and roles played by Local Government Unit (LGU) actors, provide the focus of this chapter. It explores the key linkages between the case study projects explored in Chapters 5 and 6, and government as well as civil society institutions. Many of the areas explored in this chapter stem from issues raised in the course of barangay-level as well as PNRC interviews and discussions. This applies in particular to the areas of: disaster management and the Disaster Co-ordinating Councils (Section 7.1.2); LGU funding systems (Section 7.1.4) and constraints to effective policy and programme implementation (Section 7.2.3); and, natural resource management (Section 7.2.2). The local government units (LGUs) primarily featured in this analysis, are provincial and municipal government.[1] These are the LGUs that interface directly with the PNRC case study projects. Although barangay Captains and Council members make up the lowest tier of the LGU system, I have chosen to incorporate their perspective in Chapter 5 rather than here, as these elected representatives are also fully integrated members of the barangay communities which they serve. The different views are synthesised in Chapter 8.

This chapter explores the manner in which the concept of vulnerability is articulated, within local government policy discourse and practice. Examining the context of local government institutions, policy framework and programmes adds depth to our understanding of the case study projects. Certain project actors, particularly barangay leaders, are also LGU actors. A considerable degree of co-ordination is required in order to implement local projects, with an emphasis upon accessing the primary resources of funding, equipment and knowledge-based skills. This is reinforced by the requirement that LGU permission be granted in order for projects or programmes to operate, even where these are externally funded by NGOs. This chapter adds to our understanding of the interface between LGU and other project actors, as well as to the capacity of local

[1] Refer to Section 4.2.1 for an overview of the Philippine LGU system.

(including barangay-level) actors to effectively influence their situation and instigate sustainable processes of change. This, by means of exploring the governing frameworks within which these actors operate, and by examining how these actors are placed within that system of rules, regulations and norms.

The chapter commences with an overview of elements of the LGU institutional framework that are key to this thesis (Section 7.1). In particular, the section concentrates upon LGU roles and responsibilities, as well as dependency relationships within the decentralised system. Section 7.2 explores prominent elements of LGU approaches to disaster management, vulnerability reduction and development. Changing natural resource management policy and practices provides a particular focus in Section 7.2.2, which contains the example of a current, integrated sustainable rural development project. Section 7.2 ends (in Section 7.2.3) by examining constraints under the current system to effective implementation of government policy and programmes. Next, Section 7.3 explores the various manners in which the concept of vulnerability and its causes are constructed by LGU actors, in different circumstances.

Section 7.4 provides an alternative perspective to official lines on environmental management and degradation, as well as vulnerability experiences. This perspective is based upon the observations of two specific NGOs that seek to represent the rights and interests of the Mangyan minority group resident in Oriental Mindoro Province. Although this is only one among many possible alternative perspectives to those represented by government actors, it is considered particularly relevant to this thesis. This is because the alternative perspective represented by these NGOs provides considerable insight into the experiences of an extremely marginalised and in many ways vulnerable group living within one of my case study areas. The Mangyan story also has wider application in contributing to our understanding of the strong linkages between political power and the shaping of both policy discourse and popular understandings of the causes of vulnerability. Environmental degradation and natural resource management discourses within barangay, PNRC and LGU spheres have tended to be based in certain respects upon elements of received wisdom as much as upon experience. The 'alternative perspective' poses serious challenges to those relying upon such received wisdom, and in doing-so enhances our understanding of

vulnerability issues and proposed solutions. Finally, Section 7.5 provides a conclusion to this chapter.

7.1 The Institutional Framework

Decentralisation of the Philippine local government system is designed to engender stakeholder participation in government initiatives, and local self-sufficiency. At national level, the Estrada Administration prioritises rural poverty alleviation, a key element of which is sustainable, community-based resource management (Cerilles, 1999). Overall, this decentralised government culture fits well with the ideals of a community-based approach to disaster management. However in practice, the lower the level of LGU, the higher its degree of financial dependence. This can act as a disincentive to community-led initiatives.

Disaster management is prioritised within the LGU system. The main thrust of LGUs' disaster management role lies in the areas of awareness-raising, hazard warnings, mitigation, co-ordination, response and rehabilitation. PNRC's role as an auxiliary of government, specialising in disaster management is officially endorsed. In practice, LGU and PNRC areas of activity and responsibility do at times overlap. The institution of the Disaster Co-ordinating Council (DCC) is a key vehicle for planning and implementing disaster management strategies within the LGU system. The term 'disaster management' is most commonly employed to describe activities relating to 'natural' and 'man-made' hazard events and their human impact. Dig deeper beyond the terminology and it soon becomes clear that LGU disaster management is increasingly integrated with sustainable environmental management and development strategies. Conceptually and pragmatically, vulnerability alleviation strategies are multi-sectoral. The inter-relatedness of different manifestations of vulnerability is increasingly addressed, and as a result, what passes for LGU 'disaster management' in official discourse, is merely the tip of the iceberg.

7.1.1 Local Government Roles and Responsibilities

Example 7.1 (below) contains an overview of key elements of disaster management policy of the Philippine government.

Example 7.1:

> **Presidential Decree No. 1566** (extract): Strengthening the Philippine Disaster Control Capability and Establishing the National Program on Community Disaster Preparedness.
>
> Section 1: Declaration of Policy
> It is the policy of the state that;
> (a) Self-reliance shall be developed by promoting and encouraging the spirit of self-help and mutual assistance among the local officials and their constituents;
> (b) Each political and administrative subdivision of the country shall utilize all available resources in the area before asking for assistance from the neighbouring entities or higher authority;
> (c) The primary responsibility rests on the government agencies in the affected areas in co-ordination with the people themselves;
> (d) It shall be the responsibility of all government departments, bureaus, agencies and instrumentalities to have documented plans of their emergency functions and activities;
> (e) Planning and operation shall also be done at the barangay level in an inter-agency, multi-sectoral basis to optimise the utilisation of resources;
> ...
> (h) When an emergency affects an area covering several towns and cities, the city mayors and their personnel and facilities shall be placed under the operational control of the Provincial Governor for the duration of the emergency;
> ...
> (President, F. E. Marcos. Source: Region IV Disaster Management Manual, 1997).

At the head of provincial government, Provincial Governors exercise wide-ranging powers overseeing the executive and legislative functions of provincial government (Mr Umali[2]). In carrying out any initiative, the support of the Governor involved is vital. Even where national government provide their own input, without provincial support, one "*cannot move*" (Mr Macopid[3]). In times of emergency, response and communications are co-ordinated through the Governor's office, for each affected province (Mr Pedalino[4]). Below provincial government, each municipality is headed by a Mayor, whose office co-ordinates the implementation of government programmes at barangay level, and is responsible for municipal planning (Mayor Dela Chica[5]).

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[2] Provincial Administrator Oriental Mindoro.
[3] Department of Agriculture Southern Leyte Province.
[4] Public Information Agency (PIA) Southern Leyte.
[5] Baco Municipality, Oriental Mindoro.

At provincial level, there operate a plethora of sectoral councils and government offices, whose mandate is accorded by both provincial and national government. Each provincial office, for example the Department of the Environment and Natural Resources (DENR), has its regional and national counterparts to whom it is accountable. In the same manner, municipal offices and officers are accountable to their provincial counterparts. The provincial office of the Department of Planning and Development reviews all development plans of the barangays and municipalities of the province and co-ordinates the inputs of concerned actors. The associated Provincial Development Council is the chief planning body of the province, and is chaired by the Provincial Governor (Province of Or. Mindoro, 1997; Ms Estela[6]). Other provincial level sectoral planning bodies include the PDCC, the Provincial Health Board, Provincial School Board and the Provincial Bids and Awards Committee to name but a few (Mr Wamil[7]). The *Sangguniang Panlalawigan*[8] is another key body, which reviews and approves development plans subject to existing laws.

This entire structure is replicated at the municipal level, from the multi-sectoral development councils to the Council or legislative body, called the *Sangguniang Bayan* at the municipal level (Province of Or. Mindoro, 1997; Ms Joaquin,[9] Mayor Espina[10]). Since the province is hierarchically higher than the municipality, then the Sangguniang Panlalawigan reviews the ordinances passed below by the Sanggunian Bayan. Likewise, the municipal Sangguniang Bayan reviews the acts of the barangay councils (Ms Joaquin[11]). The compulsory multi-sectoral councils – including a DCC – are also established at the barangay level, and are involved in the local development planning process. However, in practice, their plans are always subject to the approval of higher government levels and to the availability of adequate funds. One of the most important forms of planning is that concerned with land use. Under the Local Government Code, each municipality is required to produce and update land use plans every ten years. These plans are 'multi-sectoral', and involve many different agents as they involve categorisation

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[6] Planning and Development Southern Leyte Province.
[7] Department of the Interior and Local Government (DILG) Oriental Mindoro Province.
[8] Provincial council and legislative body.
[9] Personal communication (Email: 26 June 2001).
[10] Libagon Municipality, Southern Leyte.
[11] Personal communication (Email: 26 June 2001).

of municipal lands which determines to which purposes lands in question can be used (Ms Estela[12]). In practice, municipal capacities are often challenged by the task of drawing up these plans. In some cases, municipalities have hired consultants for this purpose. In other cases, production of the plans has been delayed (Ms Estela[13]), with land categorisation remaining a politically sensitive area.[14]

Responsibility for implementation of government policy is increasingly concentrated at municipal level, with provincial government providing co-ordination and support. For instance, both crisis situations and aquatic resources are increasingly managed at the municipal level (Ms Abad,[15] Mayor Espina[16]). This localised concentration of responsibility is evidenced by the proliferation of municipal councils and bodies charged with increasingly autonomous powers to implement projects and policy directives, and to enforce legislation.[17] Municipal councils are not only charged with administrative and management roles, but also function as advisory bodies representing local interests. Prior consultation by provincial actors with municipal councils is increasingly a mechanism employed to contribute to the design of provincial ordinances (Ms Abad[18]).[19]

The Public Information Agency is a government agency responsible for both gathering and disseminating information. Information relating to hazards, emergency situations, technical knowledge and government policy is disseminated by PIA to LGU actors and local inhabitants by a variety of means[20] (Mr Pedalino[21]). The PIA has another primary role, namely, to gather data for regional and national levels of government, on what is happening at municipal and barangay levels. Statistical data, programme developments

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[12] Planning and Development Southern Leyte Province.
[13] Planning and Development Southern Leyte Province.
[14] Anonymous personal communication.
[15] Department of Agriculture (DA) Southern Leyte Province.
[16] Libagon Municipality, Southern Leyte.
[17] Refer to Section 7.2.1 for key elements of the decentralised local government system.
[18] DA Southern Leyte Province.
[19] With reference to Municipal Fisheries and Aquatic Resources Management Councils.
[20] These include: distribution of reading materials, public talks (generally to assembled groups of municipal officers and barangay captains) and public information boards.
[21] PIA Southern Leyte.

and public reactions to government policy are gathered by the PIA for higher levels of government (Mr Pedalino[22]).

The institutional framework for local-level rural development planning and implementation is laid out in Figure 7.1 below.

Figure 7.1: Local-level Rural Development Planning and Implementation

Government Line Agencies:
DENR
DA
DSWD
Information Flow
Policy directives and resources
Rural Development
Local Government Units:
Provincial Government
Municipal Government

7.1.2 Local Disaster Management and the Disaster Co-ordinating Councils

Since the early 1990's, the LGU structure has incorporated Provincial, Municipal and Barangay Disaster Co-ordinating Councils (PDCC, MDCC and BDCC). Much of their role is concerned with heightening preparation and mitigation, as opposed to pure response elements of disaster management (Mr Umali,[23] Governor Lerias[24]). Meeting monthly, the Disaster Co-ordinating Councils (DCCs) have been instrumental in mapping floodplains

[22] PIA Southern Leyte.
[23] Provincial Administrator Oriental Mindoro.
[24] Southern Leyte Province.

and particularly vulnerable areas,[25] as well as being responsible for drawing-up Annual Disaster Preparedness Plans for respectively, the province, municipality and barangay (Mr Wamil,[26] Mr Umali,[27] Governor Lerias[28]). Within these plans, are contained recommendations for local projects. In accordance with the LGU hierarchy, plans are submitted by BDCC to the municipality; from BDCC to the province; from PDCC to the regional authorities. In practice, proposals tend to be subject to approval by the highest authority at any given level, for instance, at the municipal level, they are subject to approval by the Mayor (Mr Wamil[29]). Within DCCs, the regulations stipulate that various sectors of society should be represented. For instance, at the provincial level these include representatives of local government, NGOs and the private sector (Mr Wamil[30]).

In practice, BDCC and MDCCs provide mainly information and suggestions as to possible future projects, which are then collated and submitted as appropriate to higher levels of government (Mr Soriano[31]). Each municipality has its own technical staff, who have the mandate to carry out smaller scale works independently, subject to approval of the relevant bodies and funding availability (Mr Soriano[32]). BDCCs in particular, lack the resources to implement projects alone (Mr Soriano[33]).

Within the field of disaster management, LGU disaster response systems are prioritised. These include assuring the local availability of suitable transportation for relief distribution and, if necessary, evacuation purposes, as well as maintaining crucial communication links. (Mayor Dela Chica[34]). For instance, small, motorised boats have been provided by municipal authorities to inland barangay in certain areas, to aid evacuation or distribution of relief supplies to families trapped by fast flowing flood waters (Mayor Dela Chica[35]).[36]

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[25] At the time of interviewing in Oriental Mindoro, consultants had been contracted to conduct a study of the dynamics of rivers flowing through the province (Mr Umali).
[26] DILG Oriental Mindoro Province.
[27] Provincial Administrator Oriental Mindoro.
[28] Southern Leyte Province.
[29] DILG Oriental Mindoro Province.
[30] DILG Oriental Mindoro Province.
[31] Department of Public Works and Highways (DPWH) Oriental Mindoro Province.
[32] DPWH Oriental Mindoro Province.
[33] DPWH Oriental Mindoro Province.
[34] Baco Municipality, Oriental Mindoro.
[35] Baco Municipality, Oriental Mindoro.

Maintaining trained 'search and rescue' teams, and providing disaster management training to local officials, are considered necessary priorities in order for LGUs to be able to effectively respond to severe events occurring within their jurisdictions (Governor Lerias[37]).

7.1.3 Warning and Evacuation Systems

Typhoon warning systems are particularly strong across the Philippines. In addition to the circulation of information concerning typhoon occurrence, movement and strength by the television and press, S.S.B.[38] radio is employed where telephone lines are either down or non-existent, to issue information updates and warnings (Mayor Espina,[39] Mayor Dela Chica,[40] Mr Pedalino[41]). PAGASA[42] provides a continuous flow of information on typhoons and tropical storms. PIA[43] offices follow reports on any actual or likely events in their area of responsibility, and disseminate warnings at provincial level (Mr Pedalino[44]). The Governor's office acts as a co-ordinating centre for each province during emergency situations such as the onset of a typhoon (Mr Pedalino[45]). Once a storm signal number one warning has been issued, then all DCCs are alerted through the governor's office, from provincial to barangay level. The DCCs then remain on standby for the duration of the emergency period. All available lines of communication should be kept open and each municipality communicates directly with the Governor's office (Mr Pedalino[46]). Warnings are disseminated from the municipal level to barangay captains, who are then responsible for ensuring that the information is passed to barangay members (Mayor Espina[47]). Municipalities are increasingly able to communicate with their constituent barangays by

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[36] Refer to Section 5.4.4 for barangay perspectives on disaster management provisions such as the supply of boats by LGUs.
[37] Southern Leyte Province.
[38] Single Site Band.
[39] Libagon Municipality, Southern Leyte.
[40] Baco Municipality, Oriental Mindoro.
[41] PIA Southern Leyte.
[42] Philippine Atmospheric, Geophysical and Astronomical Services Administration.
[43] Public Information Agency.
[44] PIA Southern Leyte.
[45] PIA Southern Leyte.
[46] PIA Southern Leyte.
[47] Libagon Municipality, Southern Leyte.

radio[48] (Mayor Dela Chica[49]). For those municipalities that do not yet have radio equipment of their own, communications are passed through local police stations where necessary (Mr Pedalino[50]). Private radio users groups also often participate in information dissemination and co-ordination efforts during emergency situations (Mr Pedalino[51]). Radio generally provides an effective means of communication during times of pending or actual disaster. However, when electric power fails, it becomes difficult to recharge radio batteries, and this can lead to communication failure (Mayor Dela Chica[52]). During severe typhoons, evacuation of vulnerable households within a given barangay is often required. This is particularly true of those living in houses made of light materials, or situated in low-lying flood or storm surge prone areas. Each BDCC is responsible for designating an appropriate evacuation centre for its barangay (Mayor Dela Chica[53]). It is relatively rare for an event to occur which requires mass evacuation of entire, or large sectors of barangays. One such instance occurred during the 1994 earthquake in Oriental Mindoro (Mayor Dela Chica[54]).

7.1.4 Government Funding Systems

Within the LGU system, funding for projects is largely drawn from the twenty per cent allowance of the Internal Revenue Allocation (IRA).[55] This is spent as decided by the executive, subject to departmental guidelines on utilisation (Mr Wamil,[56] Mayor Dela Chica[57]). The Development Council is primarily responsible for determining which types of project to undertake, with reference to national government policy guidelines and funding preferences (Mayor Espina,[58] Mr Umali[59]). The Provincial Planning and

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[48] As is the case in Baco Municipality, Oriental Mindoro study area.
[49] Baco Municipality, Oriental Mindoro.
[50] PIA Southern Leyte.
[51] PIA Southern Leyte.
[52] Baco Municipality, Oriental Mindoro.
[53] Baco Municipality, Oriental Mindoro.
[54] Baco Municipality, Oriental Mindoro.
[55] The IRA allocation for each LGU is determined according to criteria such as population size, land area and economic income. The larger each of these, the larger the share accorded. Status, such as whether the settlement in question is recognised as a city or town is also included in the calculations (Ms Kuizon DSWD, Southern Leyte Province).
[56] DILG Oriental Mindoro Province.
[57] Baco Municipality, Oriental Mindoro.
[58] Libagon Municipality, Southern Leyte.

Development Office undertakes a supportive role, referring projects which cannot be funded from the IRA to funding agencies such as the Asian Development Bank, or the Philippine Land Bank (Ms Estela,[60] Mr Macopid[61]). Such funding often takes the form of low interest loans, and there is no guarantee that funds applied for will be granted. In such cases, even well planned programmes lie unimplemented (Mr Macopid[62]).

The remainder of the IRA goes towards meeting recurrent expenses such as staff salaries (Ms Joaquin[63]). Of the twenty per cent, five per cent is retained until the end of the financial year in the form of a calamity fund, to be drawn upon only in *response* to extreme events during this period[64] (Mr Wamil,[65] Mayor Espina,[66] Mayor Dela Chica,[67] Ms Kuizon[68]). If at the end of the financial year calamity funds remain unspent they may be released into general LGU funds and spent accordingly. Decisions as to the budgeting[69] of the twenty per cent development fund are made in consultation with the multi-sectoral local development councils by the Sangguniang Panlalawigan[70] (Mr Wamil[71]). However, the municipal Sangguniang Bayan possesses the power to declare a local[72] state of calamity without reference to higher authority, and to release the five per cent calamity funds (Mayor Espina[73]).[74]

[59] Provincial Administrator Oriental Mindoro.
[60] Planning and Development Southern Leyte Province.
[61] DA Southern Leyte Province.
[62] DA Southern Leyte Province.
[63] Personal communication (Email: 26 June 2001).
[64] Under the Human Ecology and Security Programme (HES).
[65] DILG Oriental Mindoro Province.
[66] Libagon Municipality, Southern Leyte.
[67] Baco Municipality, Oriental Mindoro.
[68] Department of Social Work and Development (DSWD) Southern Leyte Province.
[69] Work begins on putting together LGU budgets in July, and these budgets should generally be approved, by October of each year. In practice, considerable delays in the release of funding can occur. At the time of interview, there were municipalities in Oriental Mindoro that were awaiting approval of their annual budgets in April. Consequentially, these municipalities were operating using what was left of the previous year's budget (Mr Wamil).
[70] Provincial council and legislative body.
[71] DILG Oriental Mindoro Province.
[72] Within its municipal jurisdiction.
[73] Libagon Municipality, Southern Leyte.
[74] In practice, this power has been little used as the funds available at this level are too limited to be of significant use (Mayor Espina).

Typically, provincial and municipal calamity funds are used in the event of a severe typhoon or flooding event in the following manners. To: carry out rescue operations; provide medical aid; make safe affected areas; carry out basic repairs to damaged infrastructure; and distribute basic relief goods such as food, drinking water, blankets, and housing materials (Gastardo-Conaco et al, 1993; Mayor Dela Chica,[75] Mayor Espina[76]). DSWD is able to release limited financial assistance[77] to individuals in need, during crisis situations (Ms Arado[78]). If a disaster situation is judged to surpass the capacity of municipal and provincial authorities to respond, then appeal may be made to regional and ultimately national government (Mayor Dela Chica,[79] Mayor Espina,[80] Ms Kuizon[81]). Rehabilitation initiatives may include incentives to relocate housing, away from disaster prone areas. Ms Kuizon[82] provides an example of how such schemes operate in practice. DSWD can offer disaster victims whose housing has been destroyed cash sums of between 2,000 and 5,000 Pesos[83] to help meet their immediate needs. This assistance is given on condition that those benefiting will rebuild their houses in an area not considered disaster prone. If unable to transfer the site of their house to another area, then the LGU will provide a relocation option (Ms Kuizon[84]).

In contrast to response and rehabilitation, comparatively little funding provision is made for disaster preparedness. Preparedness tends to be lumped under broader capacity-building, with a focus in practice upon information dissemination and training (Ms Kuizon[85]). As regards capacity-building, DSWD funding constraints have led to the targeting of the poorest municipalities, and of the poorest barangays[86] within these municipalities. Those living outside of the designated target areas are not yet benefiting

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[75] Baco Municipality, Oriental Mindoro.
[76] Libagon Municipality, Southern Leyte.
[77] AICS (Aid to Individuals in Crisis Situation).
[78] Department of Social Welfare and Development (DSWD) Libagon Municipality.
[79] Baco Municipality, Oriental Mindoro.
[80] Libagon Municipality, Southern Leyte.
[81] DSWD Southern Leyte Province.
[82] DSWD Southern Leyte Province.
[83] Approximately 37-93 GBP (54:1ER).
[84] DSWD Southern Leyte Province.
[85] DSWD Southern Leyte Province.
[86] 'Poorest' in this sense, refers to those which rank lowest on the municipal and barangay classification system which takes account of factors such as economic income, population size and land area.

from the current capacity-building scheme, which focuses upon disaster preparedness training, and the establishment of community kitchens by municipal social workers, to address malnutrition (Ms Kuizon[87]). Such schemes are intended to provide demonstrations of low budget courses of action that can be implemented locally. It is hoped that if deemed successful similar initiatives will be established across the province, although the source of funding remains unclear (Ms Kuizon[88]).

Each financial year, Provincial Government allocates a significant proportion of its disposable funds for infrastructural projects, which may include structural mitigation measures (Mr Wamil[89]), although constructions such as sea and river dikes are likely to be built using national government funds[90] (Mayor Espina[91]). LGU budgets are more often spent upon roads and livelihoods projects (Mayor Espina[92]). In Chapter 6 we saw that LGU's preparedness and mitigation activities may involve contributing to projects initiated and largely funded by other actors such as PNRC. LGU projects that are primarily government funded and managed can be directly implemented by LGU actors, through state contractors, or through People's Organisations (Mr Mageamit[93]). The last tend to be long duration initiatives, with an emphasis upon participation – and often employment – of local people (Mr Mageamit[94]). In contrast, where LGU staff or state contractors are sole implementers, completion is relatively rapid (Mr Mageamit[95]). These different types of scheme work reasonably efficiently for projects planned and budgeted for in advance according to standard procedures. However, securing funds for significant post disaster infrastructural projects is more problematic (Mr Soriano[96]). In order to reduce delays in the release of funding and bureaucratic 'red tape', funds for authorised projects costing up to one million Pesos[97] can be released directly to the Municipal Government concerned. In

[87] DSWD Southern Leyte Province.
[88] DSWD Southern Leyte Province.
[89] DILG Oriental Mindoro Province.
[90] Appeals for the funding of such projects are generally made to the elected congressman, or to senators known to have local sympathies (Mayor Espina).
[91] Libagon Municipality, Southern Leyte.
[92] Libagon Municipality, Southern Leyte.
[93] Low-Income Upland Communities Project (LIUCP) Oriental Mindoro Province.
[94] LIUCP Oriental Mindoro Province.
[95] LIUCP Oriental Mindoro Province.
[96] DPWH Oriental Mindoro Province.
[97] Approximately 18,520 GBP.

contrast, projects costing between one and five million Pesos[98] are released directly to, and administered by, Provincial Government (Mayor Espina[99]). Large-scale infrastructural projects budgeted at above five million Pesos are administered through the Department of Public Works and Highways. These funds in particular can take a long time to filter through the layers of bureaucracy before implementation can begin (Mayor Espina[100]). This point is illustrated by the example below, in which Mr Soriano[101] outlines the procedures followed in implementing infrastructural repairs, after December 1998 flooding in Oriental Mindoro.

Example 7.2:

> Funds set aside for immediate repairs were initially employed to make the most seriously affected roads and bridges usable. Funds available from this source were not sufficient to restore infrastructure to pre-flooding levels of repair. Meanwhile, emergency funding was requested through the provincial Governor. There is no established time-scale for the issue of such funds, which require the approval of the Philippine President. At the end of April 1999, no such funds have been approved (Mr Soriano, DPWH Province of Oriental Mindoro).

7.2 Reaching the People: Current LGU Approaches

Current LGU approaches have in common an overriding policy aim. Namely, to improve living conditions for the poverty-stricken masses across the Philippines, living at or close to, subsistence level. Initiatives are broadly designed to reduce vulnerability, increase local capacities, provide increased livelihoods opportunities to target groups, raise public awareness of key issues and enforce sustainable natural resource use strategies, in line with Government policy. In the section below, I provide firstly an overview of what proved, in the context of this research, to be key tenets of the decentralised LGU system. Secondly, I outline what I describe as a "combined approach" to vulnerability alleviation and

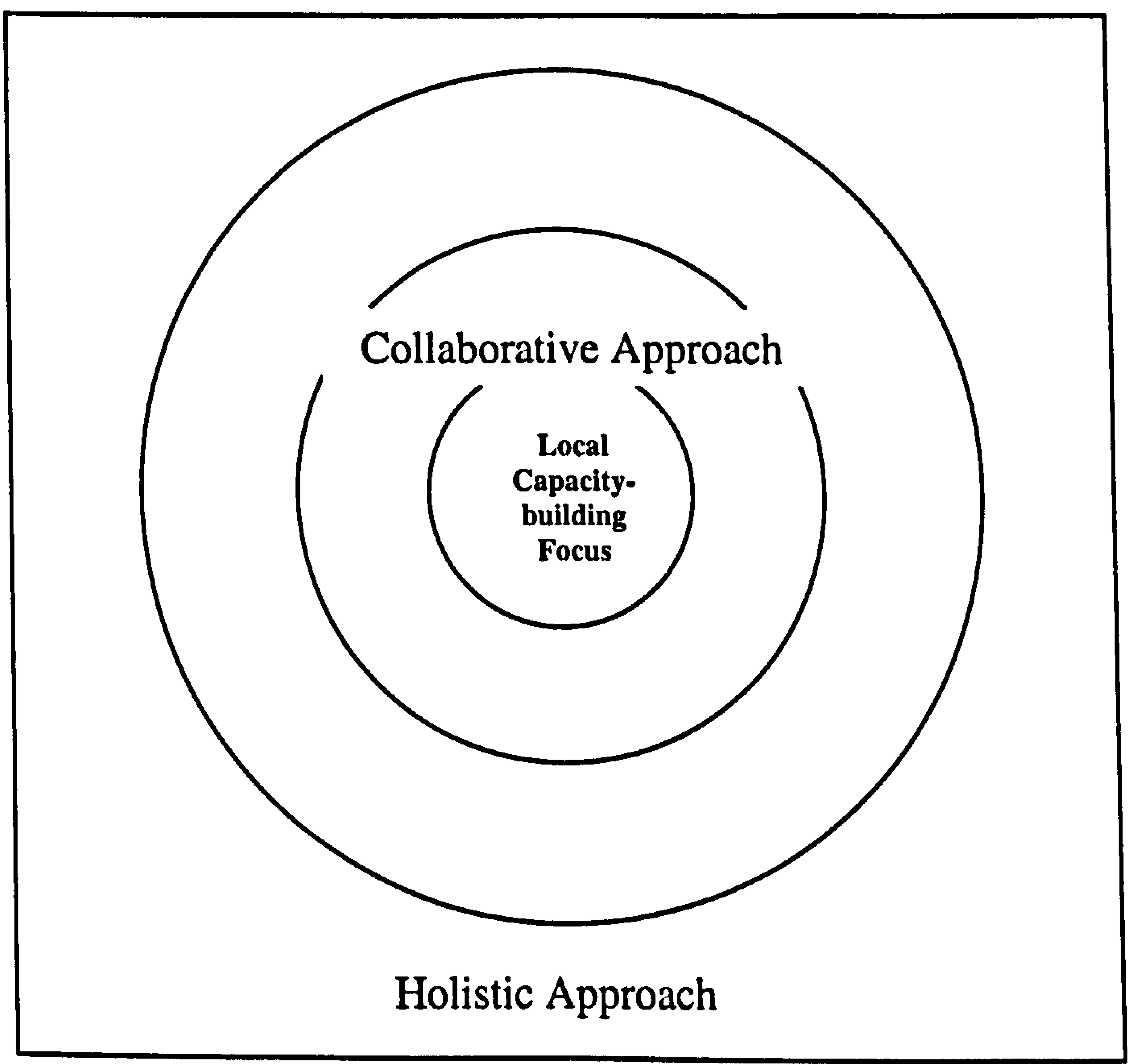
[98] Approximately 92,590 GBP.
[99] Libagon Municipality, Southern Leyte.
[100] Libagon Municipality, Southern Leyte.
[101] DPWH Oriental Mindoro Province.

sustainable development, with a focus upon natural resource management. Thirdly, I discuss constraints to effective implementation, which were raised by LGU informants.

7.2.1 Key Tenets of the Decentralised Local Government System

Key tenets of the decentralised LGU system, pertaining to this study are highlighted below. These can be summarised as collaborative, holistic and capacity-building foci, as is illustrated in Figure 7.2 below.

Figure 7.2: Key tenets of the LGU System



Collaborative Approach

The decentralised government approach is characterised firstly by an emphasis upon collaborative initiatives, with counterparts provided by the various categories of actor involved. Alongside LGUs, community members, NGO, religious and commercial sector actors are important components of collaborative initiatives (Governor Lerias,[102] Major

[102] Southern Leyte Province.

Dela Chica[103]). Collaboration is encouraged vertically between different levels of government, and also horizontally between different government departments and agencies. Sectoral inputs to specific projects or programmes are co-ordinated through the offices of Governors and Mayors, within whose jurisdiction actors operate.

Conceptually, government services and programmes are mere "*tools*" with which to initiate change, or points of "*entry*" when working with communities (Ms Kuizon[104]). Consultation with barangay officials and residents is a key aspect of LGU projects (Mr Endico[105]). Consultation increases the likelihood of a project's success in meeting the 'needs' of local people (Mr Endico[106]). Local co-operation, particularly of barangay captains, is essential to successful project implementation (Mr Endico[107]). Thus, in raising community level awareness of issues such as deforestation and the process's environmental implications, LGUs also seek to enlist the active support of community members in countering illegal logging in the area in which they live. Without the support of concerned communities, it is inherently difficult for LGUs to combat the local activities of powerful elements such as illegal loggers (Mr Ozon[108]).

Holistic Approach

Government approaches are increasingly holistic in outlook (Governor Lerias[109]). As such, the DSWD's aim is to provide "*comprehensive and integrated delivery of social services*",[110] with an emphasis upon multi-sectoral livelihoods (Ms Kuizon,[111] Ms Arado[112]). Likewise, the government Community-based Resource Management programme aims to combine land-use regulation with provision of technical training and alternative livelihoods initiatives. The programme is also intended to integrate with watershed management and land-use plans of the municipalities concerned (Cerilles,

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[103] Baco Municipality, Oriental Mindoro.
[104] DSWD Southern Leyte Province.
[105] Planning and Development, Libagon Municipality.
[106] Planning and Development, Libagon Municipality.
[107] Planning and Development, Libagon Municipality.
[108] Department of the Environment and Natural Resources (DENR) Southern Leyte Province.
[109] Southern Leyte Province.
[110] This quote refers to CIDDS (Comprehensive and Integrated Delivery of Social Services), the formally enshrined national delivery mechanism for the Minimum Basic Needs Approach (Executive Order 443).
[111] DSWD Southern Leyte Province.

1999). In agriculture and fisheries projects, technical quick-fix solutions are rejected in favour of experiential initiatives, which seek to introduce new practices or varieties, or to adapt the old, without negating indigenous knowledge and experience. Such initiatives go further, in offering support in co-operative organisation, in accessing funds to scale-up or extend activities,[113] in the marketing of end products and in developing entrepreneurial skills (Mr Matibag,[114] Ms Abad,[115] Mrs Gador[116]).

Local Capacity-building Focus

Capacity-building initiatives tend to target specific groups of community members, as well as barangay officials and LGU staff. In building-up local capacities, the intention is to initiate *sustainable* development. Training and awareness-raising are intended to increase the capacity of local actors to undertake initiatives beyond the scope of the original government scheme.

LGUs increasingly operate with and through *groups* as opposed to individual household heads (Mr Matibag[117]). In particular, LGUs work through locally based *people's organisations* (POs), which are often established to fulfil the requirements of a particular government project or programme. POs provide the local level structure upon which projects are hinged. They are the designated recipients of technical assistance and training. This, with a view to building-up local capacities to practice improved livelihoods in line with Government guidelines on sustainable development (Cerilles, 1999). Where appropriate, LGUs may choose to work with existing POs. These often display considerable organisational capability, but lack funding. LGUs' role is to channel funding intended to benefit local communities, through locally-based POs (Mr Mageamit[118]). The focal point of such programmes is the contract between participating POs and Government actors, which outlines actor responsibilities and counterparts.

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[112] DSWD Libagon Municipality.
[113] For example into food processing (Mrs Gador).
[114] Department of Agriculture (DA) Southern Leyte Province.
[115] DA Southern Leyte Province.
[116] Department of Agriculture (DA) Southern Leyte Province.
[117] DA Southern Leyte Province.
[118] LIUCP Oriental Mindoro Province.

Other programmes such as those administered by DSWD tends to initiate projects by working with small select vulnerable target groups[119] in economically depressed communities. In livelihood schemes, each participant household typically receives a share of the funds available, conditional upon their use for approved purposes. As a group they receive training relevant to the scheme and, in the case of livelihood ventures, support in forming a co-operative group or PO to sustain the project. After training and evaluation, if the group is considered strong and cohesive enough, then they may be referred by the LGU to appropriate NGO funding bodies (Ms Kuizon[120]). In this manner, sustainability is sought, without encouraging dependency upon government funding sources.

Livestock breeding programmes are similar barangay-level initiatives, which attempt to minimise dependency by offering participant households livestock in the form of loans, conditional upon their repayment at a future date (Mr Macopid[121]). These differ from the livelihoods initiatives described previously, in that breeding stock are dispersed to select households in target barangays, rather than to PO's or co-operative groups (Mr Macopid[122]). Programme participants are chosen by the Municipal Mayor, and sign contracts to the effect that breeding stock cannot be sold within the first three years of the programme, after which time full ownership is signed over to participants. Offspring bred during the first and third years of the scheme, are claimed by provincial Government in payment for the livestock distributed (Mr Macopid[123]). The programme aims to generate income, increase participant capacities in livestock care and breeding through training and to introduce "*superior*" breeds to the area (Mr Macopid[124]). Participants are selected for their capacity to care for the livestock. In this respect, access to grazing land and fodder is a fundamental requirement[125] (Mr Macopid[126]). As such, this is not a scheme that specifically targets resource-poor households. In similar agricultural schemes, farmers are provided agricultural extension services and, where available, seed which is generally to be

[119] For example, women and unemployed 'out of school' youths.
[120] DSWD Southern Leyte Province.
[121] DA Southern Leyte Province.
[122] DA Southern Leyte Province.
[123] DA Southern Leyte Province.
[124] DA Southern Leyte Province.
[125] Due to scarcity of land available for grazing, farmers are encouraged to establish hedgerows planted with forage grasses (Mr Macopid).

repaid interest-free (Mr Matibag[127]). Repayment of loans by agreement is intended to promote the independence of participants from government support, and to encourage participant 'ownership' of resources such as livestock.

Historically, what is described as a "dole-out" mentality has permeated many government programmes (Mr Matibag,[128] Ms Arado[129]). Now the tendency is increasingly for beneficiaries of government programmes across the various sectors, to be obliged to commit to treating government supplied grants (whether they be in the form of cash or goods) as interest-free loans to be repaid in cash or kind. Under such schemes, repayment is due as per conditions set out in a formal 'memorandum of agreement', at some specified future point (Mr Matibag,[130] Mr Macopid,[131] Mr Ozon,[132] Ms Arado[133]). DSWD employs a combination of the two approaches[134] in implementing its programmes. Thus, children diagnosed malnourished are provided food (subject to strict conditions) under the Child Feeding Programme, without any charge to their parents. In contrast, capital assistance is provided under a long running programme to select households,[135] in the form of an interest-free loan. Such sums are intended to enhance household livelihood earning capacity. The manner in which sums are spent, is monitored by municipal officers. A third programme of DSWD illustrates a compromise approach, for schemes not directly linked to income-generation initiatives. In this instance, latrine building materials are distributed free of charge to select participating households, as part of the LGU drive to improve health and sanitation. Beneficiaries of the scheme are expected to provide their labour as a 'counterpart', in constructing their own household latrine from the materials provided (Ms Arado[136]).

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[126] DA Southern Leyte Province.
[127] DA Southern Leyte Province.
[128] DA Southern Leyte Province.
[129] DSWD Libagon Municipality.
[130] DA Southern Leyte Province.
[131] DA Southern Leyte Province.
[132] DENR Southern Leyte Province.
[133] DSWD Libagon Municipality.
[134] 'Dole-out' and repayable loan.
[135] Barangay captains and municipal officers are charged to ensure that selected participants are from indigenous families and of "*good character*" (Ms Arado).
[136] DSWD Libagon Municipality.

LGU approaches tend to favour capacity-building through experiential learning, with increased emphasis upon indigenous knowledge. In agricultural technical development, this translates to bigger demonstration plots and an active role for participating agriculturists. Practices from a variety of sources are experimented with and adapted to suit local circumstances and needs. Received technical wisdom and widespread use of expensive commercial agricultural inputs are increasingly questioned, and alternatives sought (Mr Matibag[137]).

In the disaster management field, the above policy shifts translate into an emphasis upon locally-based disaster management and capacity-building initiatives, which benefit from increased access to wider support networks. The government approach is also shifting towards greater emphasis upon preparedness and mitigation, although response remains important. This is characterised as being more proactive rather than purely reactive (Governor Lerias[138]). During La Nina, a nation-wide scheme was initiated by the government to clear waterways choked with weed. Much of this work was carried out by volunteers, however limited funding was extended to pay specific groups of participant a daily rate for their labour. This only applied in target barangays (Ms Kuizon[139]). Rather than being viewed as isolated acts of nature, disaster events are increasingly linked to human activities and human impacts upon the environment (Governor Lerias[140]). As such, LGUs need to also address issues such as waste management and environmental degradation if they wish to reduce potential and actual hazards (Governor Lerias[141]). Although understanding of these linkages is growing, Governor Lerias[142] acknowledges that provincial Government is still involved in more talk than action, particularly in the area of environmental protection. Both environmental protection and disaster preparedness/mitigation are areas in which provincial Government "*should*" adopt a more active role in the future (Governor Lerias[143]).

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[137] DA Southern Leyte Province.
[138] Southern Leyte Province.
[139] DSWD Southern Leyte Province.
[140] Southern Leyte Province.
[141] Southern Leyte Province.
[142] Southern Leyte Province.

7.2.2 Changing Natural Resource Management Strategies and Practice

Addressing local people's vulnerability in the term's wider sense, is seen as the key to reducing the impact of natural hazard events; and implementing sustainable forms of (societal) development. The LGU approach to reducing vulnerability and ensuring sustainable development relies to a large extent upon counteracting forms of human-induced environmental 'degradation', such as deforestation and marine resource depletion. In this section, I explore the main thrusts of Government natural resource management policy as regards the population at large. The LGU approach in this context is essentially two-pronged, with an emphasis upon education and awareness-raising on the one hand, and regulation and enforcement on the other. This said, the need for interim livelihoods and capacity-building initiatives is recognised. In this context, these act as transitional measures, in reaching long-term goals of sustainable natural resource management and development.

Education and Awareness Raising

Mr Umali[144] emphasises the importance of disaster preparedness elements, which are currently focussed around training activities in co-ordination with national government.

DENR staff maintain that increased knowledge through training in 'good' farming practice, as well as the opportunities provided by government initiatives linking livelihood and reforestation (or preservation of existing forest), have resulted in decreased practice of "slash and burn" agriculture (DENR,[145] Mr Ozon[146]). A degree of local discretion operates. This is illustrated by the existence of unofficial amnesties, which operate with regard to small-scale tree felling to provide timber for local house building, as distinct to larger-scale commercial operations (Mayor Espina[147]).

[143] Southern Leyte Province.
[144] Provincial Administrator Oriental Mindoro.
[145] Department of the Environment and Natural Resources (DENR) staff Oriental Mindoro Province.
[146] DENR Southern Leyte Province.
[147] Libagon Municipality, Southern Leyte.

It is observed that general awareness of environmental issues is increasing across society (Governor Lerias,[148] Mr Ozon,[149] Mayor Espina[150]). Young people in particular are becoming increasingly aware of environmental issues. As part of the education process, LGUs are themselves becoming more attuned to human-ecological processes and related issues (Governor Lerias,[151] Ms Abad[152]). However, the value of natural resources to the masses who derive their livelihoods from them, tends to be underestimated or ignored by LGUs, when balanced against economic benefits associated with large-scale commercial enterprise or development initiatives (Ms Abad[153]).[154]

Regulating Environmental Management and Change

Municipal level operations[155] with strong stakeholder involvement, is a favoured format for the enforcement of environmental regulations. Enforcement of regulations regarding land and marine resource use is increasingly carried out at the local level, with emphasis upon provincial and municipal government patrols (Governor Lerias,[156] Mayor Espina,[157] Ms Abad[158]). For instance, in Southern Leyte, municipal fishery law enforcement bodies made up of local inhabitants, patrol coastal waters, often using patrol boats provided by the Municipal Government concerned (Governor Lerias,[159] Ms Abad,[160] Mayor Espina[161]). Also in Southern Leyte, LGUs are in the process of organising Municipal Fisheries and Aquatic Resources Councils, composed mainly of municipal fisherfolks (Ms Abad[162]). Such regulations designed to safeguard dwindling fish stocks now receive considerable popular support in their enforcement, amongst small-scale local fisherfolks,[163] while 53 small-scale marine sanctuaries have been established and managed locally in Southern

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[148] Southern Leyte Province.
[149] DENR Southern Leyte Province.
[150] Libagon Municipality, Southern Leyte.
[151] Southern Leyte Province.
[152] DA Southern Leyte Province.
[153] DA Southern Leyte Province.
[154] In the context of mangrove depletion.
[155] Co-ordinated and supported by provincial government (Ms Abad).
[156] Southern Leyte Province.
[157] Libagon Municipality, Southern Leyte.
[158] DA Southern Leyte Province.
[159] Southern Leyte Province.
[160] DA Southern Leyte Province.
[161] Libagon Municipality, Southern Leyte.
[162] DA Southern Leyte Province.

Leyte (Governor Lerias,[164] Mr Atienza[165]). According to Ms Abad,[166] fish sanctuaries in Sogod bay (Southern Leyte) contain artificial reefs, and are designed to create the conditions necessary for natural regeneration of the bay's marine resources. These sanctuaries have been established as protected areas by government ordinance. As a result, local fisherfolks are accorded only very limited access to these areas. LGUs recognise that recovery of natural resources will only happen in the long-term, and that such schemes have to be balanced with initiatives to meet the immediate and everyday livelihood needs of local people. Thus, "*economic incentives*" are required if fisherfolks are to be expected to moderate their fishing practices, in order to "*reduce the impact*" of these activities on the marine environment (Ms Abad[167]).

Several of those interviewed expressed approval for LGUs' continued movement towards a more proactive approach to disaster management, as opposed to the largely reactive one of past decades (Mr Umali,[168] Governor Lerias[169]). In Oriental Mindoro for example, detailed studies of provincial river systems have been commissioned (Mr Umali[170]). Reforestation and mangrove plantation initiatives, as well as awareness-raising campaigns on the effects of deforestation and mangrove depletion, are ongoing in both of the provinces studied (Mr Umali,[171] Governor Lerias[172]). These and other such mitigating and preparatory activities are increasingly considered fundamental to effective disaster management.

Example of an Integrated Government Approach to Sustainable Rural Development

The Community-based Resource Management Programme aims to address rural poverty and environmental concerns by granting more substantial long term rights of local people to lands covered and to the fruits of participants' labour under the programme (Cerilles, 1999). Under the auspices of this programme, the Community-based Forest Management

[163] Based upon direct observation and interview findings.
[164] Southern Leyte Province.
[165] ICDPP-Leyte.
[166] DA Southern Leyte Province.
[167] DA Southern Leyte Province.
[168] Provincial Administrator Oriental Mindoro.
[169] Southern Leyte Province.
[170] Provincial Administrator Oriental Mindoro.
[171] Provincial Administrator Oriental Mindoro.
[172] Southern Leyte Province.

(CBFM) project in Sogod, Southern Leyte[173] was first established in 1987 by DENR.[174] The NGO, LABRADOR,[175] has provided assistance to the project, primarily in the form of community organisation and technical training. The PO, KUFA[176] was established, and became involved in the Kahupian project in 1997.[177] By this time, CBFM emphasis had shifted towards the ideals and approach associated with the Community-based Resource Management Programme described above. Kahupian was selected as an area considered a 'hotspot' for illegal logging activities. Under the scheme, 69 KUFA member households have been allocated parcels of land – officially classified as protected forest lands of up to five hectares – under government ownership. For each land parcel, 80 per cent is to be planted with designated seedling types, and the remaining 20 is set aside for growing cash crops or vegetables for own consumption. In accordance with the founding contract, project hand-over will be after 25 years of community member management, by which time, trees planted will have fully matured. The contract allows smallholders to harvest the mature trees (age 20-25 years), stipulating that for each parcel of land, 70 per cent of the logging proceeds are to remain with the PO involved and its members, while the remaining 30 per cent belong to Government. Of this 30 per cent, half is to be invested in expanding the programme (or similar future programmes) into new areas, while the remainder is due to the national treasury. Participants in the project may also be periodically paid to carry out "comprehensive site development" which entails planting seedlings provided by DENR in designated areas, for a daily rate of 100 Pesos.[178] KUFA members are expected to patrol the project area as a deterrent to prohibited logging activities.

Behind the programme lies a recognition that DENR alone could not carry out desired levels of reforestation, much less initiate and maintain sustainable upland management practices. Rather than enforcing the protection of upland areas by driving human settlers

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[173] Information about the CBFM programme in Sogod is derived primarily from interviews with: 1) Mr Ozon, DENR Southern Leyte Province; and 2) Ms Cagurol, Captain of Barangay Kahupian, Sogod (CBFM project site) and President of KUFA (Kahupian Upland Farmers Association), the PO established to take a lead role in local level project implementation. Further information emerged during a field visit to the project site through discussions with key project actors and local people.

[174] The government Department of the Environment and Natural Resources.

[175] Leyte and Samar Rural Development Workers' Association.

[176] Kahupian Upland Farmers Association.

[177] Despite the PO's formal establishment in 1997, in practice, KUFA previously operated under the programme carrying a different name, but with similar membership.

out, land-use meeting project criteria is officially endorsed, and as such can be to an extent contained and controlled in project areas. Working through POs provides a local network of participants and monitoring structure. The Kahupian project differs from previous such initiatives in providing integrated rural development services and training, considered appropriate to the area and its inhabitants. National government funds are channelled through provincial DENR for 'environmental enhancement'. In addition to the NGO, LABRADOR's input, technical assistance has also been provided by other government agencies, such as the Department of Agriculture and the Department of Health. Agricultural training has included soil erosion prevention, including 'alley farming' techniques. Organic farming methods are taught, while hedgerows and terraces have been established in certain areas, and irrigation systems installed. Other project-based services have included health services and civil registration. Training in furniture making as an income-generating activity, is a likely future direction of the project. This element has proved controversial, as the primary current source of material is salvaged logs, mostly abandoned by logging companies when the terrain hindered their retrieval. Previous attempts to make use of such resources for furniture making and firewood led to accusations that illegal activities had resumed and as a result, this project element was suspended and is currently under review.

Disaster prevention and mitigation elements are incorporated in the project as follows. Firstly, soil erosion prevention elements of the project not only contribute to more effective agricultural practice, but also lessen the likelihood and/or severity of landslides in upland regions. Local inhabitants have had recent experience of the dangers and disruption associated with such events. In 1994, typhoon *Bising II* rains triggered a landslide in which eight out of ten members of an indigenous minority settler group were killed. The landslide damaged crops and housing in the area, as well as blocking the barangay's access road to the nearest town. The road remained impassable by car and commercial passenger transport for approximately one month. As a result, the cost of making the trip to the nearest market town (Sogod) to sell produce and/or to purchase necessary commodities soared. During this time, people hired a succession of motorbikes and labourers to ferry

[178] Approximately 1.85 GBPs.

passengers and heavy loads between the barangay and town. Other simple means of disaster mitigation have been incorporated in the project under agricultural extension elements. These include, careful regulation of the flow of water in irrigation canals to alleviate possible flooding, and the introduction of drought resistant upland rice varieties as an alternative source of food in times of water scarcity. Finally, the issue of forest fire prevention has been addressed under the project, in consultation with PNRC. As a precautionary measure, firebreaks have been established in new tree plantations, and fire resistant species are planted along these firebreaks. Under the project, DENR has also provided training in fire fighting and rescue skills.

The extent of DENR involvement in disaster mitigation is limited. Much of DENR's understanding of the issues and possible solutions is derived from PNRC and from the Provincial Disaster Co-ordinating Council. Over and above the project elements described above, DENR's disaster mitigation role within the project is limited to advising local people on possible hazard related risks in the vicinity, such as the location of housing adjacent to rivers. Government and PNRC information dissemination drives have already provided the general public with a basic understanding of the causes and effects of natural hazard events, as well as of disaster preparedness and mitigation measures. Technical training providing 'scientific' understanding of specific situations and means of addressing them has not yet been made widespread. Provision of such training has been a focus of PNRC. However, simple means of disaster prevention and mitigation such as those incorporated in the CBFM project are equally valid forms of disaster management. Overall, the project is considered successful in its primary objective of minimising illegal logging activities in the area.

7.2.3 Constraints to Effective Project Implementation

Many LGU interviewees[179] cite funding scarcity as a significant factor, limiting LGU capacity. A second constraint is encapsulated in the term '*politics*' (Mr Soriano,[180] Mayor

[179] Mr Wamil, Mayor Espina, Mayor Dela Chica, Mr Endico, DENR, Mr Mageamit, Mr Soriano, Ms Kuizon.
[180] DPWH Oriental Mindoro Province.

Espina[181]). Thirdly, bureaucracy and staff motivation are factors cited as limiting effective implementation. Fourthly, differing viewpoints amongst actors involved can cause friction and result in actors failing to fully participate, or even relinquishing their involvement in specific projects.

Scarcity and Policy Prioritisation in Spending Funds

Flooding during the rainy season commonly causes "*havoc*" (Mr Soriano[182]). Much of LGU resources are taken-up with the repair of public infrastructure in affected areas, with bridges and roads requiring considerable yearly maintenance to restore primary transport links and services (Mr Soriano,[183] Mayor Dela Chica[184]). Constructing and maintaining river dikes and repairing flood damage are primary concerns (Mr Soriano[185]). With most of DPWH, provincial office's funding being tied-up in carrying out repairs to roads and bridges across the province, the department's role in providing flood protection and infrastructural repairs as a part of rehabilitation, supersedes any more developmental role (Mr Soriano[186]).

While LGO and NGO co-ordination with provincial government, as well as with barangay officials and NGOs during disaster events is strong, the response time of provincial government (in terms of issuing aid and assistance) varies according to circumstances and not least upon the availability of adequate funds (Mayor Dela Chica[187]). LGU departmental funding is generally earmarked for specific projects or purposes, and cannot easily be redirected for use in local initiatives (Mr Soriano[188]). Even those funds that have already been budgeted commonly experience delays in their release (DENR[189], Mr Soriano,[190] Mayor Espina[191]). Current LGU regulations do not require that any of the LGU Internal Revenue Allocation be set-aside specifically for disaster preparedness or

[181] Libagon Municipality, Southern Leyte.
[182] DPWH Oriental Mindoro Province.
[183] DPWH Oriental Mindoro Province.
[184] Baco Municipality, Oriental Mindoro.
[185] DPWH Oriental Mindoro Province.
[186] DPWH Oriental Mindoro Province.
[187] Baco Municipality, Oriental Mindoro.
[188] DPWH Oriental Mindoro Province.
[189] DENR staff Oriental Mindoro.
[190] DPWH Oriental Mindoro Province.

mitigation purposes (Mr Wamil[192]). Generally, there is not a great deal of funding available at either the regional or provincial level for municipal or barangay disaster preparedness or mitigation schemes (Mr Wamil[193]).

Ms Arado[194] explains that national government programmes are generally relatively well funded. Under decentralisation however, many nation-wide programmes have gradually been turned over to LGU administration and funding. An example in point is CIDDS,[195] which was initiated under national government direction. During the programme's first phase in Libagon Municipality, three barangays were targeted. The programme began to encompass further barangays in 1999, and this same year, was turned over fully to LGU control. In effect, employment of locally based staff of the programme switched from national to municipal government. Future programme funding levels are less certain, and are expected to diminish (Ms Arado[196]).

The strictures of LGU funding regulations provide an explanation as to why LGUs often favour involvement in collaborative schemes, whereby NGOs provide the primary financial input, 'organise' communities and manage projects (Mrs Perez[197]). Such is the case in ICDPP Tigbao project, where participation of both community members and LGUs is defined largely in terms of the project counterparts they provide.[198] In the Tigbao project the municipal Government provided the expertise of an engineer to assess the proposed river control and sea wall mitigation measures, to design the sea wall and to oversee its construction. Machinery to dredge the river was provided by the provincial Government. Municipal authorities paid for the necessary fuel. In both instances, salary and machinery costs were borne by the LGU concerned. In the example below, the engineer from the municipal Planning and Development office who was involved in the project describes his experience.

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[191] Libagon Municipality, Southern Leyte.
[192] DILG Oriental Mindoro Province.
[193] DILG Oriental Mindoro Province.
[194] DSWD Libagon Municipality.
[195] Comprehensive and Integrated Delivery of Social Services.
[196] DSWD Libagon Municipality.
[197] Mrs R. Perez Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), personal communication (1 July 2001).

Example 7.3:

> Whilst satisfied overall with the sea wall project, it is regrettable that they were unable to push through with the original proposal to construct a river dike due to funding constraints. The river dredging and re-channelling that was carried out under the project was a relatively temporary measure. In contrast, had a concrete dike been constructed, its expected lifespan would have been 25-30 years. The expected lifespan of the sea wall is at least fifty years, however, this will depend upon how long is taken to fill the trench behind the sea wall. This area is currently retaining a considerable volume of water and threatening not only housing located behind the sea wall but also the foundations of the sea wall itself. Once the trench is filled, the area behind the sea wall should be concreted to form a 'multi-purpose' pavement, ideal for drying rice and other such activities (Mr Endico, Planning and Development Co-ordinator, Libagon Municipality).

Mr Endico[199] lists other sea walls that have been constructed in the barangays of Libagon municipality, with LGU funding. At the municipal level, he is currently solely responsible for the design of such structures and for overseeing their construction. The LGU does not have the funding to contract external engineers. In fact, the main obstacles to such projects are lack of LGU funds and lack of skilled manpower within LGUs (Ms Abad,[200] Mr Endico[201]).

National government policy directives determine both funding priorities, and the form of funding issued for use at the local level. Thus, in Oriental Mindoro provincial Government prioritises the province's role as a 'food basket' to Southern Luzon and Manila. This is particularly true (and also "*fortunate*" for Oriental Mindoro) at this time, when agriculture is a primary focus of national government policy, receiving considerable Presidential support (Mr Umali[202]). A further example from Southern Leyte illustrates the manner in which policy directives influence the form of funding that can be issued. In income-generating livelihoods schemes generally only short-term capital is issued, thus discouraging the initiation of long term government-funded projects (Ms Kuizon[203]).

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198 Refer to Sections 4.3.2, 4.3.3 and 5.4 for details of project counterparts.
199 Planning and Development, Libagon Municipality.
200 DA Southern Leyte Province.
201 Planning and Development, Libagon Municipality.
202 Provincial Administrator Oriental Mindoro.
203 DSWD Southern Leyte Province.

Power and the Politics of Funding

Alongside official regulations and procedures governing decision-making processes and fund allocation, more opaque political processes also play a role in determined the distribution and spending of government funds. In this sense, 'politics' is represented as a frustrating, but inevitable element of local government. Simply having access to a congressman of the same political persuasion as local politicians, and sympathetic to furthering local interests, is fundamental to accessing national funding and ultimately, implementing key projects.[204] Another illustration is provided by a former municipal councillor who spoke of her frustrations in opposing a powerful mining lobby who were at the time pushing for LGU operating permits, in the face of serious environmental concerns.[205] The role of 'politics' was to approve the desired permits in the face of government environmental policy and legitimate concerns of local actors. That power associated with financial weight and political connections proved the guiding force in determining political outcomes requires no elaboration. It is recognised that 'politics' has served to protect[206] the activities of favoured commercial loggers, however in the current political climate this is less the case (Mayor Espina[207]), as is illustrated by the example below.

[204] Personal communication, key LGU actor.
[205] Anonymous informant.
[206] In some cases even legitimate such activities through the granting of government permits (on the basis of interviews and informal discussions with a variety of actors).
[207] Libagon Municipality, Southern Leyte.

Example 7.4:

> A privately owned sand and gravel works in Southern Leyte, is blamed for noise and water disturbance as well as increased siltation of the Sogod Bay area. These factors combined are blamed for causing substantial damage to marine resources in the bay (Mayor Espina, Ms Abad). Current political leaders are increasingly resistant to allowing stone crushing activities to continue on the bay shoreline, in the light of strongly voiced environmental concerns, however a government permit has been granted to continue smaller scale activities upriver (Mayor Espina, Ms Abad). The required environmental clearance certificate has been issued, subject to conditions – designed to minimise the environmental impact of activities – being met (Ms Abad).

In this instance, the political pendulum would seem to be swinging in favour of the environmental lobby and the masses whose livelihoods depend in part at least upon the (now seriously depleted) marine resources of Sogod Bay. Despite environmental concerns, commercial development, particularly that which seeks to tap into growing markets (such as the construction industry), fits well with both policy goals and political aspirations. Such development is overridden in political decision-making processes less easily than the small voices of protest.[208] The power of local communities to oppose the interests of entrenched local power structures should not be overestimated or romanticised. This point is illustrated in example 7.5 below.

Example 7.5:

> In Kahupian CBFM initiative, key project actors express their frustrations at the failure of powerful agents such as the Philippine National Police and other government agencies to respect key tenets of the natural resource management programme. Such actors are blamed for their involvement in clandestine logging activities, sometimes hiring local people to provide them with timber, despite the operation of strict prohibitions in the area. Whereas even those local people not directly benefiting from the project sympathise with its aims, temptation provided by the loggers for those badly in need of cash income is great. Even more so when the only alternative source of immediate cash is credit (k3).

[208] Based upon discussions with (anonymous) actors voicing concerns about development initiatives in the Southern Leyte's provincial capital, Maasin. These concerns are centred around human and environmental impacts, and question the role played by 'politics' in weighing certain costs against expected benefits, in framing debates of the issues involved, and also in bypassing channels for proper consultation with local people affected.

Bureaucracy and Staff Motivation

Encouraging active involvement of lower echelons of government in nation-wide programmes, is problematic (Mr Umali[209]). Although LGU regulations require that each municipality establish an MDCC and that each barangay establish a BDCC, ensuring that these function as useful bodies, rather than as further layers of bureaucracy is challenging. BDCC's in particular, require "*encouragement*" to form properly working councils (Mr Umali[210]). Nevertheless, since the severe flood events of 1993-4 in Mindoro, considerable progress has been made in awareness-raising, associated with increased local-level cooperation (Mr Umali[211]). Ms Kuizon[212] describes some of the unintended by-products of decentralisation witnessed in her department. In particular, staff who had previously worked directly under national Government experienced many more benefits than they currently do working under LGUs. This leaves employees demotivated and, when combined with funding shortages, leads to many programmes not filtering down as they should to municipal and barangay levels. Increasing the numbers of elected politicians involved in implementing programmes through LGUs, increases the likelihood of staff being overridden or frustrated in their efforts to implement programmes by political figures. Bureaucracy has also increased under the LGU system, with funding taking considerable time to reach barangay level project implementers (Ms Kuizon,[213] Ms Abad,[214] Mr Pedalino[215]). Such funding delays are a considerable constraint to programme implementation, with their effects felt strongest by intended beneficiaries (Mr Macopid[216]). As an example in point, where a crisis situation has been declared, government regulations stipulate that aid is to be extended to identified recipients within 24 hours. When working directly under national Government, this was possible, however since decentralisation, greater time is required to handle the necessary paperwork[217] (Ms Kuizon[218]).

[209] Provincial Administrator Oriental Mindoro.
[210] Provincial Administrator Oriental Mindoro.
[211] Provincial Administrator Oriental Mindoro.
[212] DSWD Southern Leyte Province.
[213] DSWD Southern Leyte Province.
[214] DA Southern Leyte Province.
[215] PIA Southern Leyte.
[216] DA Southern Leyte Province.
[217] Some of this time can be attributed to staff's lack of familiarity with the new system (Ms Kuizon).
[218] DSWD Southern Leyte Province.

Nevertheless, in an emergency situation, bureaucracy can still be bypassed, and intervention can be quicker than under ordinary circumstances (Mr Pedalino[219]).

Differing Viewpoints and their Implications for Vulnerability Reduction Initiatives

Other issues encountered, are concerned with differences in the levels of understanding, priorities and objectives of actors involved in the various initiatives. We have seen that local communities are often considered not sufficiently technologically equipped for independent action (DENR[220]), and requiring training by outside 'experts' (Mr Ozon,[221] Mr Macopid,[222] Mrs Gador[223]). Discourses about 'ignorance' and the need to 'educate' local actors as to prominent issues, hazards and appropriate means to address these, reflect a certain viewpoint of knowledge and understanding which is strongly biased towards the 'expert'. Thus it follows that the primary role of those with greater expert knowledge is to educate those with less. Such education phases are often incorporated in 'social preparation' or 'community organising' activities, which seek to enlist the active support and participation of community members (Mr Ozon[224]).

In order for LGUs to enlist significant local support, they have first to overcome entrenched 'negative attitudes' of their subjects. These are often the attitudes of resource-poor vulnerable people, who tend to choose short-term capital over long-term investment (Mr Ozon[225]). A popular argument states that the government itself has not really changed its own practices, so why should the people change theirs? (Mr Ozon[226]). Ms Arado[227] observes that amidst all the changes and development, the one element that does not change, is "*the attitude of the people*". In essence, people often "*don't really listen*" to information and advice from LGU officers. Such attitudes are demonstrated where, for

[219] PIA Southern Leyte.
[220] DENR staff Oriental Mindoro Province.
[221] DENR Southern Leyte Province.
[222] DA Southern Leyte Province.
[223] DA Southern Leyte Province.
[224] DENR Southern Leyte Province.
[225] DENR Southern Leyte Province.
[226] DENR Southern Leyte Province.
[227] DSWD Libagon Municipality.

instance, local beneficiaries have accepted materials distributed by LGUs, but then failed to use these for the purpose intended (Ms Arado[228]).[229]

Differences in priorities and approach also occur between LGUs and NGOs operating in the same localities, and even occasionally between different LGUs. Mr Mageamit[230] explains that, LIUCP has been involved with programmes in which a coalition of government agencies and NGOs has been formed. Disagreements as to the duration and depth of 'social preparation' phases have lead to premature withdrawal of contracted NGOs from programmes. Also the "*morality*" of accepting funding in the form of loans from certain sources has been questioned within the NGO community (Mr Mageamit[231]). While it is recognised that NGO actors are entitled to promote and uphold their own values, LGU interviewees often inferred that LGU-NGO collaborative initiatives are valued. A presumption presides amongst LGU actors, that barangay, PO, LGU and NGO actors share common objectives in their involvement in particular initiatives. In practice, even different departments of the same LGU may at times fail to co-ordinate their activities in a given area. An example is provided in Kahupian, where a parallel livestock project clashed with the CBFM project in respect to land-use priorities. As the local-level participants of each project were very different sets, considerable negotiations were required before agreement could be reached.[232]

7.3 Constructions of Vulnerability and its Causes

This section explores the key components of vulnerability, from the perspective of LGU actors. These dominant constructions of vulnerability are manifested in policy-making and government discourse, and focus upon the first four key areas listed in Figure 7.3 below. The fifth phenomenon with which vulnerability is associated – 'lack of political voice' – is

[228] DSWD Libagon Municipality.
[229] This is presented as a general and recurring 'problem', however it is not suggested that this is universally the case across all LGU programmes and participant barangay, or for every programme beneficiary.
[230] LIUCP Oriental Mindoro Province.
[231] LIUCP Oriental Mindoro Province.
[232] Based upon discussions during a field visit, with key actors of the CBFM project, Kahupian.

largely the terrain of NGOs and protest movements. This topic is addressed in Section 7.4 which presents an alternative perspective to that of government on key issues such as environmental management and land rights.

Figure 7.3: Conceptual Understanding of Vulnerability within the LGU Framework

Vulnerability associated with:
- Poverty and Lack of Livelihood/Educational Opportunities;
- Flood Plain and Coastal Geography;
- Environmental Change/Degradation;
- Ignorance;
- Lack of Political Voice (NGOs and other representatives of marginalised groups).

Representations of vulnerability characterised by:
- Separation of various types of vulnerability – conceptually and in addressing.

7.3.1 Event-centred Vulnerability

During severe typhoons and flood events, it is largely geographic criteria which determine who suffers most (Mr Umali,[233] Governor Lerias,[234] Mr Ozon[235]). Frequent typhoon occurrence impedes development, as it is inherently difficult to plan '*disaster-proof*' projects (Mr Endico[236]). Those living in disaster-prone areas are aware of the dangers they face, and have some measure of capacity to respond to extreme – if not exceptional – events (Mayor Dela Chica,[237] Mayor Espina[238]). Coping capacities are influenced by levels of loss or damage incurred, and by the predictability[239] of events (Mayor Dela Chica[240]). The earthquake-related sinking of much of northern Mindoro in 1994 has increased the vulnerability of many areas to flooding (Mr Umali,[241] Mayor Dela Chica[242]). However the earthquake brought with it the hidden short-time advantage of an influx of funds for the

[233] Provincial Administrator Oriental Mindoro.
[234] Southern Leyte Province.
[235] DENR Southern Leyte Province.
[236] Planning and Development, Libagon Municipality.
[237] Baco Municipality, Oriental Mindoro.
[238] Libagon Municipality, Southern Leyte.
[239] For instance, a sudden earthquake is more likely to take communities by surprise than a typhoon.
[240] Baco Municipality, Oriental Mindoro.
[241] Provincial Administrator Oriental Mindoro.
[242] Baco Municipality, Oriental Mindoro.

reconstruction and repair of infrastructure in the province, that would not otherwise have been made available (Mr Umali[243]). In this manner, significant event-centred vulnerability and loss can precipitate government response to reduce both present and future vulnerability. A further example is provided by Limasawa Island, Southern Leyte. The island is represented by LGU sources as a particularly vulnerable area requiring mitigating and preparatory measures. This is largely on the basis of a previously unexpected and devastating storm surge event, which served to highlight elements of the islanders' vulnerability, compounded by their relative isolation (Governor Lerias[244]). Poverty is a primary factor increasing the relative[245] impact of events. In an economically depressed barangay, 15-20 per cent of households are typically affected by a severe typhoon event, to such an extent as to require government assistance to recover (Ms Kuizon[246]).

7.3.2 Poverty, Livelihoods and Opportunity

Vulnerability in its wider sense, is associated with poverty and a related lack of educational or livelihood opportunities (Mr Umali,[247] Governor Lerias,[248] Mr Ozon,[249] Mr Endico,[250] Mayor Dela Chica,[251] Mayor Espina[252]). This is compounded by increased population pressure on limited and in many cases, dwindling and degraded natural resources (Mayor Espina[253]). Unlike (direct) vulnerability to flood events, "*economic*" (or livelihoods) issues are always of primary concern in heavily agriculture-dependant local economies (Mr Umali,[254] Mayor Dela Chica,[255] Mayor Espina[256]). Un- or under-employment rates are high, and in many areas the majority of the population is living below the poverty line

[243] Provincial Administrator Oriental Mindoro.
[244] Southern Leyte Province.
[245] As opposed to absolute.
[246] DSWD Southern Leyte Province.
[247] Provincial Administrator Oriental Mindoro.
[248] Southern Leyte Province.
[249] DENR Southern Leyte Province.
[250] Planning and Development, Libagon Municipality.
[251] Baco Municipality, Oriental Mindoro.
[252] Libagon Municipality, Southern Leyte.
[253] Libagon Municipality, Southern Leyte.
[254] Provincial Administrator Oriental Mindoro.
[255] Baco Municipality, Oriental Mindoro.
[256] Libagon Municipality, Southern Leyte.

(Mayor Espina,[257] Ms Kuizon[258]). Local policy biases reflect LGU constructions of vulnerability and of local 'need'.[259] For instance, Oriental Mindoro provincial government is working to preserve the province's role as a 'food basket' to Southern Luzon and Manila (Mr Umali[260]). Government programmes designed to alleviate vulnerability and increase quality of life target the areas of: livelihoods, housing, health, water supply and sanitary systems (Mayor Dela Chica,[261] Mayor Espina[262]).

In coastal settlements of Southern Leyte, the protection of dwindling marine resources is prioritised as an area of environmental concern. Such resources are valued not only for any inherent or intangible value that they might be accorded, but also for their tangible, livelihoods value – both actual and potential (Governor Lerias,[263] Mayor Espina,[264] Mr Endico,[265] Ms Abad[266]).

There has been a shift in approach[267] from top-down government management of natural resource exploitation through a permit system, to greater emphasis upon LGUs working in collaboration with local natural resource users to preserve and encourage regeneration of depleted natural resources. Under this latter focus, protection of natural resources goes hand-in-hand with income-generation and sustainable livelihoods initiatives (Ms Abad[268]). Traditionally LGUs have had little interest or involvement in small-scale fisheries (Ms Abad[269]) or in diversified agricultural practice, barring a few commercial crops such as rice

[257] Libagon Municipality, Southern Leyte.
[258] DSWD Southern Leyte Province.
[259] As well as factors more concerned with political expediency and government capacity explored Section7.
[260] Provincial Administrator Oriental Mindoro.
[261] Baco Municipality, Oriental Mindoro.
[262] Libagon Municipality, Southern Leyte.
[263] Southern Leyte Province.
[264] Libagon Municipality, Southern Leyte.
[265] Planning and Development, Libagon Municipality.
[266] DA Southern Leyte Province.
[267] While the focus of government policy is shifting in the light of increased knowledge and public debate of human-ecological processes and the implications of certain types of environmental change, the two approaches continue to co-exist. Section 7.2.2 under *Example of an Integrated Government Approach to Sustainable Rural Development* provides an example of how the two approaches may sometime clash at the project interface.
[268] DA Southern Leyte Province.
[269] DA Southern Leyte Province.

and corn (Mr Matibag[270]). Under government Food Security programmes, poverty alleviation as well as sustainable rural livelihoods and natural resource management, have become policy focal points. In attempting to target the vulnerable poor, LGUs have sought means of building upon the areas of livelihood and resources commonly employed by the masses of the rural poor. Thus small-scale diversified agricultural practice, backyard livestock rearing, cottage industry and small-scale fisheries have increasingly become elements of LGU projects (Mr Matibag,[271] Ms Abad,[272] Mr Macopid,[273] Ms Arado[274]). Areas where there is considered to be a viable commercial outlet for small-scale producers are particularly targeted (Mr Macopid,[275] Ms Abad[276]). Such initiatives are however combined with the provision of more general services,[277] designed to alleviate immediate vulnerability and to support commercial development (Mr Macopid[278]). Infrastructural developments such as the installation of piped water to rural households (Ms Arado[279]) and the concreting and maintenance of municipal and barangay access roads also help to improve quality of life, and to support more targeted initiatives.[280] We have seen that capacity-building – generally in the form of LGU provided training – is an important element of many such schemes. Vulnerable groups such as women, the elderly and unemployed youths, who had previously been by-passed by projects which worked with household heads, are now themselves being targeted by LGU projects (Mr Matibag,[281] Ms Arado[282]). As a result of these changes, the LGU departments concerned, have had to adapt accordingly (Ms Abad[283]).

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[270] DA Southern Leyte Province.
[271] DA Southern Leyte Province.
[272] DA Southern Leyte Province.
[273] DA Southern Leyte Province.
[274] DSWD Libagon Municipality.
[275] DA Southern Leyte Province.
[276] DA Southern Leyte Province.
[277] Examples are public health and sanitation or veterinary services (Mr Macopid, ibid.).
[278] DA Southern Leyte Province.
[279] DSWD Libagon Municipality.
[280] Good access roads speed journey times to market towns, and have been attributed with increased provision of competitively priced local transport links. Provision of good quality piped water supply also saves time and effort in water collection and filtering (on the basis of barangay level observations and discussions).
[281] DA Southern Leyte Province.
[282] DSWD Libagon Municipality.
[283] DA Southern Leyte Province.

7.3.3 Vulnerability through Ignorance

Vulnerability to the effects of natural phenomena such as flooding and storm surge is also commonly associated with '*ignorance*' (DENR,[284] Governor Lerias[285]). Underlying this association, is a tri-part assumption. This assumption holds that people would neither act as they do, if they were fully aware of the consequences of their actions; nor would they place themselves in certain situations, if they were fully aware of the risks involved. Thus a DENR representative presents adequately communicating risks and environmental issues to Mangyan minority groups as problematic for government actors.[286] In this context, the same employee emphasises the "*need to tell (these people) what to do*". They then soften this position with the suggestion that this might best be done through training and education initiatives that increase understanding of reforestation procedures (DENR[287]). In a similar vein, people would be better equipped to prepare for and respond to events, if they were appropriately organised and had received instruction as to how best to do this. Thus officials such as Governor Lerias,[288] Ms Abad,[289] Mr Ozon,[290] Mrs Gador,[291] Mr Macopid[292] and Ms Arado[293] emphasise LGUs' role in providing community education and technical skills training. For example in Southern Leyte, provincial Government has employed local radio as a means to broadcast information campaigns on issues of coastal management and protection. The province has also run seminar courses to promote the ideals of sustainable coastal management and to highlight the role of stakeholders in responsible management (Ms Abad[294]).

Another form of 'ignorance' emerging from government interviews is that attributed to local people in relation to government regulation and legislation. Policies, laws and regulations, designed either to reduce specific types of vulnerability directly, or to reduce

[284] DENR staff Oriental Mindoro Province.
[285] Southern Leyte Province.
[286] This usually has to be done through Mangyan leaders who, in community matters, represent, and take decisions on behalf of their communities (DENR, ibid).
[287] DENR staff Oriental Mindoro Province.
[288] Southern Leyte Province.
[289] DA Southern Leyte Province.
[290] DENR Southern Leyte Province.
[291] DA Southern Leyte Province.
[292] DA Southern Leyte Province.
[293] DSWD Libagon Municipality.

the causes of vulnerability, are cited. Representatives of LGUs introduce the idea of a lag between the implementation of government policy in its various guises, and the spread of popular knowledge and understanding of legislative, regulatory or programme measures.[295] For instance, fishing techniques such as the use of dragnets, chemicals or explosives to stun fish have been outlawed in coastal waters (Governor Lerias[296]). Recent information campaigns have succeeded in making the existence of these regulations and the logic behind them, common knowledge (Governor Lerias[297]).

A further example is provided by Government Building Codes, which dictate that housing must be situated at least 10 metres from riverbanks. In practice, this code is rarely enforced. Subject to the consent of landowners, Filipinos commonly construct their homes where they wish. In many cases, barangay Captains are not informed prior to construction and many people remain ignorant of the regulations. Others prefer to bypass the regulatory system where possible in order to avoid complications or the possibility of their application being refused (Governor Lerias[298]).

7.3.4 Environmental Change and Degradation

Upland land-use, and more specifically deforestation, is commonly linked to increased incidence and severity of upland landslides and flash flooding on the flood plains below (Cerilles, 1999; Mr Umali,[299] Mr Soriano,[300] DENR,[301] Mr Ozon,[302] Mr Endico,[303] Mayor Espina[304]). Deforestation is a cause of increased rates of river siltation and in Southern Leyte, is considered a cause of increased siltation of Sogod bay, with serious repercussions for marine life in the bay (Ms Abad[305]). Rehabilitation of denuded watersheds is a priority

[294] DA Southern Leyte Province.
[295] On the basis of LGU interviews conducted in Oriental Mindoro and Southern Leyte.
[296] Southern Leyte Province.
[297] Southern Leyte Province.
[298] Southern Leyte Province.
[299] Provincial Administrator Oriental Mindoro.
[300] DPWH Oriental Mindoro Province.
[301] DENR staff Oriental Mindoro Province.
[302] DENR Southern Leyte Province.
[303] Planning and Development, Libagon Municipality.
[304] Libagon Municipality, Southern Leyte.
[305] DA Southern Leyte Province.

area, particularly for DENR.[306] For some such as Mr Endico,[307] disasters caused by upland deforestation are a relatively new phenomenon. For others, environmental impacts that are increasingly visible to natural resource users are the primary factor prompting increased understanding, and LGU intervention in environmental management issues. Ms Abad[308] explains that '*fishermen are only now becoming widely aware of environmental impacts of factors such as fishing practices, marine resource-use, upland resource-use and commercial developments, as their catches decline. The damage however, was done years before*'. Government agencies address the aforementioned form of vulnerability through increased enforcement of land-use and marine resource-use regulations on the one hand, and through government reforestation and alternative livelihoods programmes, or agro-forestry initiatives on the other (Mr Umali,[309] DENR,[310] Governor Lerias,[311] Mr Ozon,[312] Ms Abad[313]).

7.4 An Alternative Perspective

In this section, I examine the chosen priorities and perspectives of two NGOs who specifically target Mangyan minority indigenous groups in Mindoro. Many Mangyan settlements are based in remote mountainous locations, and have relatively little contact with formal Government institutions or schemes. Even those Mangyans who have settled in lowland barangays, such as those based in Mayabig, remain marginalised in every-day barangay life, and have little part to play in broad-stream LGU schemes or decision-making processes. The *kaingin*[314] shifting agricultural system practised by Mangyans in the uplands of Mindoro, is commonly labelled 'slash-and-burn' by both government officials

[306] DENR staff Oriental Mindoro Province.
[307] Planning and Development, Libagon Municipality.
[308] DA Southern Leyte Province.
[309] Provincial Administrator Oriental Mindoro.
[310] DENR staff Oriental Mindoro Province.
[311] Southern Leyte Province.
[312] DENR Southern Leyte Province.
[313] DA Southern Leyte Province.
[314] Refer to Section 4.1.3 under *Ethnic Groups*.

and ordinary people.[315] Slash-and-burn agricultural practice is largely outlawed, and is widely presented as a primary source of environmental degradation, associated with increased incidence and severity of flashflooding and landslides. In Kahupian, members of indigenous minority groups have been prohibited by the barangay council from settling in the upland barangay, where a CBFM project is flourishing, and deforestation has been substantially reduced (Ms Cagurol[316]). In a keynote national-level speech outlining community-based resource management policy, kaingin agricultural practice is lumped together with commercial logging as the primary causes of various "*societal maladies*" (Cerilles, 1999:2). These include, "*massive soil erosion in the upland and poor agricultural crop productivity in the lowland, destructive floods, lack of construction timber for the national housing programme, air and water pollution*" (Cerilles, 1999:2). In one instance, a local government employee in Oriental Mindoro claims that 'slash-and-burn' style agriculture is more destructive than illegal logging for firewood and commercial timber because slash-and-burn is associated with the clearance of large areas of forest and undergrowth, as opposed to small pockets of trees. The same informant conceded that the overall magnitude of deforestation by illegal logging had greatly decreased in recent years, due – not only to stricter enforcement of government regulations – but also to the lack of mature trees remaining (DENR[317]). The Low-income Upland Communities Project (LIUCP) in Mindoro spearheads a DENR drive to support the *sustainable* development of upland – particularly Mangyan – communities across the island. Within the conceptual framework of the LIUCP approach, the DENR goal of sustainable environmental management of upland watersheds can best be achieved by supplementing protective prohibitions (for instance of tree or undergrowth clearing) with socio-economic projects designed to improve or increase the livelihood options of marginal upland communities (LIUCP, 1995; Mr Mageamit[318]). Organisations representing the interests of Mangyans provide a different perspective on the causes of flash flooding, the Mangyan way of life and Mangyan priorities.

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[315] This assertion is based upon barangay level interviews as well as interviews with staff of Provincial and Municipal Government offices.
[316] Barangay Captain of Kahupian and President of KUFA, the PO implementing CBFM in Kahupian.
[317] DENR staff Oriental Mindoro Province.
[318] LIUCP Oriental Mindoro Province.

The first of the two NGOs I shall examine is a small outfit based in Baco.[319] This NGO is called Baco Mangyan Kalakbay Foundation (BMKF). Mrs Del Mundo[320] provides an overview of the foundation's priorities, approach, and activities. "*Kalakbay*" means to move forward, hand-in-hand. As such, BMKF seeks to augment Mangyan standards of living and to facilitate development, by providing services specifically tailored to meet the needs of Mangyan peoples. The second NGO is Kapulungan Para sa Lupaing (KPLN), which translates as "Land is Life". An overview of its objectives is provided by Mr Tugas.[321] Like BMKF, KPLN also seeks to raise Mangyan living standards as an over-riding goal, however the approach adopted by KPLN differs from that of BMKF. KPLN has primarily adopted an advocacy role, which emphasises raising the awareness of Mangyans to their legal rights, particularly in relation to land-ownership and stewardship. KPLN advocacy also extends to campaigns to raise the profile of, and respect for, Mangyan peoples and their rights within wider society. This, without having to abandon their cultural heritage, in attempts to assimilate with their lowland neighbours. Although the law accords Mangyans (and other indigenous minority groups) equal rights with lowland majority groups, in practice, Mangyans are often treated and regarded as "*second class citizens*" (Mr Tugas[322]) by the Tagalog majority of Mindoro. As a group, the Mangyan peoples still face an uphill struggle to enforce their legally accorded rights.

BMKF seeks to provide non-formal education to Mangyan communities, many of whose members have received little in the way of formal education (Mrs Del Mundo,[323] DENR[324]). As well as teaching literacy skills, BMKF also incorporates awareness-raising of environmental, health and other issues considered relevant to local communities (Mrs Del Mundo[325]). Literacy rates are increasing amongst younger Mangyan generations. A small but increasing number have been sponsored in their education to degree level through (mainly) missionary-run schools. Formal education is associated with increasing

[319] Oriental Mindoro case study municipality.
[320] BMKF staff.
[321] KPLN co-ordinator.
[322] KPLN co-ordinator.
[323] BMKF staff.
[324] DENR staff Oriental Mindoro Province.
[325] BMKF staff.

political understanding and voice amongst Mangyans of their situation (Mr Tugas[326]). Vulnerability in all sectors (i.e. health, livelihoods, hazards) is closely associated with economic status. As such, like LIUCP, BMKF considers income-generation a priority area for Mangyan people, which the organisation would like to incorporate in future activities once problematic issues surrounding product marketing have been addressed (Mrs Del Mundo[327]). Unlike Government agencies, both NGOs agree that issues surrounding land-use and ownership are priorities for Mangyan peoples (Mrs Del Mundo,[328] Mr Tugas[329]).

In their upland communities, Mangyans are often affected by flash-flooding and landslides. NGOs and church representatives have in the past collaborated in responding to extreme events (Mrs Del Mundo[330]). However, KPLN asserts that upland occupants can enjoy an adequate and self-sufficient way of life, providing they are allowed to practice their system of shifting agriculture. In contrast, without professional qualifications, the majority of Mangyans living in the lowlands can only find low-paid, temporary work (Mr Tugas[331]). Thus, the lives of lowland Mangyan settlers are in many cases typified as low status, and full of uncertainty as to their livelihoods, and dependency upon the goodwill of lowland neighbours to hire and pay them equitably.

Both BMKF and KPLN agree that the Mangyan people have been disproportionately blamed in both official and common discourses for contributing to environmental degradation through the practice of their *kaingin* agricultural system (Mr Tugas,[332] Mrs Del Mundo[333]). We have seen that this practice has been branded 'slash-and-burn', and blamed for contributing to increased incidence and severity of flooding in many areas of the Philippines. Yet, in the *kaingin* system of shifting agriculture, large, mature trees are not generally felled when preparing the land for cultivation. This system incorporates long

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[326] KPLN co-ordinator.
[327] BMKF staff.
[328] BMKF staff.
[329] KPLN co-ordinator.
[330] BMKF staff.
[331] KPLN co-ordinator.
[332] KPLN co-ordinator.
[333] BMKF staff.

fallow periods to allow vegetation regeneration (Mr Tugas[334]). In Oriental Mindoro, it is asserted that during the 1960s and 1970s in particular, illegal logging was the major cause of environmental degradation, which has had repercussions for flooding since. Large-scale mining operations are likewise blamed for environmental degradation (Mr Tugas[335]). Unfortunately for the Mangyan people, they have little political voice, and as such are easily blamed by powerful interests (Mrs Del Mundo[336]). Much of the land Mangyans have been 'granted' access to, is retained in Government ownership with Mangyan rights limited to stewardship of the land, subject to Government provisions. These effectively prohibit land clearance for agricultural use. Even where Mangyans do hold land titles, in some instances these have not been recognised by those in power, or have been overridden in the 'interests of the nation', and transferred to powerful private corporations (Mr Tugas[337]). Clearly, power, voice and the shaping of policy discourse are strongly linked.

7.5 Summary

In providing LGU and alternative perspectives on disaster management and vulnerability issues, this chapter serves both to support and to enlarge upon the findings of Chapters 5 and 6. LGU experiences of community-based initiatives raise similar issues to those encountered by PNRC. Like PNRC, LGUs are increasingly employing community-based approaches. In the case of LGUs, this frequently means working in collaboration with NGOs and/or grassroots organisations. The chapter finds that LGU institutions and their situation within the national system of governance provide further insight into the discontinuities between community-based approach ideals and practice. From this analysis, implications for community-based initiatives can be drawn. Although these include particular references to the Philippine context, they also have wider application to community-based or participatory approaches.

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[334] KPLN co-ordinator.
[335] KPLN co-ordinator.
[336] BMKF staff.
[337] KPLN co-ordinator.

One key issue raised within this chapter centres upon the hierarchical LGU structure and funding constraints, particularly at lower levels of government. We saw in Chapter 6 that the PNRC community-based approach to local capacity-building assumes that community actors can be supported and empowered to access LGU funding for barangay disaster preparedness mitigation and prevention purposes. The findings of Chapter 7 place considerable doubt as to the ability of community actors to access and maintain control of funds that hierarchically higher authorities are themselves struggling to access within the LGU and national government system. Related issues include the propensity for political co-option of community-based programmes within the current government system, and the influence of departmental and budgetary structures in shaping vulnerability reduction strategies. These tendencies are aggravated for community-based initiatives that require not just LGU co-operation, but also LGU funding and/or other counterparts.

In common with PNRC representations, LGU discourse displays a paternalistic tendency to highlight *awareness-raising* functions of government policy and initiatives vis-à-vis local people (for instance on environmental protection issues). Local objections tend to be treated as rooted in ignorance rather than in differing priorities from those of government. In comparison, project negotiation processes at the LGU-community interface tend to be played down, particularly in as far as these involve LGU actors seeking community *acceptance* of LGU roles and perspectives in relation to the project at hand. Community-based approaches in the area of natural resource management should be viewed as one element of a two-pronged approach which balances LGU regulation and law enforcement elements with stakeholder participation in sustainable resource management initiatives.

Although the principles of incremental learning and flexibility associated with community-based approaches are accepted in theory, in practice LGU representations of community-based initiatives are dominated by discourse and practices found to be unfavourable to those principles. These practices and discourses involve contractual agreements with local participants that are drawn-up following standard LGU formulae; training and participation in the enforcement of government land-use regulations as prerequisites of participation, community organising; as well as standard formats and procedures passed down through the hierarchy. The CBFM project example explored in Section 7.2.2 demonstrates that implementation of standard training sessions and other such activities, are not in

themselves measures of success. Findings of Chapters 5, 6 and 7 support the assertion that training provision and other such project activities are most effective when they are tailored to meet the needs of different communities and their projects rather than following a centralised blue print. Sufficient and "regular" training is required to make capacity building schemes a success, however LGU funding shortages often lead to minimal training provision (Mr Macopid[338]).[339]

The CBFM project example also demonstrates some of the difficulties faced by community-based projects in attempting to overcome vested local interests and to challenge existing power structures, where these create obstacles to successful attainment of project objectives. It is also difficult for such projects to function fully *inclusively* within a given community. In the CBFM project example, we saw that control of natural resources was vested in a select group as members of the grassroots People's Organisation involved. The organisation of this group reflects the barangay hierarchy with the barangay Captain at its head, in the same manner that teams of trained disaster management volunteers in both of the PNRC projects studied are headed by barangay Captains. In the CBFM project, migrant minority groups have been excluded from the area as a direct result of the project. On a positive note, many resident households of the barangay who are not directly involved in the project, find certain beneficial project activities open to them, and some are able to benefit indirectly through increased business and/or the introduction of new agricultural methods. Nevertheless, from a community-based perspective, such 'spin-off' benefits are no substitute for active participation in decision-making project processed.

Community-based approaches operating essentially within the LGU system are unable to challenge key tenets of policy discourse, especially that surrounding the causes of environmental degradation and more broadly, vulnerability. Certain policy elements are slowly but increasingly being called into question.[340] However, government sanctioned projects tend to separate (in both conceptual and practical terms) disaster management or vulnerability reduction issues from the political processes and struggles that define policy

[338] DA Southern Leyte Province.
[339] With reference to livestock dispersal programmes.
[340] For instance the role of shifting agricultural systems in causing environmental degradation.

discourse and shape policy frameworks. Nevertheless, the Philippine government is increasingly conceptualising and addressing natural resource management issues in terms of a combined approach to vulnerability reduction and sustainable development. PNRC strategy to maintain the organisation's role as a specialist auxiliary to government in disaster management[341] has served to discourage its community-based initiatives from being allowed to evolve integrated disaster management-sustainable development approaches such as those increasingly employed by LGUs.

[341] This role is explored in Sections 6.1.3 and 6.5.4.

8. Shifting Sands of Vulnerability: Grasping the Concept

In Chapters 5, 6 and 7, I have explored perceptions of vulnerability, mechanisms, approaches and institutions that seek to address vulnerability, respectively from the perspectives of community members, PNRC and LGU actors. This chapter synthesises the key finding of the previous three chapters, and incorporates these into the analytical framework developed in Chapter 3. It is beyond the remit of this thesis to provide a thorough overview of all locally influential institutions and their relationship with the projects concerned. What I have sought to do here is to explore key linkages – and where appropriate, discontinuities – between existing community-based, LGU and PNRC project institutions, actors and approaches.

> *"Vulnerability is the human dimension of disasters. To understand what makes people vulnerable, we have to move away from the hazard itself to look at a much wider, and a much more diverse, set of influences: the whole range of economic, social, cultural, institutional, political and even psychological factors that shape people's lives and create the environment that they live in"*.
>
> **(Twigg, 2001a:2).**

Twigg (quoted above) argues that vulnerability is socially constructed. By this he means that vulnerability is a product of a physical and social environment which is constantly in the process of being shaped by human influence. While I wholeheartedly accept this proposition, this thesis shows that vulnerability is also socially constructed in terms of meaning and understanding attached to the term. Underlying previous chapters is a line of reasoning which states that our understanding of the term vulnerability is shaped by a variety of *meanings* which can be associated with the term and related narratives. Thus, Red Cross actors proved successful in shaping and delimiting the scope of vulnerability reducing measures within the context of the projects and broader programmes studied. Yet, eventual outputs do not fully reflect individual actors' understanding of broader vulnerability issues, or of wider meanings attached to vulnerability reduction. Hilhorst holds that such meanings do not rest with individual actors, rather they are contested,

negotiated and evolved through social interaction. As such they vary over time, situation and space (Hilhorst, 2000).

Therefore, there are two different manners in which we can say that vulnerability is socially constructed. Firstly, as a human condition created largely by social processes; and secondly, by different meanings attached to the term which serve to define and limit actor's understandings and/or use of the term in various contexts. The first Section (8.1) of this chapter addresses key areas in exploring vulnerability as a socially constructed state, with a focus upon the links with livelihoods; while the second Section (8.2) addresses the construction and interrelation of different meanings attached to the term vulnerability, as manifested at the project interface.

8.1 Linking Livelihoods and Vulnerability Theory

Livelihoods are a key area of local vulnerability, and this is demonstrated in the community actor perspectives explored in Chapter 5. Accepting that a primary aim of the community-based approach is (or should be) to give precedence to needs and priorities formulated by participating community members, then it may be inappropriate to use this approach within the constraints of an agenda tightly set by actors external to the community concerned. Clearly, no programme or project can operate entirely without boundaries. With few exceptions, facilitating actors and in particular funding agents, argue their right to be both informed of project direction and progress, and also to enforce limits (generally on ethical grounds), beyond which they will either not allow the project to proceed, or will withdraw their support. This said, when a project claims to prioritise the alleviation of *underlying* vulnerability, albeit within a disaster management framework, questions may be raised as to whether participating community members should correctly be encouraged by facilitators to formulate multi-sectoral strategies where they (the community members) consider this appropriate. After all, the separation and compartmentalisation of the areas of disaster management and livelihoods – or more broadly – development are artificial constructs, created and maintained by professional 'experts', be they members of academic, Government or NGO communities.

In the context outlined above, I seek in this section to explore key elements of underlying local vulnerability and of local capacity emerging from case study findings. This is done with reference to the strong emergent area of sustainable livelihoods approach and analysis. Elements of social and institutional analysis are employed to add depth to our understanding of the linkages between formal and informal social institutions plus the roles played by both social networks and processes of marginalisation. All of these are key factors in determining levels and manifestations of vulnerability, both in the Philippine context studied, and beyond.

8.1.1 Sustainable Livelihoods and Vulnerability

> *"You have to help first the people in the community before you can help their place. How can you put a man to safety if he is not eating every day?"* (Mr Peligro, Tigbao).

The quote above emerges from an interview in which the interviewee was encouraged to discuss the relative importance of the PNRC project in the lives of the people of Tigbao, and in particular the sea wall mitigation measure. The interviewee is 'not ungrateful' for PNRC inputs to the barangay, yet he clearly prioritises the types of vulnerability that he would like to see addressed first. "Safety" in the eyes of this interviewee is concerned not only with protection from natural events, but also with livelihoods security, providing at very least a minimum daily food intake.

We have seen that the findings of this thesis on the social construction of vulnerability point towards a more holistic approach to understanding vulnerability than one centred upon hazards and natural events. In the same manner, sustainable livelihoods provides an approach and framework of analysis "*that is more representative of a complex, holistic, reality*" (Ashley and Carney, 1999:47). Although, as a starting point of this research I have not employed a framework of analysis that is recognisable as belonging to the sustainable livelihoods school, similarities in terms of the factors and processes considered, as well as of findings and recommendations are apparent. This is attributed largely to shared core elements of approach, built in both instances upon the foundations of participatory or bottom-up approaches to development. These common core elements can be summed-up as follows: people-centred (with an emphasis upon intended beneficiaries of programmes

and their priorities); holistic (emphasis upon multi-sectoral analysis); dynamic (emphasises processes of change and fluctuation); Multi-level (incorporates key linkages between different institutional levels) (Ashley and Carney, 1999). DFID holds livelihoods to be sustainable "*when they:*

- *are resilient in the face of external shocks and stresses;*
- *are not dependent upon external support (or if they are, this support should itself be economically and institutionally sustainable);*
- *maintain the long-term productivity of natural resources; and*
- *do not undermine the livelihoods of, or compromise the livelihood options open to, others*" (Ashley and Carney, 1999:46).

The sustainable livelihoods framework is summarised in Figure 8.1 below. In enlarging upon the various elements of the sustainable livelihoods framework in the remainder of this section, I refer to those presented in Figure 8.1.

Figure 8.1: Sustainable Livelihoods Framework

Key
H = Human Capital S = Social Capital
N = Natural Capital P = Physical Capital
F = Financial Capital

LIVELIHOOD ASSETS
VULNERABILITY CONTEXT
• SHOCKS
• TRENDS
• SEASONALITY
H S N P F
Influence & Access
TRANSFORMING STRUCTURES AND PROCESSES
STRUCTURES
• Levels of
• Government
• Private sector
PROCESSES
• Laws
• Policies
• Culture
• Institutions
In order to achieve:
LIVELIHOOD STRATEGIES
LIVELIHOOD OUTCOMES
• More income
• Increased well-being
• Reduced vulnerability
• Inproved food security
• More sustainable use of NR base

Source: Ashley and Carney, 1999.[1]

[1] Based upon.

The relationship between vulnerability and livelihoods has most notably been conceptualised in a disaster studies context by Blaikie et al., 1994, in their PAR (Pressure and Release) and Access models[2] (Twigg, 2001b). Sustainable livelihoods builds upon existing approaches within development schools of thought, and in this sense, is more evolutionary than revolutionary (Ashley and Carney, 1999; Twigg, 2001b). At the same time, sustainable livelihoods represents an important conceptual development in terms of thinking about vulnerability and livelihoods, in this instance, from a developmental perspective (Twigg, 2001b). Nevertheless, DFID acknowledges a plea *"for greater focus upon vulnerability, what this means and how we should measure it"* (Ashley and Carney, 1999:28). In addressing vulnerability to shocks, trends and stresses the sustainable livelihoods approach holds that, social and other forms of capital asset are built upon in enacting short-term coping strategies, as well as more long-term livelihood adaptive and developmental measures. In decreasing vulnerability (and increasing sustainability of livelihood practices), such strategies are designed to increase well-being, and to strengthen the overall livelihood asset 'packages' of the actors concerned (Ashley and Carney, 1999:28).

Twigg links aspects of vulnerability associated with, for instance, construction regulation and deforestation with broader political economy, economic and demographic trends (Twigg, 2001a). Accordingly:

> *"Few of these aspects of vulnerability are normally considered part of disaster management but all have a profound bearing on a disaster's impact. These are very complex issues of sustainable development and this is why natural disasters in developing countries are often described as 'unsolved problems of development'"* (Twigg, 2001a:3).

Within DFID's sustainable livelihoods framework, vulnerability provides a context within which people live, and shape their livelihoods (Ashley and Carney, 1999; Twigg, 2001b). Within this context, vulnerability is manifested in process and events, categorised as: shocks (including fast onset natural events such as flooding and typhoons), wider trends (for instance: economic, technological and demographic), seasonal variations (Ashley and

[2] For an overview of these models, refer to Section 2.1.3. For a succinct summary of key developments in linking livelihoods and vulnerability to disasters, see: Twigg, J. June 2000. **Sustainable Livelihoods and Vulnerability to Disasters.** Benfield Grieg Hazard Research Centre, for the Disaster Mitigation Institute.

Carney, 1999) and other stresses such as slow onset drought events[3] (De Haan, 2000). These categories of vulnerability emerge as those directly impacting upon people's livelihood assets, their access to those assets and generally upon their livelihood options (Twigg, 2001b). In many ways vulnerability is a product of the transforming structures and processes (illustrated in Figure 8.1) that contribute to the nature and quality of different actors' access to resources. These structures also provide constraints with and within which actors operate. For example, my research findings link local actors' access to marine and forest resources to government regulatory and permit issuing systems in the Philippines. In many instances, government institutions have acted to determine which actors have legally enforceable rights of access to particular resources, as is the case for upland forest and land resources. In other instances, government institutions have not so much prevented general (local) access to common resources, as have supported the degradation of natural resources (albeit unintentionally) linked to primarily commercial activities, legitimised by government. Marine resource depletion provides a good example of this type of structural process in action.

Actors choose from amongst livelihood options according to their capacity and priorities. *Meanings* attributed to livelihoods and development, influence the choices that people take in formulating their livelihood strategies (Bebbington, 1999). This capacity to choose is also defined by structural factors such as those outlined above, by the types of vulnerability experienced, and by the fluid sets of assets available to actors at any given time (Ashley and Carney, 1999; Farrington et al, 1999). Livelihood assets are categorised by the sustainable livelihoods framework as five different forms of capital: human, natural, financial, physical and social. These assets provide both the inputs to livelihoods strategies, and also the outputs (Bebbington, 1999). They influence people's "*poverty status and quality of life by affecting human experience as well as income*" (Bebbington, 1999:2033). Of the five livelihood assets – social capital – is worthy of particular attention. This, because social capital is the most debated of the capital assets, and because

[3] In exploring coping and adaptive strategies designed to address shocks and stresses, De Haan treats seasonality as an example of low-level environmental stress, while drought is considered a high-level form of stress (De Haan, 2000).

it is the asset most closely linked to issues of access – both to natural resources and of various actors to each other (Bebbington, 1999).

Social capital is taken to incorporate social networks and norms such as trust and accountability, which are in themselves problematic elements to define and assess (Bebbington, 1999). Falk and Kilpatrick caution that current "*political demand for social capital information is running faster than the research that might ethically inform it*" (Falk and Kilpatrick, 2000:108). Likewise, Bebbington asserts that further work is required in increasing understanding of the causal mechanisms inherent in social networks, and in particular in relating these mechanisms to livelihoods issues (Bebbington, 1999). The concept of social capital is founded upon the notion that social actors are bound together by mutual expectations of social accountability, and that these expectations are dependent upon the presence of a degree of trust (Falk and Kilpatrick, 2000). Svendsen and Svendsen trace the development of the notion of social capital to much earlier sociological analysis of the phenomenon of reciprocity.[4] Reciprocity being a concept used to describe the whole package of ties, shared values, norms and understandings which bind individuals and groups within any society, and enable them to trade and cooperate (Svendsen and Svendsen, 2000[5]). In this context, social capital is presented as a "*narrower definition of reciprocity, which focuses upon trust*" (Svendsen and Svendsen, 2000:73). Trust in this sense is defined as:

> "*the expectation that arises within a community of regular, co-operative behaviour, based on commonly shared norms*" (Svendsen and Svendsen, 2000:73).

Reciprocity and trust function particularly well within small closed communities, however social capital operates at various levels, from the micro to macro levels, incorporating individuals, households, interest groups and even social movements (Svendsen and Svendsen, 2000). Social capital is to be found in government, NGO and civil society networks, as well as in groups based upon ties of kinship or neighbourly relations. Svendsen and Svendsen find that social capital is built-up slowly over long timeframes, but can be rapidly broken down, particularly by processes of societal, technological and

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[4] Svendsen and Svendsen refer to Mauss' (1925, 1969) work on reciprocity emerging from the study of exchange of goods within society.

structural change. However, in their study of Danish cooperative dairies, they found that social capital has a tendency to re-emerge over time in different forms (Svendsen and Svendsen, 2000). Falk and Kilpatrick introduce two key ideas to the concept of social capital. Firstly that, through the mechanism of interactive learning, resources of knowledge and identity are central sources of social capital. Secondly, social actors are simultaneously involved in using and building social capital (Falk and Kilpatrick, 2000). Furthermore, outcomes of livelihood strategies and social capital use can be both positive and negative (Falk and Kilpatrick, 2000), and their impacts can vary between different social actors. Hence the inclusion in the sustainable livelihoods framework of the condition that, in order to be sustainable, livelihood outcomes do not compromise the livelihood option of other actors. Crucially, social capital bestows social *inclusion* (as opposed to exclusion) on those actors within the network (De Haan, 2000).

Under the sustainable livelihoods framework, actors build upon their various assets (including social capital) in choosing the extent, timing and nature of their engagement with, or opposition to, transforming structures and processes. *Transforming structures and processes* are a key element of the sustainable livelihoods approach (Twigg, 2001b). Elements of *influence* and *access* are depicted in the framework as two-way flows. Although their importance is recognised, these elements which are inherently concerned with power relations at various levels often tend to be under-emphasised in sustainable livelihoods approaches (Ashley and Carney, 1999).

My own research findings indicate that assets such as land, education, social standing and money tend to reinforce each other in the hands of local actors. Assets can be employed to access and influence transforming structures and processes by a number of means. These include the development planning process, through the electoral system (primarily by influencing the votes of associated groups), through developing local norms and regulations, and through overt or passive resistance to specific institutions or developments. An example of overt resistance is the public voicing of concerns regarding the environmental impacts of commercial mining or stone-crushing activities. 'Accidental'

[5] Based upon Mauss, 1925, 1969.

damaging by fisherfolks of mangroves planted in coastal fishing waters – by government actors without consultation – provides an example of covert or passive resistance. Assets of all types are commonly employed to access external (Government or NGO) funding, and to influence or control the manner in which this is spent. Section 4.2.1 outlined the role of barangay Captains, in accessing Government bodies and NGOs, and in securing external funding for barangay projects. Barangay Captains tend to secure their positions upon the strength of their social capital, through a combination of family standing and personal social status and networks. They are also expected to have sufficient of the other assets to guarantee their ability to fulfil other roles, such as providing for the needs of visiting officials and taking significant time away from their own livelihood activities to address barangay business and co-ordinate with municipal officials.

Within the barangay, actors may secure access to funding through their participation in various projects and programmes. Those interviewed who had in the past or were currently participating in NGO or government projects, had generally been selected on the basis of their social capital, and locally perceived capacity to participate and prosper under the scheme, as much as by their project defined 'need'. Generally, barangay level project participants are selected by barangay officials. At very least, the selection of project participants must be approved by the barangay captain concerned. Selection may take place on an individual basis, or as a self-selected co-operative group of applicants (for example the fish corral owners of Tigbao who were supported in their venture by a government programme). Although officials may be constrained in their choices by funding agent imposed criteria, they generally exercise a high degree of discretion in their choices. For example, those selected for livestock breeding projects are those with access to grazing, forage or feed-producing resources. They are also those with sufficient human capital in the form of health and ability, to be considered able to learn about and practice good husbandry. Crucially, they are those whose social capital affords them the image (to decision makers) of trustworthy, responsible and grateful community members.

In contrast, recipients of government child feeding programmes are selected according to need, measured in this instance by signs of child malnutrition. Recipient households are requested to bring their malnourished child or children to the designated feeding centre in the barangay on designated times and days, to be fed there and then on-site. The purpose

of this rigidly enforced format, is to ensure that food provided is consumed wholly by the malnourished children themselves, rather than being shared amongst household members, or even sold or exchanged for other goods. In practice, this format entails public shaming of recipient households (in discussions, community members commonly identify households with a child or children officially declared malnourished), and this has social repercussions.

Experiences of vulnerability affect both actors' access to, and influence of, projects and programmes: the instruments of transforming structures and processes. It has been well documented that asset poverty can negatively impact actors' abilities to participate in development initiatives. Not least, because the daily struggle for survival is prioritised over other less immediate demands on actors' time and energy (Chambers, 1983). Those whose livelihood assets are such that their options mainly lie in spending significant periods away from home, can find themselves effectively excluded from participation by their physical absence. From my research findings, this was found often to be the case for asset poor households, and particularly so for those households with high ratios of dependants to healthy adult workers. In such circumstances, able males of the household often engage in casual agricultural and construction industry wage labour. The less well socially connected the household is to the locality in which they are resident, the more likely this work is to be found further afield. Local social capital is key to involvement in barangay affairs, development processes and opportunities. In this sense, lack of locally based asset capital is self-reinforcing in terms of future involvement and access. It also breeds vulnerability to future shocks and stresses. However, weak locally based social capital can be compensated for in the vulnerability stakes, by strong trans-community capital. Thus, households with a family member based elsewhere, and earning a significant salary have a safety-net to fall back upon in times of need. This is particularly true whilst that family member has few or no dependants in their own household, and/or has acquired significant social or other capital of their own, particularly if this is through marriage. Another common form of social capital is associated with in-comers to the barangay, who have maintained social and other forms of asset capital such as land, in their place of origin. Such forms of asset access that transcend local boundaries can significantly decrease household vulnerability to geographically or sector-bound (for instance agriculture) shocks and stresses. They are an important form of livelihood diversification

strategy. One means of increasing local social capital for community in-comers is through marriage to a person of local origin. This bringing together of households can provide the foundations upon which strong inter-household social capital is built, and can lead to access to natural capital such as land, financial capital through loans or employment, or physical capital such as fishing equipment or agricultural tools. As well as reducing household vulnerability to foreseeable shocks and stresses, increased local social capital through extended family connections can also increase access to wider community institutions and development.

On the basis of my case study findings, I suggest that external *perceptions* of the vulnerability of other actors may also affect those actors' patterns of influence and access to transforming structures and processes. Firstly, I add the caveat that such perceptions are formulated at a variety of levels, evolve continuously and are formed and negotiated subject, not only to experience and understanding, but also to political and legitimising motives. On this basis, certain groups (eg. the people of Lutao area of barangay Tigbao) become classified by other actors as needy and vulnerable in specific manners, and this classification itself affects the nature of their ability to influence and access transforming structures and processes. Such ramifications are complex and can encompass both positive and negative elements, often simultaneously. One example is provided by the people of Lutao area of barangay Tigbao. This particular group, are commonly identified by both officials and other community groups and individuals as vulnerable, with particular reference to typhoon related shocks, as well as other livelihoods and environmental stresses (eg. marine resource depletion, coastal erosion and population growth). On the positive side, such formal and informal classification has led to increased fund allocation (and acceptance of this within the community) to development of this particular area of the barangay. Lutao projects have taken the form of improved access to public water supply, communal latrines and protective measures in the form of the sea wall and mangrove plantation. On the negative side, the social standing, and thus social capital of residents of this area of the barangay is affected by their vulnerable or 'needy' image. This negative social standing is reinforced for those Lutao residents who are also identified as first or second generation migrants from upland areas. This due to their pervasive image within the wider barangay as having more social 'vices', too many children (relative to their capacity to support them) and relatively low standards of sanitation. Such groups tend to

be consulted less, and *required* to participate more, due to common perceptions that they 'need to be told what to do' for their own good. Such perceptions permeate several spheres, from the barangay level up through the local government system.

Taking into account capacities, vulnerability and structural determining factors, livelihood outcomes are complex, diverse and multi-faceted (Twigg, 2001b). The sustainable livelihoods framework places (desirable) livelihood outcomes in the five categories of: more income, increased well-being, reduced vulnerability (to trends, shocks and seasonalities), improved food security, more sustainable use of natural resources. The scope of this thesis does not allow me to explore each of these outcomes in detail. However I have sought to comment upon the usefulness of this element of the sustainable livelihoods framework, in the light of my own research findings.

Increased well-being stands out as a useful inclusion, in as far as the term may be used to encapsulate intangible benefits of livelihoods strategies which are centred around meeting human needs and desires in social, political, personal development and spiritual – as well as more physical – spheres. What this framework fails to make explicit is that assets have use and meaning beyond their contribution to sustainable productivity (Bebbington, 1999), although many such elements are implicitly covered by the concept of well-being. Unlike previous sections or components of the framework, this section of the sustainable livelihoods framework is clearly less concerned with increasing understanding of complex livelihoods, and is more concerned with presenting desirable livelihood goals, with an emphasis upon the sustainable. In practice, many livelihoods strategies do aim to achieve certain of these outcomes, however, for resource-poor actors in particular, livelihood strategies are often concerned more with survival and meeting basic needs than with achieving sustainable outcomes, as desirable as these may be. Thus farmers may persist with agricultural practices which they know to be increasingly unsustainable, or fisherfolks may continue to fish seriously depleted waters, simply because they lack viable alternative short-term options. Long-term sustainability is largely a function of actors' capacities and options, themselves determined by the vulnerability, assets, structures and processes depicted in the sustainable livelihoods framework. "*Individually, these will wax and wane, but the platform that they provide in combination must be stable or rising if people's capacity to generate new activities is to be sustainable*" (Farrington et al, 1999:5).

Fundamentally, we should not forget that increasing actor capacities is also about *empowerment*, which can take many forms, and be manifested in many different ways, but not least in challenging dominant institutions and structures governing access to resources (Bebbington, 1999). Expressed in this manner, certain sustainable livelihood outcomes are unlikely to be seen as such desirable elements by those actors who stand in relative terms to lose capacity and control of resources. This is a prime reason for difficulties experienced by Philippine authorities in putting into practice policy proposing to shift control of forest resources from government to locally based user groups (Gauld, 2000). Gauld suggests that policy claiming to be responsive to equity issues and sustainable livelihood needs may in reality be driven more by neo-liberal preoccupation with *efficiency* than in response to calls for asset *redistribution* (Gauld, 2000:235). In a similar manner, there is a danger in employing the sustainable livelihoods framework, of sidelining issues of equity and distribution. This danger is recognised by Carney, who claims that implicit in sustainable livelihoods approaches is an assumption "*that the emphasis will be on the poorest*" (Carney, 1998:2).

8.1.2 Relating Social Exclusion and Marginalisation to Vulnerability

We have seen that those actors lacking in social capital experience a degree of social exclusion or marginalisation, which is itself reflected in social capital building. Social capital is never an absolute. As long as individuals interact in some manner, then reciprocal ties are formed, although the quality and social value of such ties varies enormously. Svendsen and Svendsen (2000) distinguish between social capital built upon essentially informal reciprocal relations and embedded social values, and (largely externally driven) formalized economic relations. The later were found in their study to be instrumental in eroding the social capital stock of the former. Svendsen and Svendsen suggest that specific 'stocks' of social capital can fast be eroded and lost through transforming processes. However, they also note that social capital stock can re-emerge in new forms, which appear to be context dependent (Svendsen and Svendsen, 2000). How does social capital then relate to processes of social exclusion and marginalisation? We have seen that livelihoods strategies are built upon social capital and other livelihood assets. From my research findings, accessing and building stocks of assets, as well as

implementing livelihood strategies are the most common means by which local actors seek to address elements of vulnerability. De Haan holds that:

> *"(l)ivelihood strategies engender processes of inclusion and exclusion: it is important to note that the sustainable livelihood of one actor may result in the social exclusion of another, or at least structure his or her field of action"* (De Haan, 2000:352).

In the manner of sustainability and vulnerability, exclusion and marginalisation are concepts laden with meaning, which have been much debated within social science literature. De Haan (2000) cites Gore's[6] literature review on social exclusion in Africa in explaining the conceptual difference between exclusion and marginalisation approaches. The first approach treats exclusion as a process by which social groups seek to uphold their own interests, by preventing other groups from accessing key resources. Often this process is legitimised with reference to factors such as race, gender, language, ethnicity, origin or religion which differentiate between the included and the excluded groups (De Haan, 2000). Examples of apparent exclusion processes emerging from my research are provided by Mangyan inhabitants of Mayabig, and by upland migrants in Tigbao. Exclusion of these groups is legitimised on the basis of their ethnicity and origins, which can be broken down further to common perceptions of these groups' 'otherness' in terms of norms, values and social customs. In both cases, members of these two groups tended to be poor in many or all of the categories of livelihood asset. However it is social capital which stands out as the main form of asset from which members of these groups are actively excluded. This exclusion is a complex, non-absolute process, which is not fully explained by promotion of self-interest on the part of social elites. While this explanation is less than satisfactory in explaining micro level processes, the exclusion approach holds more weight at meso and macro levels, in explaining the processes by which powerful elements of Philippine society have historically sought to monopolise control of crucial land and forest resources (Gauld, 2000).

The second approach based upon understanding processes of marginalisation, has a different explanation as to why social differentiation arises between groups or actors. De

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[6] Gore, C. (1994). Social Exclusion and Africa south of the Sahara: A review of the literature. International Institute for Labour Studies, Labour Institutions and Development Programme DP62 ILO, Geneva.

Haan, 2000 (based upon Gore[7]) summarises marginalisation as a process by which certain actors are successful in their livelihood outcomes, while those who are less successful tend to be 'left behind' or marginalised by their inability to significantly improve their position. Marginalisation in this sense is attributed to 'bottlenecks' in actors' access to capital assets (De Haan, 2000). To take my example above, Mangyan and upland migrant groups would not so much have been actively excluded from access to vital resources such as land, as have arrived too late to claim access to this scarce resource.[8] Marginalisation processes may also help to explain the relative failure of members of these groups to integrate in established local social networks, and to build social capital in the same manner as other community members. This social capital poverty carries significant repercussions in terms of accessing credit and loans or of being able to borrow tools or equipment, or accessing land for housing or on which to grow rootcrops.[9] However, from the perspective of the sustainable livelihoods framework, marginalisation does not provide an adequate explanation of actor interrelations and their outcomes, nor of structural elements which serve to constrain some actors, and often, to increase the opportunities of others.

De Haan attempts to synthesise exclusion and marginalisation approaches by accepting that access to capital assets can be denied, but at the same time recognising the role of human agency, by which marginalised or excluded actors manoeuvre within the bounds of structural constraints (De Haan, 2000). Within the sustainable livelihoods framework, processes of social exclusion and marginalisation contribute to the vulnerability context of actors. They can also be trends or stresses in their own rights, to which actors are vulnerable, and which reinforce other forms of vulnerability.

[7] Ibid.

[8] Note that historically indigenous peoples such as the Mangyans of Mindoro have themselves been pushed off territories they previously occupied by waves of incoming migrants.

[9] It is common practice for households who have no formal access to land through ownership or tenancy, to by permitted to grow subsistence root crops such as cassava and sweet potato on other's plantation land, in spaces between the trees.

8.1.3 *Local Government and PNRC Roles in Local Social Capital Building*

Svendsen and Svendsen's study of social capital takes as its focal point closed[10] co-operative communities of interest (Svendsen and Svendsen, 2000). Yet, social capital is a wider asset, which tends to accumulate within society, in 'bundles of social networks', which can often be highly localised (Svendsen and Svendsen, 2000:73). The communities that form the subject of my study are both geographic communities, and the lowest administrative unit of the Philippine local government system. As such, in social capital terms, they are not closed in the manner of Svendsen and Svendsen's subjects of study. Rather, they are communities made up of diverse multitudes of networks, many of which are linked to each other, and some of which extend well beyond the territorial bounds of the communities studied. Civil society organisations, including local people's organisations such as Farmers Irrigators Associations, are potential framework for supporting social capital growth, as are local co-operative societies. However, social capital refers to the relationships that drive these organisations, and not to their structure or role, although these may serve as indicators as to the quality of social capacity engendered. Social capital exists at all levels of society, and social capital networks which are manifested at different levels, are often linked to one another (Falk and Kilpatrick, 2000). Local government and Red Cross actors are not exempt from social capital networks in carrying out either their formal or informal roles. In fact, the findings of my study affirm Falk and Kilpatrick's assertion that such actors are *simultaneously* involved in social capital building and in using social capital (Falk and Kilpatrick, 2000:100).

Both LGU and PNRC actors in the Philippines are involved in community organising activities, as a fundamental part of community-based initiatives. Community organisation is an activity concerned essentially with bringing together both community members and other key actors, in order to stimulate knowledge sharing and learning on a given topic; be that disaster preparedness or forest management. Community organising tends to build upon existing community relations and social capital, in a manner, which seeks to integrate LGU or PNRC actors in the social networks, which are evolved or strengthened by the

[10] Closed in the sense that members of the communities concerned are bound together in a specific form of co-operative relation.

exercise. In the PNRC projects studied, both aim to consolidate a network of community, PNRC and LGU actors, with the common interests of vulnerability reduction and effective disaster management. This process of integration by sharing knowledge and attempting to forge bonds of trust between the different groups of actor involved is generally described as 'capacity-building', which is a key desired outcome of the process. In essence, we can see that community organisation as practised by such organisational actors is concerned with social capital building. However, organisational actors also use the process of social capital building for organisational goals, such as legitimising their policy and guidelines and objectives, building-up political support bases (LGUs) and strengthening and adding to membership of volunteer networks (PNRC).

Social capital building is also a means by which LGU and PNRC actors contribute – often unintentionally but sometimes deliberately – to processes of exclusion and marginalisation in community networks and initiatives. Communities of all natures, including those of interest, tend towards heterogeneity and inequality. Reciprocity and trust may be seen to be great social levellers, particularly where these are associated with common interests and potential for mutual gain. However, social sanctions and accountability mechanisms can still impact unequally in spite of social capital. In fact, this inequality can often be attributed largely to inequalities between actors, in their access to social capital stock. Often those connected to many different networks are less affected by the sanction of any given network, while the relative uniqueness of other members' ties to the network in question can make their will to hold the network together stronger than their desire to fully sanction an errant member. Because networks are linked across various scales, often the inclusion of a member in one particular network may be driven as much by that member's strong and useful connection with other networks (for instance, local government) as by the strength of that member's reciprocal ties. Ironically, social capital building is a form of capacity-building that can often tend towards cultivating ties of dependency of (interest) community members on the LGU or PNRC actors involved, precisely because of the strength of bonds that have been formed in the process. When LGU or PNRC actors have been established as central nodes in the network, then their disassociation – even if gradual – can signify the erosion of the network. This is particularly true where organisations concerned are the primary rule setter (and often the police) of the network – a common occurrence even in community-based initiatives.

In attempting to grasp the processes associated with social capital building and use, I have been concerned with unpacking the hazy concept of capacity-building, so often touted as a key objective of community initiatives. I have also explored the linkages between livelihoods and vulnerability, of which social capital acts as a key – enabling – building-block or resource for vulnerability reduction and other forms of livelihood strategy. The building and use of social capital leads into my final section, where interaction and processes of negotiation between actors of the project interface, are seen to shape meanings and eventual project outputs. This is an area that is little elaborated on by the sustainable livelihoods framework, and as such I have reverted to the interface analysis approach developed in Section 3.1. In this manner, I explore final links in my research between conceptualisation of vulnerability and the formulation and implementation of vulnerability reduction measures.

8.2 Vulnerability at the Interface

This section draws together the various processes shaping projects, and explores the main forms of constraint, within which project actors operate. Let us recall the basic tenets of the actor-oriented approach, which stipulate that – within the bounds of any structural constraints – actors negotiate meaning and build upon available resources in enacting their various (often contested) understandings, values and strategies. This process is attributed to human agency, which also insures that actors may, within the bounds of their capacities, seek to influence, contribute to or challenge those structures or processes that constrain. Whilst these constraints are far from static, they can be categorised as falling within the sphere of: the community concerned; formal institutions (ICDPP, PNRC, LGU, donor community); the wider environment, economy and social networks which are increasingly globalised.

Figure 8.2: Influences Shaping Meanings of Vulnerability and Intervention at the Project Interface

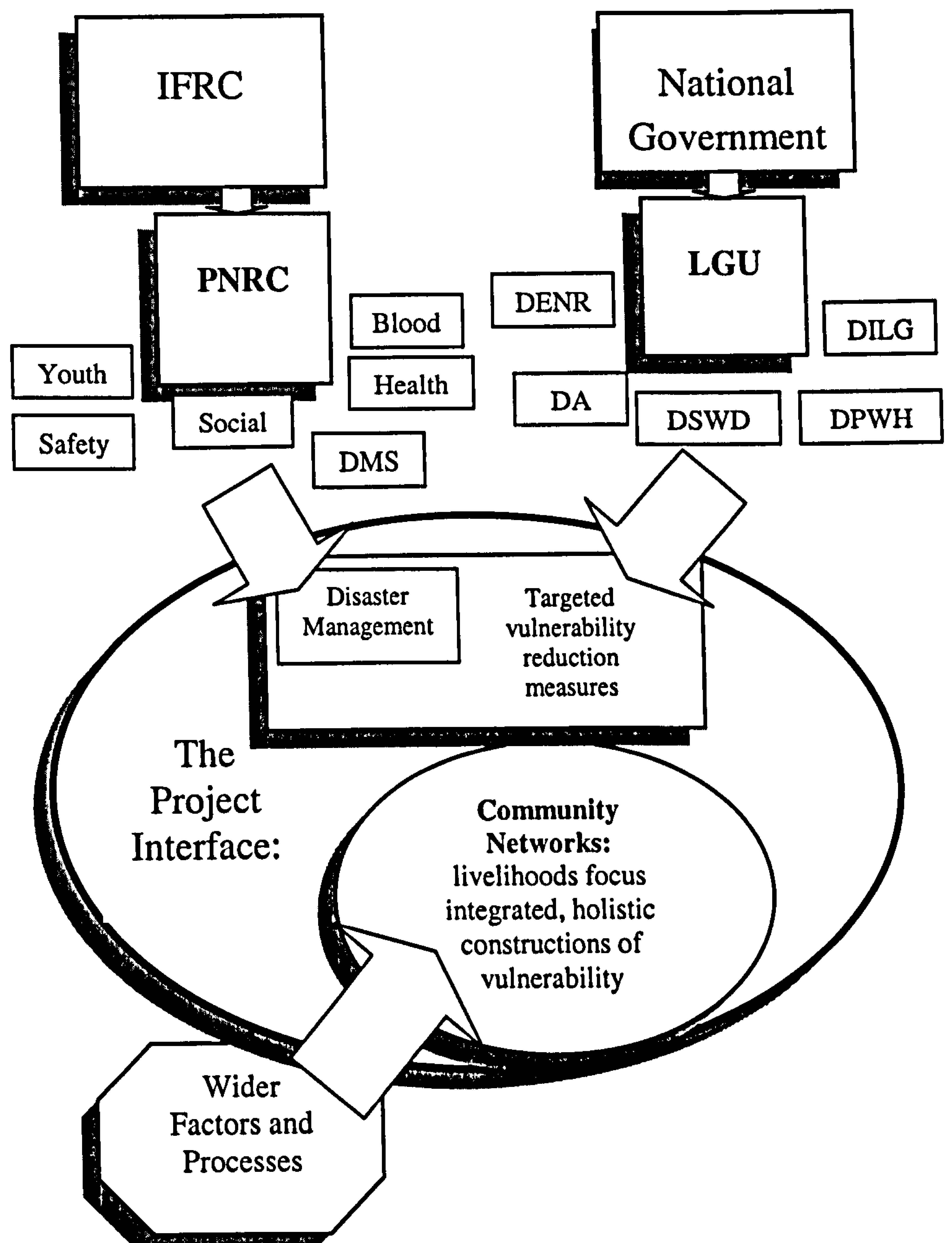

Figure 8.2 above, presents in simple diagrammatic form the primary components of the project interfaces forming the focal point of my case studies. The primary actors of the interface are PNRC, LGU, and community actors. In each instance, these actors operate both as individuals and as groups. PNRC is an autonomous organisation, which has accepted the founding principles of IFRC, and is influenced by policy and developments within the IFRC network. Specific projects and programmes of PNRC are however bound in a structural sense by agreements with, and the stipulations of, donor organisations. In the two cases studied, these donors are both Red Cross national societies, and as such are also members of IFRC. LGUs are able under the Philippine decentralised government

system to exercise a degree of autonomy, however they remain hierarchically bound by the directives, rules and regulations of the Government system, from national to barangay level. Each of these two broad categories of actor, PNRC and LGU, operate through a range of services, departments and programmes. Such initiatives have tended in broad terms to remain compartmentalised and targeted, even where project approaches have become increasingly community-centred. The third and final group of project interface actors are incorporated in community networks. Among these actors are formal community leaders, who are tied into the LGU system as the (hierarchically) lowest administrative tier. The barangay community is made up of a fluid mass of interconnected networks, which also incorporate formal leaders in various respects, and many of which are linked to actors situated primarily outside of the barangay community concerned. Although responsive to formal hierarchies, community actors, both as individuals and groups, tend to view vulnerability issues in more holistic terms than government or PNRC actors. This in itself does not prevent community actors from, at times, formulating targeted strategies. Livelihoods and vulnerability are strongly linked both conceptually and strategically. The 'wider factors and processes' box is intended to capture elements such as the trends, stresses and shocks featured in sustainable livelihoods approaches. These are important in-as-far as they have a bearing upon the project interface. This, through their impact upon the perceptions, strategies and livelihoods of interface actors, as well as upon structures, resources and government policy.

8.2.1 Components of the Project Interface

Building upon the findings explored in Chapters 5, 6 and 7, this section draws out the key elements in summary form, and situates them within the project interface conceptual framework. In Section 3.1.2, I laid out the foundations of this framework, within the context of existing literature on this approach. In Figure 3.3, I introduced the five spheres of the project interfaces in question, namely: the household/individual sphere, the community sphere, the PNRC sphere, the LGU sphere, and the national and/or global sphere. Taking each of the five spheres in turn, in this section, I explore the defining points of each, and look at the relations and processes governing 'arena' negotiations and project outcomes in the cases studied. Negotiation take place within various interface 'arenas'

which overlap the different spheres. As such, some overlap also occurs in my description of negotiation processes and constraining factors pertaining to the different spheres, below.

Individual/Household Sphere

Much of household and individual interests are tied-up in livelihood concerns. Within the barangays studied, agriculture and fisheries emerge as prominent sectors, while those who are able tend also to engage in skilled employment, trade and small-scale enterprise. Many – particularly young – adults are prepared to migrate long distances within the Philippines or overseas, to search for, or to undertake waged employment. For the majority of households, diverse livelihood options are maintained as a strategy designed to minimise vulnerability. Maintaining diverse livelihood options requires considerable time and energy. Actors within this sphere are often bound by seasonal agricultural and fishing calendars, as well as by daily cycles (for instance, fishing is a primarily night-time activity). Those who migrate can be absent from their home barangay for long periods, and many are bound by filial or parental obligation, to undertake livelihood options that would not be their choice under different circumstances. This is particularly so for resource-poor actors. Mothers with young children are often unable to absent themselves from their barangay for long periods, or to undertake work that cannot be combined with childcare demands. This is likely to be the case for those who do not have female relatives available within the barangay, in whose care they can leave their children. The availability of daycare centres in barangay has eased this situation to an extent, although not all households can afford to meet even these small fees. In any case, daycare centre hours are limited. Many individual or household actors find themselves limited in the types and duration of activity in which they can become involved. A clear example of this situation is provided by the unwillingness of community members with family or livelihood commitments to participate in extended disaster management training sessions which take place some distance from their home area. For those with heavy livelihood commitments, involvement in public meetings and decision-making processes can also be difficult. In this manner, many local actors are little involved in direct public negotiations, and shaping of project outputs. This however does not necessarily mean that the same actors are unable to contribute *indirectly* to the same processes. Much negotiation and discussion is carried out through informal interaction within local social networks. Even everyday gossip with friends and neighbours is a powerful social tool which should not be underestimated (Scott,

1985). Such interaction not only contributes to social-capital building (and also weakening), but also imparts knowledge, and helps to shape opinions and shared understanding, even before formal decision-making processes are initiated.

The Community Sphere

We have seen that the communities emerging from my case studies are barangay-based. As such, they are primarily geographically defined, incorporating all those whose *permanent* place of residence is situated within the bounds of the barangay concerned.[11] Such barangay communities also function as the lowest administrative unit of the Philippine LGU system, and as such have their own elected Captain and appointed Council.

Earlier in this chapter we explored the importance of networks and the social capital which they impart, in building and implementing livelihood strategies. Respecting social obligations and participating in social events, from family celebrations to barangay fiestas, are key elements in maintaining good social relations and in social capital building. Individual or household public voice and negotiating power are determined to a large extent by social capital status. Thus, those with less social standing in the barangay as a whole are more likely to be treated as recipients of aid who are expected to be grateful for what they receive, and less likely to be consulted in a meaningful manner as to what project outputs should be. Barangay leaders, and others who are prominent in the social networks concerned, are partially responsible for determining both access to arenas of negotiation, and the quality of access of different actors within the community concerned. Although it is standard practice in the Philippines for the whole community to be called to barangay meetings in order to discuss happenings such as a new project being planned, barangay leaders determine who is to be included in any behind-the-scenes negotiations. Any public statement in such a meeting is as liable to spark public condemnation as it is to engender respect. Community members who enter the negotiating arena in any meaningful manner, will be mindful of any social repercussions that voicing their opinions is likely to impart.

[11] Adult sons and daughters are sometimes registered as resident in the barangay in which they grew up, and in which their parents have remained, even when they are working and have established their own homes elsewhere.

In this sense, their negotiating role can be limited or shaped by awareness of likely social capital gains or losses for the individual or household concerned.

Barangay leaders are themselves answerable to members of the community at large, and as members of a variety of social networks. Barangay leaders cannot be presumed to be neutral, facilitating actors in barangay decision-making processes. Rather, they are often torn in several directions at once in attempting to balance the fulfilment of private social obligations with their public (largely unremunerated) role. Public office, even at the barangay-level, carries such responsibilities as maintaining justice and enhancing the well-being of community members at large. Barangay officials are obliged by their position to at least listen to the grievances and requests of community actors. It is through this mechanism that community actors, who might not otherwise exercise strong negotiating powers in community arenas, can make themselves heard. Thus, for instance, an otherwise fairly marginalised group of Tigbao residents were able to promptly summon officials to witness the damage being caused by water that had collected behind the seawall during seasonal high tides. In this manner, they were able to directly raise issues relating to seawall design and further work with key local decision-makers. This mechanism is most effectively employed when the grievances and requests relate to inanimate objects such as the seawall and do not involve one actor or group of actors challenging the actions or rights of fellow community members. Otherwise, community leaders tend to operate as mediators, and the outcome of ensuing negotiations between disputing actors are likely to be strongly influenced by elements such as the respective status and social capital bases of those concerned.

PNRC Sphere

This sphere is dominated by formal relations between actors. PNRC actors operate at a variety of levels. They include staff of national headquarters as well as local Chapter (provincial level), staff. They include staff on permanent contracts as well as those employed on a short-term basis, to undertake specific project or programme -related tasks. ICDPP staff fit into this last category. As a Red Cross organisation, PNRC is founded upon a set of principles that extol the virtues of voluntarism. PNRC locally-based volunteers make up a fluid network of actors who tend to cluster in local groups. Continued contact with PNRC and commitment to the Red Cross/Red Crescent movement tends to wax and wane, and is dependent upon a whole variety of factors and circumstances. These include; opportunities for active (and personally rewarding) involvement, the availability of supportive funding which covers at least minimal expenses incurred by volunteers and, livelihoods commitments, especially where migration is a factor.

Although neutrality is a PNRC goal shared with other members of the Red Cross/Red Crescent movement, many members of PNRC find themselves involved in political negotiations on a regular basis, particularly with LGU actors. This is a vital part of PNRC actor's roles in both implementing projects and programmes and recruiting voluntary members in any locality. In the projects studied, PNRC actors played a vital role in negotiations and decision-making processes at both LGU and barangay levels. Initially, project sites had to be selected with reference to LGU actor priorities and wishes. Project sites could not be selected without the permission of the provincial Governor and municipal Mayor concerned. Likewise, the permission and goodwill of barangay leaders had also to be sought, before projects could be initiated. In fact, barangay leaders' good relations with PNRC actors and willingness to participate in projects where criteria cited alongside relative vulnerability of the populations concerned in the selection of project sites.

Hierarchy is an important defining factor of social relations and decision-making processes within the PNRC sphere. Programmes and even individual project specifications tend to be largely shaped by negotiations that take place within higher echelons of PNRC, and in particular between national-level PNRC actors and external donors. My research findings

indicate that a high degree of control of programme and project processes is retained by actors who have little *direct* contact with the project locality or with day-to-day implementation. This control is enforced through hierarchical mechanisms, through accountability mechanisms that are written into founding project agreements at all levels. For instance, donor organisations agree to provide funding, conditional upon PNRC national-level actors' provision of appropriate levels of support to programme and project staff, and their ensuring that reports are produced at regular intervals for donor use. At the local project-level, barangay leaders agree with PNRC project staff, to facilitate project implementation, to maintain levels of local participation and to ensure that paperwork requirements are met. Community members are consulted on certain aspects of projects, however, in practice, much of project content is shaped largely externally to the community sphere, and project formats are imposed upon participating communities. Community actors' negotiating powers tend to be limited to specific project elements, such as which type of mitigation measure to prioritise.

Whereas in DMS-CBDP, PNRC hierarchy was presented as the primary constraint on local negotiating powers, in ICDPP, it was the donor who enforced constraints in the form of strong external directives. ICDPP staff noted that external evaluation was carried out on behalf of the donor, largely by university based consultants. This process was considered to favour a lopsided view of project progress and success, which devalued local opinion and understanding, and in at least one instance led to misunderstanding with serious repercussions for the project concerned. The ICDPP donor pushed the high-technology mapping element of the programme, and stipulated that externally designed survey forms be used across the programme in project site selection and community organising processes. Post absorption of ICDPP by DMS, it is likely that at very least, the form of mapping implemented in future programmes will change (Mr Malibiran[12]). Implicit in ICDPP staff representations of negotiations with the donor, is a suggestion that the donor has tended to assume that in accepting financial support, PNRC has invoked a *duty* to accept donor stipulations.

LGU Sphere

[12] Mr Malibiran, ICDPP Co-ordinator.

Like the PNRC sphere outlined above, negotiations and decision-making processes operating within this sphere are guided primarily by formal rules and regulations. We have seen in Section 7.2.3 that commissioning supplementary funding from higher echelons of government is a procedure that entails considerable time and effort. This is compounded by the fact that severe typhoons tend to cover relatively wide areas, which can encompass several different administrative jurisdictions. Attempts to equitably distribute available relief goods, funds and support to all barangays officially declared to have experienced a calamity can lead to response aid being thinly spread. Hierarchical procedures govern LGU inputs, and the roles played by LGU actors in the project interface. Policy directives and project formats are filtered down through the hierarchy to LGU actors, who, like PNRC local-level project actors, often find themselves negotiating project outputs within hierarchically imposed boundaries. The biggest constraint to flexible decision-making at the local level is caused be severely limited access to funds at lower echelons of the LGU system.

LGU actors have their own goals in becoming involved in community-based projects such as those initiated by PNRC. LGU participation is elicited by PNRC and community actors as a means of gaining access to additional funds, expertise and support. LGU support is also sought as a means of strengthening existing relations between community and LGU actors, and of securing long-term project sustainability. However, LGU actors have their own policy guidelines to follow which set out funding priorities, their own projects and programmes to run and targets to meet. LGU involvement in PNRC-driven projects must therefore fit within Government policy objectives, and not interfere with other LGU initiatives or drives to meet specific development targets. These are some of the understandings with which LGU actors enter into negotiating arena. Much of the key project negotiations involving LGU actors revolve around LGU inputs. Generally, LGU actors are enthusiastic in their support for (non-controversial) NGO-initiated projects, so long as benefits to actors within their jurisdictions are apparent. NGOs involved are also expected to approach LGU actors with evidence of NGO ability to provide appropriate levels of funding, organisation and human resources for the project concerned. LGU actors do not generally expect to be approached by NGOs as significant funding sources, however, they may agree to provide limited support where project outputs fit with Government objectives, and provide opportunities for political gain, which outweigh the

costs of involvement. Forms of political gain include increased popularity and goodwill, as well as increased votes for individuals and/or their supporters. It is commonly understood that where LGU actors have provided input to projects of any origin, then these same actors will claim a substantial degree of credit for project outputs. This process can be seen as a form of co-option, and is often reinforced by other project actors who publicly express gratitude, and endorse LGU inputs as key to project success. The same public endorsement is carried out with regard to PNRC inputs and involvement. Perversely, community member involvement and inputs to the success of community-based projects receive least substantial public recognition, while community actors demonstrate their good manners through self-denigrating expressions of gratitude to formal actors belonging to LGUs or PNRC. Public acknowledgements of community efforts by formal institutions, continue to be somewhat overshadowed by the norms and attitudes which govern hierarchical social relations.

Wider Factors and Processes

The factors and processes I am concerned with in the context of the project interface are those which impact upon project actors' experiences and perceptions of both vulnerability and vulnerability reducing strategies. These include factors such as trade systems, which exhibit changing emphasis upon commodities such as hemp fabric and rice. Fluctuations in supplier competition, demand, market prices, input costs and improved or degraded transportation links all have their bearing upon the vulnerability experiences of those who livelihoods are affected. Education, demographic, marriage, childbearing, inheritance, employment and migration patterns all have vulnerability implications. Climatic patterns and variation can have tremendous impact upon local experiences of vulnerability. Changing government policy and practice in areas such as natural resource management and rights of access have implications for local vulnerability, and also for the manner and areas in which vulnerability issues can be addressed by local actors. For example, increased government prioritisation of 'sustainable' environmental management options and of efforts to counteract degradation of upland and marine resources, has led to increased mainstreaming of public criticism of commercial enterprises in as far as their activities are seen as having negative long-term environmental ramifications. Furthermore, as issues of public safety (for instance from landslides and or flash flooding) have been increasingly linked to environmental management practice in policy and public discourse at

higher levels of government, so too have these issues been increasingly effectively aired in local forums of negotiation. Often, this type of negotiation is polemized around personal or collective experiences of situations on the one hand, and on the other, outside received wisdom about what makes people vulnerable to extreme events or circumstances – be they fast or slow onset. Formal institutional actors sometimes lack depth of understanding of the livelihoods side of vulnerability in this context; more often, though they possess understanding, they dismiss such knowledge, on the basis of received wisdom as to what is relevant to the project in hand. Increased emphasis upon local participation and community-based approaches is itself the product of a global trend in government, NGO and academic circles.

8.2.2 Constructions of Vulnerability at the Project Interface

Actors shape project outputs through processes of negotiation. Eventual outputs are limited by many different factors, which can be categorised as follows:

- the confines of projects and programmes;
- organisational constraints such as funding, accountability and hierarchical processes and procedures;
- access to assets and resources including knowledge;
- external factors and processes including shocks, trends and stresses.

Negotiation processes are themselves influenced by collective actor understandings or constructions of vulnerability. Collective constructed meanings of vulnerability are based upon the following:

- knowledge and experience;
- education and training, including received wisdom;
- social relations and processes which both limit and promote the negotiation powers of different actors within the various forums or arena of negotiation which make up the project interface.

We know that the communities concerned are heterogeneous geographical and administrative units. They are made-up of various and evolving networks. Between community members, there are differences in socio-economic status, priorities, needs and backgrounds. Section 5 explores in some detail the differential nature of community-level

vulnerability experience, and of strategies to address vulnerability. Despite the complexity of local-level manifestations of vulnerability, it is possible to make some generalisations about the manner in which vulnerability experiences are constructed community-based project actors. When not confined by imposed definitions or externally introduced associations of vulnerability (for instance with natural *events*), community actor constructions of vulnerability experience tend to be holistic and livelihoods-centred. Community actors are continuously involved in formulating and implementing their own vulnerability reduction strategies as a contingent part of balancing and choosing between available livelihood options in everyday life.

In contrast, PNRC and LGU actors are governed by organisational norms and procedures. The constructions of vulnerability that they bring to project negotiating arenas are rooted in personal experiences, community accounts, their education and training as well as the knowledge and understanding of peers and superiors. The constructions of vulnerability that PNRC and LGU actors promote in certain negotiating arenas (particularly those with community actors) have often been formed and delimited through prior negotiations in other arenas with different combinations of actor. Actor agency is responsible for shaping shared constructions of vulnerability for project purposes. Outcomes of actor negotiations are also shaped by organisational constraints, which are carried as baggage by organisational actors into project arenas. Such organisational constraints are imposed by elements such as structure, access to funding, operational rules, policy and political priorities. A key element of structural constraint is provided by the tendency of formal organisations to compartmentalise their activities and responsibilities. In the case of PNRC, key operational areas are broken down into Social, Disaster Management, Youth, Health, Safety and Blood Services. Similarly, LGUs are fragmented along departmental lines. As illustrated in Figure 8.2 above, these include, DENR (Department of the Environment and Natural Resources), DA (Department of Agriculture), DSWD (Department of Social Welfare and Development), DPWH (Department of Public Works and Highways) and DILG (Department of the Interior and Local Government). Typically, the elements of each PNRC Service and Government Department that seek to address vulnerability tend to lack cross-sectoral co-ordination, each unit having its own priorities and agenda. These organisational structures themselves have contributed to conceptual compartmentalisation or disaggregation of different elements of vulnerability. At the

project interface, this process is manifested in disaggregated project constructions of vulnerability, which are clearly related to the structures of services and departments involved. This helps to explain the process by which, in the projects studied event-centred constructions of vulnerability have prevailed, despite both community member experiences of underlying vulnerability in various manifestations, and considerable organisational experience of addressing vulnerability across the sectors of PNRC and LGU activity. To illustrate this point, I shall draw upon an LGU example.

DSWD provide an extensive construction of household vulnerability, which is based upon nationally defined 'minimum basic needs indicators', which incorporate elements such as housing materials, sources of lighting and fuel for cooking and water supply, as well as income. On the basis of Barangay Tigbao's 1998 Minimum Basic Needs survey findings, manifestations of vulnerability in the barangay are ranked (in descending order of priority) as follows (source: Tigbao, 1999):

1. lack of 'gainful employment' of all members of the household (18yrs+), other than the head of household;
2. lack of adequate (sanitary) latrine for each household;
3. failure of the total household income to meet the minimum as defined by the 'subsistence threshold' level;
4. lack of 'gainful employment' of the household head;
5. failure of all members of the household (10 yrs+) to read, write and use simple arithmetic.

Three of these five priority areas listed above directly relate vulnerability to livelihoods, which clearly reinforces my case study findings. However, this departmental construction of vulnerability is based upon its own set of indicators, and has little practical bearing upon constructions of (event-centred) vulnerability in a disaster management project context. This, despite the fact that both constructions relate directly to the same individual barangay, and that both have been integrated into Barangay and LGU Development Plans.

8.3 Summary

As much as we may wish to uphold the role of actors in shaping both states and meanings of vulnerability, it is important to recognise the role played by structural constraints. These tend to restrict actor's room for manoeuvre in given situations. Hilhorst holds that actors' worldviews and actions are a function of their agency, operating within the bounds of structural constraints. It follows that some actors are more able or active in terms of promoting their particular worldview or agenda in negotiating arena (Hilhorst, 2000). Structure also assures certain actors of more room for manoeuvre than others (Hilhorst, 2000).

We have seen that organisation-led project constructions of vulnerability in a disaster management context are far more limited than the framework of analysis I have employed. This is both in terms of depth and of the levels of analysis. Much of the complexity of local-level vulnerability and capacities has been effectively discounted, as have many of the wider processes that also have an impact at the project interface. Community members on the other hand, have been found to operate using a relatively integrated and holistic approach to vulnerability construction and reduction. In particular, vulnerability is closely related to livelihoods at the local level. Imposed limitations to project-related constructions of vulnerability in a disaster management context, in turn restrict the field of strategies to address vulnerability and eventual project output options. Such restrictions are found to be of equal importance to the effectiveness of community-based projects as funding constraints, local power relations and bureaucratic processes, although all are clearly related. Fundamentally, processes that serve to delimit project constructions of vulnerability also contribute to a form of depoliticisation of issues surrounding vulnerability. This despite – or perhaps because of the fact that many vulnerability issues, and indeed disaster management – is in reality highly politicised.[13]

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[13] Refer to Sections 2.1 and 9.2.

9. Conclusions and Recommendations

In summary, this thesis has four main elements. Firstly, it incorporates an in-depth study of local-level vulnerability. Drawing upon the findings of two Philippine case studies, the thesis is designed to further understanding of vulnerability to typhoon and flooding events, as well as to the various manners in which vulnerability is manifested. Secondly, this thesis includes a study of two Community-based Disaster Preparedness projects with an emphasis upon situating these within their organisational frameworks. Thirdly, the thesis integrates analysis of local-level vulnerability with vulnerability reduction or project management, by use of the analytical framework described below. Project interface analysis provides a means of exploring the mechanisms by which vulnerability reduction strategies are formulated and project outputs are implemented. Findings are applied to policy and practice of PNRC in the first instance, with a view to much broader application within IFRC, and more generally amongst those interested in initiatives to reduce vulnerability using a community-based approach.

Fourth and finally, this thesis is concerned with refining an appropriate conceptual tool for examining vulnerability, as it impacts at the local community level. We saw in Chapter 8 that this framework builds upon sustainable livelihoods and interface analysis approaches. It is designed to encompass processes of change, rather than treating vulnerability as a static concept for the purpose of analysis. The framework also allows for the inclusion of much broader underlying factors and processes of change in my analysis, as well as for the consideration of actor-centred factors. These include different perceptions, behavioural norms and customs, expectations, capacities in terms of knowledge, skills and resources, and crucially, interaction between these different elements as well as eventual outputs. In this respect, local capacities, and capacity-building initiatives are treated as crucial elements in understanding vulnerability.

9.1 Key Research Findings

In Section 1.3.2 I introduced my central research question, which asked:

To what extent do community-based disaster management initiatives of PNRC successfully address local people's vulnerability to typhoons and their effects?

My research findings indicate that, on the positive side, community-based approaches have been employed in these initiatives as an appropriate means of emphasising preparedness and mitigation elements of disaster management. Relief and rehabilitation-centred approaches to disaster management address elements of vulnerability experienced as a result of natural events such as typhoons. However, these approaches do not tend to address elements of vulnerability to potential future events, or underlying (non- event-centred) forms of vulnerability. By increasing the emphasis upon mitigation and preparedness elements of disaster management, community-based approaches provide scope for wider understanding and addressing of local vulnerability, in its various forms. My findings also indicate that community-based approaches to disaster preparedness encourage deepened understanding of local-specific vulnerability issues. These community-based initiatives are associated with a policy trend which specifically values the knowledge and capacities of local actors, and which seeks to build upon such local resources.

On the negative side, my findings indicate that these community-based initiatives can in practice place greater responsibility upon the shoulders of local (community) actors in disaster management, and in addressing vulnerability within their community. This, without necessarily increasing their capacity to formulate initiatives according to community understandings and priorities. Community-based approaches can actually serve to depoliticize vulnerability issues in as far as they place much of the responsibility for implementation, upon those who do not have the jurisdiction or political power to address wider factors and processes which contribute to vulnerability. Those within the government – and particularly the LGU system – that do potentially have the capacity to tackle bigger issues such as environmental degradation or rights of access to resources, can choose instead to content themselves with supporting small-scale disaster management initiatives, and with reaping the political benefits of such involvement. The act of

implementing a community-based approach does not in itself alter existing power-structures. Because of the constraints that these structures impose upon local actors, community-based approaches in practice can be as disempowering as they are empowering.

On balance, I conclude that the projects and programmes studied are moving towards better addressing the complexity of vulnerability, but as yet, are not fulfilling their potential. This is primarily attributed to structural constraints, both outside and within PNRC, as the implementing organisation. Results reveal a gap between organisational awareness of, and mechanisms for addressing, underlying vulnerability. Shifts in focus for the Red Cross include; from relief to a greater emphasis of preparedness and during-disaster management and from top-down to more community-centred approaches. Such approaches uphold the capacities of communities and their members, as opposed to focusing upon their "victimhood" – potential or actual. However, community-based initiatives remain primarily *event-centred*, and tend towards treating the *symptoms* of vulnerability, or its *direct causes*, rather than addressing *underlying root causes.* As regards community empowerment, although community-based projects and programmes have been instrumental in increasing the responsibility placed upon communities and their institutions in implementing measures designed to reduce vulnerability, communities have not been granted increased powers or means to tackle the root causes of vulnerability. Control of project processes remains vested largely in PNRC and LGU structures. The community-based approach has in part, served to shift the focus away from wider – often more politically sensitive – factors impacting vulnerability, which supersede community-level control and responsibility. There is a danger of the approach unwittingly contributing to the *'depoliticisation'*[1] of issues surrounding vulnerability.

9.2 Comments on the Politics of Disaster Prevention

Prevention is a term often neglected in the disaster management vocabulary, in favour of the commonly employed terms: planning, preparedness, mitigation, relief and

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[1] I employ the term 'depoliticisation' in a similar sense to that described by Ferguson (1994) with reference to
Footnote continues on the next page

rehabilitation. This is particularly true in the field of 'natural' hazards, where it is commonly supposed that events will inevitably occur, with disastrous implications for affected humans. Social institutions bestow upon responsible agents, the role of managing these events (both potential and actual), in a manner that minimises the severity and longevity of their impact upon society and its members. When it comes to pre-disaster activity, the role of disaster managers has traditionally been to manage risk. In the disaster studies school of thought, the trend has moved increasingly towards understanding and addressing vulnerability. However, within this school, the same basic framework – incorporating the various phases of the disaster management continuum – has been applied to risk management -centred approaches, as has been applied to vulnerability reduction initiatives. Therefore in practice, there is very little difference in evidence between the two approaches. Conceptually however, those advocating and driving the shift towards vulnerability reduction, by-and-large adopt an altogether more radical approach. I see this approach as two-fold. Firstly, it advocates addressing the root causes (as opposed to merely treating the symptoms) of disaster situations. Secondly, the approach calls for the reduction of cross-sectoral vulnerabilities, with a view to increasing societal capacities to respond to, resist or otherwise determine the make-up, circumstances or outcomes of any situation that might arise.

Whilst recognising the breadth and interconnectedness of vulnerability in its various manifestations, disaster managers (be they private or public sector actors), have tended to remain hobbled to an event-centred approach to vulnerability (or risk) reduction. Natural events serve to make apparent specific forms of vulnerability, which are more clearly identifiable and more easily targeted than wider, underlying vulnerability. However on the basis of the findings of this thesis, I argue that political factors are largely to blame for the apparent inability or unwillingness to embrace a more holistic vulnerability-centred approach to disaster prevention. Influencing factors include professional boundaries, short-term versus long-term frames of reference, political expediency and claims to political or factional neutrality.

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the impacts of development institutions and their discourses.

9.3 Policy and Practice Recommendations

The following is a list of policy and practice recommendations based-upon my research findings, which are aimed primarily at those involved in implementing community-based approaches to disaster management, or more generally to vulnerability reduction.

- Resist the urge for facilitating actors such as PNRC and LGUs to impose organisational or programme constructions of vulnerability, upon community actors. This need not entail the abandonment of sector-specific intervention. At the very least, community-based approaches should allow such intervention to be contextualised within holistic constructions of vulnerability issues.
- Linkage across initiatives of different sectors is desirable, as is linkage (and as far as possible) co-ordination of the initiatives of different actors, in as far as vulnerability issues are addressed.
- Structural constraints to the fulfilment of the fundamentally empowering objectives of community-based approaches need to addressed, whether these are external or internal to implementing organisations and their programmes. Appropriate facilitating structures and procedures should be in place *before* community-based initiatives commence, and should include mechanisms for securing adequate funding for preparation and prevention – in addition to relief and rehabilitation – elements.
- Less emphasis upon concrete project outputs such as training sessions, and more upon the impacts of those outputs.
- Be wary of pressures to standardise project or programme processes and procedures where this is likely to reduce project actors' capacity to respond flexibly to local-specific needs and situations, and generally to learn and evolve processes and approaches throughout the course of a given project.
- Focus upon process-based learning approaches, and ensure that appropriate mechanisms are incorporated in project framework. Avoid prioritising organisational learning over participant or project beneficiary learning, as this is contrary to the principle of the community-based approach.

9.4 Theoretical Contributions

In the context of the analysis and management of African environmental change, Bernstein and Woodhouse (2001) conclude that the challenge to 'conventional wisdom' "*is much needed but incomplete in its intellectual framework and agenda*". This, they claim, "*may usually be the case in the initial phase of any counter-narrative: that its analytical field of vision is fixed, and limited, by the characteristics of the discourses it seeks to contest*" (p.318). I find a great deal of parity between this position on conceptualising African environmental change, and my own findings on vulnerability in the Philippines. As is the case for environmental change, 'conventional wisdom' on hazards, disasters and related vulnerability analysis has been subject to a series of strands of counter narrative which build upon each other's prepositions, and which provide elements of an alternative approach in the field. The thesis adds to this narrative by providing cohesive synthesis of key elements of the debate. These elements include:

- emphasis upon the human (vulnerability) face of disaster analysis;
- the social construction of vulnerability (as a human state) by processes of development, marginalisation and exclusion within a political economy context;
- capacity as a counter-balance to vulnerability;
- the pivotal role played by livelihoods and social networks in shaping local-level vulnerability experiences;
- vulnerability as a socially constructed term, with its meanings and reach defined by circumstances and the inputs of various actors;
- the application of this growing alternative approach to vulnerability analysis, to disaster management policy and practice.

This said, the approach presented here may also be considered divisive in as far as it upholds the intrinsic value of all actor perspectives. Rather than searching for a set of absolute truths or values with which to explain vulnerability, the approach taken has been to build a holistic and context-sensitive overview of local-level vulnerability. This view is based upon different – and sometimes contradicting – understandings and analyses of given situations. In this manner, the researcher or analyst's role becomes one of making sense of disparity or of different representations of any given situation, process or set of events. Even for those who – through their belief in absolutes – cannot accept this position, it is

hoped that they will find value in my synthesis (into a cohesive whole) of key tenets of the 'alternative' approach or narrative.

To continue the parallel, Bernstein and Woodhouse (2001) argue that the current approach to environmental management contain a symptomatic avoidance of key processes in African farming which undermines its analytical value. In the same manner, I argue on the basis of my case study findings that – for the most part – the vulnerability approach to disasters has been unable to address wider vulnerability issues within its analytical framework. Most noticeably, processes and roles associated with social networks and livelihoods continue to be excluded from analysis of vulnerability, within a disaster context. In the disaster management field, environmental management – usually degradation – issues have begun to enter the debate. In the Philippines context, these are found generally to take the form of received wisdom about the negative impacts of such 'problems' as mangrove depletion and upland deforestation, and their potential for causing or aggravating disaster situations. Whilst I recognise the value of increasing awareness of these and other such issues, awareness is no alternative to their serious analysis in the context of wider analysis of vulnerability and the evolution of social processes, requiring a historical as well as contemporary dimension.

9.5 Further Research

In answering one set of questions, this research inevitably poses many others. It would be desirable to address a number of issues arising in further research. As such I have listed suggested areas of future research below. These are largely academic issues of particular relevance to vulnerability reduction policy and practice.

- Considerable work is required in strengthening our understanding of underlying causes of vulnerability, and of the complex linkages between different manifestations of vulnerability.

- In what ways can and do transforming structures and processes impact upon local vulnerability?[2] Historical perspectives may be particularly useful in this respect.[3]
- To what extent are the findings of this thesis on the capacity of community-based approaches such as those studied to reduce vulnerability, context-specific? Further empirical studies, based in different contexts are desirable.
- In practical terms, how can disaster and development initiatives be effectively linked?
- Further understanding of the mechanisms by which understandings and project outputs are shaped in the multiple arenas of the project interface is required, if we wish to be able influence these processes and potentially redress power imbalances.
- Are there *proven* mechanisms by which structural constraints to effective implementation of community-based approaches can be addressed, and if so, how context-specific are these?[4]

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[2] Adger (1999) provides a framework for examining social vulnerability in the context of climatic, environmental and institutional change in a transitional economy (Vietnam).
[3] For example, Winchester (2000) has researched the evolution and impacts of cyclone mitigation policy and programmes in Andhra Pradesh, India over a 20 year period (1977-97). He has rooted this research in historical processes covering most of the twentieth century, and their impact upon the region.
[4] Uphoff's (1992) 'Gal Oya' study provides some examples of structural constraints overcome in the context of a large-scale irrigation scheme. Further work in this vein would be desirable to increase our understanding of the longevity, transferability and long-term implications of such practices.

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Appendix A: Typhoon Data for Oriental Mindoro and Southern Leyte

The tables below list the typhoons which have passed within a 200 kilometre radius of the Provincial capitals of: 1) Oriental Mindoro (Calapan City) and 2) Southern Leyte (Maasin) between 1948 and 1999. Particularly destructive typhoons that have referred to specifically in interviews appear in bold in the tables.

Each of these typhoons had recorded wind speeds of over 117 kilometres per hour (kph). The tables do not include the many tropical depressions (wind speed: 35-63kph) and tropical storms (wind speed: 63-117kph) which also passed within a 200km radius of Calapan City and Maasin during this period. This data has been supplied by Ms. Rosa Perez from the Natural Disaster Reduction Branch of PAGASA (the Philippine Atmospheric, Geophysical and Astronomical Services Administration).

1) Calapan City, Oriental Mindoro: Typhoons passing within a 200km radius

Typhoons		Start Date And Time		End Date and Time		Minimum Distance from the Cyclone Path (kilometres)	
1	ROSE	23/07/48	1800	26/07/48	0600	191.4	25/07/48
2	TY4819	12/12/48	0600	16/12/48	0000	82.5	15/12/48
3	FRAN	26/12/50	1800	02/01/50	0600	117.1	30/12/50
4	IRIS	02/05/51	0000	09/05/51	1800	39.6	06/05/51
5	WANDA	18/11/51	0000	23/11/51	1200	94.3	21/11/51
6	LOIS	25/08/52	0600	26/08/52	1800	139.2	25/08/52
7	TRIX	17/10/52	0000	22/10/52	1800	18.9	22/10/52
8	VAE	14/10/52	1800	18/10/52	1800	83.2	17/10/52
9	WILMA	25/10/52	0000	28/10/52	1200	75.6	27/10/52
10	GLORIA	19/12/52	0000	23/12/52	1200	97.8	21/12/52
11	BETTY	27/10/53	0000	29/10/53	1800	138.4	28/10/53
12	PATSY	26/11/55	0000	02/12/55	1200	137.0	29/11/55
13	LUCILLE	13/11/56	0000	18/11/56	1800	195.8	16/11/56
14	POLLY	08/12/56	0600	10/12/56	1200	31.6	10/12/56
15	KATHY	18/10/58	0000	23/10/58	1800	74.3	21/10/58
16	GILDA	15/12/59	0000	20/12/59	1800	135.6	19/12/59
17	HARRIET	28/12/59	0000	02/01/59	1800	32.4	01/01/59
18	KAREN	20/04/60	0000	26/04/60	0600	182.7	23/04/60
19	OLIVE	24/06/60	0000	28/06/60	1800	125.7	26/06/60
20	KIT	03/10/60	0000	09/10/60	1800	31.6	07/10/60
21	HOPE	16/05/62	0600	21/05/62	1200	182.7	18/05/62

Appendix A: Typhoon Data

Typhoons		Start Date And Time		End Date and Time		Minimum Distance from the Cyclone Path (kilometres)	
22	JEAN	05/11/62	0000	08/11/62	0600	142.7	07/11/62
23	DADING	26/06/64	0600	30/06/64	1800	136.2	29/06/64
24	LUSING	15/07/64	0600	19/07/64	1800	142.5	17/07/64
25	KLARING	11/05/66	0000	22/05/66	1200	55.2	18/05/66
26	LOLENG	21/07/66	0000	24/07/66	1800	87.1	22/07/66
27	ANING	25/12/66	0000	30/12/66	0000	69.5	27/12/66
28	WELMING	01/11/67	0600	05/11/67	1800	111.6	04/11/67
29	SENING	11/10/70	0000	15/10/70	1800	109.7	13/10/70
30	YOLING	17/11/70	0000	20/11/70	1800	166.3	19/11/70
31	HERMING	25/05/71	0000	27/05/71	1800	59.7	26/05/71
32	MAMENG	23/06/71	0600	26/06/71	1800	32.4	25/06/71
33	NENENG	01/07/71	1200	05/07/71	1800	46.7	03/07/71
34	PEPANG	12/07/71	0000	16/07/71	1200	97.4	14/07/71
35	KONSING	23/06/72	0000	26/06/72	1800	117.9	25/06/72
36	TOYANG	04/11/72	1200	06/11/72	1800	108.2	05/11/72
37	UNDANG	01/12/72	1200	08/12/72	0600	196.7	05/12/72
38	UNDING	10/11/77	0000	17/11/77	0600	182.9	13/11/77
39	ATANG	18/04/78	0000	27/04/78	1800	85.8	20/04/78
40	WELING	24/09/78	0600	28/09/78	1200	31.2	27/09/78
41	YANING	07/10/78	0000	12/10/78	0000	176.0	09/10/78
42	KADING	25/10/78	0000	27/10/78	1200	189.0	26/10/78
43	BEBENG	13/04/79	0000	20/04/79	1200	57.8	17/04/79
44	PEPANG	16/09/79	0000	21/09/79	1200	33.8	19/09/79
45	URING	05/10/79	0000	11/10/79	0600	197.5	06/10/79
46	DALING	28/06/81	1200	02/07/81	0600	38.0	01/07/81
47	YEYENG	17/11/81	0000	21/11/81	0600	65.6	20/11/81
48	DINANG	23/12/81	0600	27/12/81	1800	46.7	26/12/81
49	NORMING	19/08/82	1800	03/09/82	1800	145.7	21/08/82
50	AURING	09/07/83	1200	11/07/83	1800	31.6	10/07/83
51	BEBENG	12/07/83	0600	16/07/83	0000	104.0	15/07/83
52	NITANG	31/08/84	0000	04/09/84	0600	170.3	03/09/84
53	PASING	10/10/86	0000	15/10/86	1800	58.7	12/10/86
54	HERMING	08/08/87	0000	14/08/87	0000	48.5	12/08/87
55	SISANG	23/11/87	0000	27/11/87	0000	21.9	26/11/87
56	TRINING	14/12/87	1200	19/12/87	0000	62.9	17/12/87
57	ASIANG	14/01/88	0000	18/01/88	0000	20.1	16/01/88
58	YONING	05/11/88	0000	09/11/88	0000	92.6	07/11/88
59	BINING	15/05/89	1200	19/05/89	0000	53.4	17/05/89
60	KURING	04/06/89	1200	08/06/89	1800	108.3	07/06/89
61	ETANG	09/07/91	0600	11/07/91	1800	33.8	10/07/91
62	PARING	18/10/92	0600	27/10/92	0000	164.4	26/10/92
63	**MONANG**	**03/12/93**	**0000**	**07/12/93**	**1800**	**31.2**	**06/12/93**
64	**NANING**	**06/12/93**	**0000**	**12/12/93**	**1800**	**92.1**	**10/12/93**
65	KATRING	18/10/94	0000	23/10/94	0000	99.8	21/10/94
66	GARDING	19/12/94	0000	24/12/94	0000	148.0	22/12/94
67	ROSING	31/10/95	0000	04/11/95	1200	119.6	03/11/95
68	LOLENG	15/10/98	0600	25/10/98	0600	197.8	22/10/98
69	**NORMING**	**09/12/98**	**0000**	**11/12/98**	**1200**	**129.4**	**11/12/98**

2) Maasin, Southern Leyte: Typhoons passing within a 200km radius

Typhoons		Start Date and Time		End Date and Time		Minimum Distance from the Typhoon Path	
2	TY4819	12/12/48	0600	16/12/48	0000	136.0	14/12/48
4	TY4917	30/10/49	1800	03/11/49	1200	71.4	01/11/49
7	BETTY	03/12/49	0000	07/12/49	1200	86.4	04/12/49
8	DELILAH	19/11/50	0000	22/11/50	0600	75.9	20/11/50
9	IRIS	02/05/51	0000	09/05/51	1800	184.5	05/05/51
10	WANDA	18/11/51	0000	23/11/51	1200	186.7	20/11/51
11	AMY	05/12/51	1200	16/12/51	0000	57.6	09/12/51
12	EMMA	30/06/52	0000	04/07/52	1800	29.6	02/07/52
13	WILMA	25/10/52	0000	28/10/52	1200	151.2	26/10/52
16	ELSIE	05/05/54	0000	09/05/54	0600	38.0	07/05/54
17	TILDA	27/11/54	0000	30/11/54	1800	96.2	29/11/54
19	**PATSY**	**26/11/55**	**0000**	**02/12/55**	**1200**	**124.4**	**28/11/55**
24	KAREN	20/04/60	0000	26/04/60	0600	93.0	21/04/60
27	HOPE	16/05/62	0600	21/05/62	1200	75.5	16/05/62
29	LUCY	25/11/62	1200	29/11/62	0000	38.4	27/11/62
31	INING	16/11/64	0600	21/11/64	0600	6.3	19/11/64
34	KLARING	11/05/66	0000	22/05/66	1200	144.9	15/05/66
36	ANING	25/12/66	0000	30/12/66	0000	197.3	26/12/66
37	BEBENG	02/03/67	0000	05/03/67	1800	40.2	03/03/67
38	YAYANG	06/11/67	0000	09/11/67	0600	97.6	07/11/67
39	REMING	13/11/68	0000	21/11/68	1800	40.9	19/11/68
40	SENIANG	21/11/68	0000	26/11/68	1200	149.9	24/11/68
41	ATRING	19/04/69	0000	24/04/69	1200	142.5	24/04/69
48	MAMENG	23/06/71	0600	26/06/71	1800	163.0	25/06/71
49	NENENG	01/07/71	1200	05/07/71	1800	151.7	03/07/71
50	PEPANG	12/07/71	0000	16/07/71	1200	191.6	14/07/71
51	GOYING	19/10/71	0600	22/10/71	0000	107.3	20/10/71
52	ASIANG	05/01/72	0000	09/01/72	0000	40.5	08/01/72
53	KONSING	23/06/72	0000	26/06/72	1800	198.0	24/06/72
54	UNDANG	01/12/72	1200	08/12/72	0600	93.6	03/12/72
58	AURING	23/01/75	0000	25/01/75	1800	22.0	24/01/75
61	YEYENG	31/12/77	0600	03/01/77	0000	64.7	02/01/77
62	ATANG	18/04/78	0000	27/04/78	1800	145.0	20/04/78
63	BEBENG	13/04/79	0000	20/04/79	1200	80.5	15/04/79
73	**BISING**	**23/03/82**	**0000**	**29/03/82**	**0000**	**42.9**	**26/03/82**
74	**NORMING**	**19/08/82**	**1800**	**03/09/82**	**1800**	**155.7**	**20/08/82**
75	**NITANG**	**31/08/84**	**0000**	**04/09/84**	**0600**	**16.2**	**02/09/84**
77	**UNDANG**	**03/11/84**	**0000**	**06/11/84**	**1200**	**174.6**	**05/11/84**
79	PASING	10/10/86	0000	15/10/86	1800	159.5	11/10/86
81	ANING	20/12/86	0000	24/12/86	0600	79.1	21/12/86
82	BIDANG	30/12/86	0000	01/01/86	0600	103.6	31/12/86
83	TRINING	14/12/87	1200	19/12/87	0000	174.2	16/12/87
85	WELPRING	01/11/88	1200	05/11/88	0000	82.3	02/11/88
86	YONING	05/11/88	0000	09/11/88	0000	163.0	07/11/88
87	BINING	15/05/89	1200	19/05/89	0000	188.7	16/05/89
88	KURING	04/06/89	1200	08/06/89	1800	135.1	06/06/89
89	**RUPING**	**10/11/90**	**0000**	**14/11/90**	**1800**	**51.3**	**12/11/90**
98	PURING	25/12/93	0000	29/12/93	1200	71.2	26/12/93

Appendix A: Typhoon Data

Typhoons		Start Date and Time		End Date and Time		Minimum Distance from the Typhoon Path	
100	BISING	01/04/94	0000	09/04/94	0600	48.1	04/04/94
101	GARDING	19/12/94	0000	24/12/94	0000	99.8	21/12/94

Appendix B: Interviews and Focus Group Discussions

This appendix lists the details of all of the interviews and formal discussion groups conducted during the main body of my field research in the Philippines. Informal discussions during fieldwork also provided an important source of background information. These are not listed here, but are referred to in the main body of the thesis where appropriate. Information contained in published and unpublished documents and reports is listed in the bibliography. Note that the numbers allocated here do not correspond to the interview references listed in the main body of the thesis in order to respect the privacy of interviewees – and in some instances for reasons of confidentiality. For this reason, community members, other than officials and key persons who gave their express permission to be interviewed and quoted as such, are not named.

Barangay Official Interviews

Mayabig:

1. Captain S. Bautista (interviews: 9 May 1999; 22 May 1999)
2. Councillor D. Arnillo, rep. Sitio Centro (interview: 26 April 1999)
3. Councillor P. Binay, rep. Sitio Balikat (interview: 20 April 1999)
4. Councillor E. Fernandez, rep. Sitio Boulevard (interview: 11 April 1999)
5. Councillor M. Aldovino, rep. Sitio Sibagan (interview: 21 April 1999)
6. Councillor A. Quinones, rep. Sitio Pook (interview: 8 May 1999)
7. Councillor R. Salazar, rep. Sitio Alwas (interview: 19 April 1999)
8. Councillor F. Sales, rep. Sitio Greenhills (interview: 12 April 1999)

Tigbao:

9. Captain D. Hermogino (interviews: 15 June 1999, 5 July 1999)
10. Mr S. Encluna, Brgy. Treasurer (interviewed: 16 June 1999)
11. Mr M. Ranque, Porok I President (interview: 2 July 1999)
12. Mr dela Pena, Porok II President (interview: 2 July 1999)
13. Mr R. Palima Porok III President (interview: 5 July 1999)

Key Barangay Persons Interviews

Mayabig:

14. Mr C. Aceveda, rep. Farmers Association (interview: 6 May 1999)
15. Mr C. Bautista, former barangay Captain (1972-82) and former President of the Mayabig Farmers Irrigators Association (interview: 16 April 1999)
16. Mr F. Binay, vice Pres. Pinay Buklod Association (interview: 26 April 1999)
17. Mrs M. Catapang, Barangay Health Worker (BHW) (interview: 12 April 1999)
18. Mr A. Quinones, Pres. Mayabig Farmers Irrigators Association and Chairman Botika Binhi (community pharmacy) (interview: 17 May 1999)
19. Mrs A. Viana, Head BHWs and Barangay Nutritional Scholar (interview: 13 April 1999)
20. Mr L. Viana, rep. Plan International (Pres. Pinay Buklod Association – PO established under Plan International) (interview: 18 April 1999)

Tigbao:

21. Mrs T. Cahucon, church rep. (interview: 5 July 1999)
22. Pastor D. Depaz, Brgy. Justice, church rep. (interview: 5 July 1999)
23. Mr J. Endriga, Tigbao, Libagon Irrigators Association (interview: 1 July 1999)
24. Mrs R. Espedilla, BHW (interview: 2 June 1999)
25. Mrs A. Lim, BHW (interview: 2 June 1999)
26. Mr R. Magdula, Brgy. Justice (interview: 5 July 1999)
27. Mrs R. Ranque, Brgy. Justice (interview: 5 July 1999)
28. Mr S. Ranque, Co-operative President, Elementary headmaster (interview: 1 July 1999)
29. Mrs P. Tipey, BHW (interview: 2 July 1999)
30. Mr Yamson, former Brgy. Captain (1980s) (interview: 23 June 1999)

PNRC Trainees Interviews

Mayabig Barangay Disaster Action Team members:

31. Mrs A. Amillo (interview: 13 April 1999)
32. Mr D. Amillo (interview: 26 April 1999)
33. Mrs P. Beri (interview: 16 April 1999)
34. Mrs M. Catapang (interview: 12 April 1999)
35. Mr H. Provido (interview: 13 April 1999)

Group Discussions

Mayabig:

36. Barangay Officials, Captain, Councillors and Brgy. Secretary: Capn. S. Bautista, Cr. M. Aldovino, Cr, D. Amillo, Cr. P. Binay, Cr. A. Quinones, Cr. R. Salazar, Cr. F. Sales, Mrs A. Amillo (interview: 11 May 1999)
37. Mangyan residents: Mr B. Alferez, Mr A. Maayon, Mr R. Montano (interview: 15 May 1999)
38. Disaster Response Team members: Capn. S. Bautista, Cr. E. Fernandez, Cr. A. Quinones, Cr. F. Sales, Cr. D. Amillo (interview: 16 Aug. 1999)

Tigbao:

39. Barangay Captain and Councillors (Kagawad): Capn. D. Hermogino, Cr. L. Basagan, Cr. Cr. Escabillas, Cr. V. Paitan, Cr. F. Piquero, Cr. A. Ranque, Cr. B. Ranque, Cr. E. Ranque, Cr. D. Salem
40. Barangay Disaster Action Team members: Capn. D. Hermogino, Ms. A. Cahucom, Ms. L. Espedilla, Mr D. Ranque, Mr E. Saldivar, Ms. A. Timkang, Mr I. Vertudazo, Mr R. Yamson

Barangay Community Member Interviews

Mayabig:

Mangyan Settlement (interview: 15 May 1999)

41. Male, agricultural labour (interview: no. 52)

Sitio Alwas (interviews: 16 and 19 April 1999)

42. Female, landowning farmer (husband) (interview no. 9)
43. Female, engineering (husband), landowning farmer (husband) (interview no. 10)
44. Male, landowning farmer (interview no. 11)
45. Female, landowning farmer (husband), agricultural labour (husband) (interview no. 13)
46. Female, elementary teacher, tenant farmer (husband) (interview no. 14)
47. Female, landowning farmer (husband) (interview no. 16)
48. Male, elementary head teacher (wife), retired farmer (interview no. 17)

Sitio Balikat (interviews: 13, 21 and 23 April 1999)

49. Female, trader (agricultural produce), tenant farmer (interview no. 22)
50. Female, tricycle driver (husband), landowning farmer (husband) (interview no. 23)
51. Husband and wife, trader, tenant farmer, welder (interview no. 30a)
52. Female, tenant farmer (husband) (interview no. 51)

Sitio Boulevard (interviews: 22 April 1999)

53. Female, agricultural labour (husband) (interview no. 24)
54. Female, agricultural labour (husband) (interview no. 25)
55. Female, agricultural labour (husband) (interview no. 26)
56. Female, tenant farmer (husband), agricultural labour (husband) (interview no. 27)
57. Female, secondary teacher, jeepney driver (husband), catering (husband) (interview no. 28)
58. Female, agricultural labour (husband) (interview no. 29)

Sitio Centro (interviews: 26 April and 7 May 1999)

59. Husband and wife, landowning farmer (interview no. 36)
60. Husband and wife, landowning farmer (interview no. 38)
61. Female, elementary teacher, farming (husband) (interview no. 39)
62. Female, retired elementary teacher, landowning farmer (husband) (interview no. 40)
63. Female, former municipal Councillor, landowning farmer (husband) (interview no. 41)
64. Husband and wife, tenant farmer (interviews no. 42)

Sitio Greenhills (interviews: 12-13 April 1999)

65. Female, BHW (interview no. 3)
66. Male, landowning farmer (interview no. 5)
67. Husband and wife, informal education teacher, agricultural labour (interview no. 6)
68. Male, Store owner, livestock-raising (interview no. 7)
69. Female, agricultural labour (husband), trader (husband) (interview no. 8)

Sitio Pook (interviews: 26 April, 8 and 17 May 1999)
70. Male, landowning farmer (interview no. 37)
71. Female, carpentry (husband) (interview no. 43)
72. Female, agricultural labour (husband) (interview no. 45)
73. Female, agricultural labour (husband) (interview no. 46a)
74. Female, tenant farmer (husband) (interview no. 46b)
75. Husband and wife, plantation caretakers (interview no. 55)
76. Female, BHW, tenant farmer (husband) (interview no. 56)

Sitio Sibagan (interviews 21 and 24 April)
77. Male, agricultural labour (interview no. 19)
78. Husband and wife, tenant farmer (interview no. 20)
79. Husband and wife, agricultural and construction labour (interview no. 21)
80. Elderly widow, retired agricultural labourer (interview no. 30b)
81. Female, carpentry (husband), tenant farmer (husband) (interview no. 31)
82. Male, carpentry and agricultural labour (interview no. 32)
83. Female, tenant farmer (husband), construction labour (husband) (interview no. 33)
84. Husband and wife, tenant farmer (interview no. 34)

Tigbao:
Barangay Road Area (interviews: 22 June 1999)
85. Female, fishing (husband), hollow block-making (husband) (interview no. 29)
86. Female, welder (husband) (interview no. 30)
87. Male (father and son), fishing, landowning farmer (interview no. 31)
88. Male, landowning and tenant farmer (interview no. 32)

Highway Area (interviews: 21-23, 25 and 28 June 1999)
89. Female, agricultural labour (husband) (interview no. 40)
90. Elderly widow, remittances (interview no. 41)
91. Female, landowning farmer (husband) (interview no. 42)
92. Widow, landowning farmer (interview no. 43)
93. Female, store owner (interview no. 44)
94. Male, store owner (interview no. 45)
95. Male, tenant farmer, construction labour (interview no. 46)
96. Male, landowning farmer (interview no. 47)
97. Husband and wife, tenant farmer, store owner, remittances (interview no. 22)
98. Husband and wife, tenant farmer (interview no. 23)
99. Female, tenant farmer (husband), hog-raising, store owner (interview no. 24)
100. Female, fishing (husband) (interview no. 25)
101. Male, fishing (interview no. 26)
102. Female, labour (husband), fishing (husband) (interview no. 27)
103. Male, tenant farmer, landowning farmer, elementary teacher (wife) (interview no. 28)
104. Female, tenant farmer (husband) (interview no. 48)
105. Female, bakery worker, delivery work (husband) (interview no. 49)

Ilaya Village (interviews: 22-23 June 1999)

106. Female, seaman (husband) (interview no. 33)
107. Female, agricultural labour (husband) (interview no. 34)
108. Female, tenant farmer (husband) (interview no. 35)
109. Female, tenant farmer (husband) (interview no. 36)
110. Female, carpenter (husband) (interview no. 37)
111. Husband and wife, tenant farmer (interview no. 38)
112. Female, landowning farmer (husband) (interview no. 39)

Korea (interviews: 28 and 30 June, 1 July 1999)

113. Female, retired farmer (father), remittances (interview no. 50)
114. Male, landowning farmer (father) (interview no. 51)
115. Female, store owner (mother) (interview no. 52)
116. Female, landowning and tenant farmer (husband), store owner, remittances (interview no. 53)
117. Male, store owner (interview no. 54)
118. Elderly widow, landowning farmer (children) (interview no. 55)
119. Male, tenant farmer (interview no. 56)
120. Female, tenant farmer (father) (interview no. 57)
121. Female, agricultural and construction labour (husband) (interview no. 58)
122. Female, agricultural and construction labour (husband) (interview no. 59)
123. Male, fishing, landowning farmer (interview no. 60)
124. Widow, landowning farmer, remittances (interview no. 61)
125. Female, agricultural labour (husband) (interview no. 62)
126. Female, landowning farmer (interview no. 63)

Lutao (interviews: 16-18 June 1999)

127. Male, landowning farmer, fishing (interview no. 2)
128. Male, agricultural labour (interview no. 3)
129. Female, landowning farmer (husband) (interview no. 4)
130. Male, landowning farmer, agricultural labour (interview no. 6)
131. Husband and wife, agricultural labour (interview no. 7)
132. Male, landowning farmer, fishing (interview no. 8)
133. Husband and wife, farmer (interview no. 9)
134. Female, landowning farmer (husband) (interview no. 10)
135. Female, agricultural labour (father) (interview no. 11)
136. Female, bus driver (interview no. 12)
137. Husband and wife, landowning farmer, fishing (interview no. 13)
138. Male, landowning farmer (interview no. 14)
139. Female, tenant farmer, hollow block-making, agricultural labour (interview: no. 15)
140. Female, landowning farmer (interview no. 16)
141. Male, fishing (interview no. 17)
142. Female, agricultural labour (interview no. 18)
143. Female, fishing, agricultural labour (interview no. 19)
144. Male, fishing (interview no. 20)
145. Male, fishing (interview no. 21)

PNRC Interviews

PNRC Headquarters, Manila:

146. Mr J. Sian, DMS Manager (interview: 4 March 1999)
147. Mr R. Malibiran, ICDPP Co-ordinator (interview: 6 Aug. 1999)

PNRC Chapters: Oriental Mindoro and Southern Leyte

148. Mr A.Villacrusis, DMS Oriental Mindoro Chapter (interview: 9 March 1999)
149. Mr D. Atienza, ICDPP Southern Leyte Project Manager (interview: 12 June 1999)
150. Mr G. Cabarubias, ICDPP Southern Leyte Project Staff (interview: 9 June 1999)
151. Mr R. Narit, ICDPP Southern Leyte Community Development Officer (interview: 12 June 1999)

Local Government Interviews

Oriental Mindoro Province:

152. Mr Umali, Provincial Administrator Province of Oriental Mindoro (interview: 30 April 1999)
153. DENR (Department of the Environment and Natural Resources) staff discussion (25 May 1999)
154. Mr T. Mageamit, Low-Income Upland Communities Project (LIUCP) DENR Oriental Mindoro Province (interview: 25 May 1999)
155. Mr R. Soriano, District Engineer, Department of Public Works and Highways (DPWH) Oriental Mindoro Province (interview: 29 April 1999)
156. Mr R. Wamil, Technical Services and Training Division, Department of the Interior and Local Government Oriental Mindoro Province (interview: 29 April 1999)

Baco Municipality, Or. Mindoro

157. Mayor's Office, Municipality of Baco, Oriental Mindoro: Mayor G. dela Chica; Civil Registrar Mr R. Aceveda; Engineer Mr C. Reyes (interview: 11 May 1999)

Southern Leyte Province

158. Governor R. Lerias, Province of Southern Leyte (interview: 21 July 1999)
159. Ms I. Estela, Department of Planning and Development, Southern Leyte Province (interview: 23 July 1999)
160. Mrs M. Gador, Department of Agriculture (DA), Southern Leyte Province (interview: 26 July 1999)
161. Ms R. Kuizon, Department of Social Welfare and Development, Southern Leyte Province (interview: 22 July 1999)
162. Mr F. Matibag, DA, Southern Leyte Province (interview: 26 July 1999)
163. Mr V. Macopid, DA, Southern Leyte Province (interview: 26 July 1999)
164. Mr F. Ozon, Information Officer, Department of the Environment and Natural Resources, Southern Leyte Province (interview: 13 July 1999)
165. Mr M. Pedalino, Public Information Officer, Public Information Agency, Southern Leyte Province (interview: 27 July 1999)

Libagon Municipality, So. Leyte

166. Mayor D. Espina, Municipality of Libagon, Southern Leyte (interview: 29 June 1999)
167. Ms E. C. Arado, Department of Social Welfare and Development, Libagon Municipality (interview: 12 July 1999)
168. Mr R. Endico, Planning and Development Co-ordinator, Libagon Municipality, Southern Leyte (interview: 7 July 1999)

NGO/PO Interviews

169. Mrs E. Blanco, Kalakbay Foundation facilitator (interview: 11 May 1999)
170. Ms C. Cagurol, KUFA (PO) President and Brgy. Kahupian, Sogod (interview: 15 July 1999); also
171. Mr Bernhal and Mr Okren, Brgy. Kahupian, Sogod project area (interviews: 15 July 1999)
172. Mrs M. del Mundo, Kalakbay Foundation senior staff (interview: 21 May 1999)
173. Mr A. Tugas, KPLN ('Kapulungan para sa Lupaing Ninuno', NGO – Mangyan land rights) Co-ordinator (interview: 29 May 1999)

Appendix C: Example of a Semi-structured Interview Checklist

BARANGAY COMMUNITY MEMBER INTERVIEW CHECKLIST

1. <u>Introduction</u>
Interviewer
Research Project
Interview Purpose
Emphasize that will respect anonymity where asked to do so

2. <u>Personal Details</u>
2.1 Name
2.2 M/F
2.3 Family Details:
Married/Widowed?
Children? (no., ages, occupations, educational and employment aspirations)
2.4 Age Group (approximate)
2.5 Place of Residence:
Barangay
Sitio/Purok/Hamlet
2.6 Place of Origin
Spouse's place of origin
If from outside, reasons for settling in barangay
2.7 Official Role(s)

3. <u>Livelihoods</u>
3.1 Primary Occupation(s)
3.2 Secondary Occupation(s)

<u>Farming</u>:	Landowner/Tenant/Labourer	<u>Own Consumption/Sale</u>
<u>Produce</u>:	Rice	
	Coconut palms	
	Copra	
	Fruit trees	
	Root crops	
	Other	
<u>Fishing</u>:	Full/Shared Ownership Boat/Equipment	
	Own Consumption/Sale	

<u>Cash Income/Remittances</u>

Wage labour
Other
3.3 Any Livelihood Changes? If so What and Why?
3.4 Biggest Difficulties faced in Livelihood?
Periodic Difficulties
Exceptional Difficulties
Limiting Factors
3.5 Coping Strategies

4. Experience of Important Events/Changes and Vulnerability within the Community (considered significant for...)

Wider Community
Those Close to (circle of Family and Friends)
Individual
4.1 What Happened?
4.2 Why do you consider these Events/Changes/forms of Vulnerability to be Important?
4.3 Who has been Most/Least Affected and Why?
4.4 Have these Experiences Influenced Life in the Wider Community after their Occurrence? How?
4.5 Have these Experiences Influenced Life for your Family and Friends after their Occurrence? How?
4.6 Have these Experiences Influenced you Personally? How?
4.7 Positive and Negative Impacts:
Short-term Impacts
Medium to Long-term Impacts
4.8 Causes:
Direct
Indirect
4.8 Which (in your opinion) are the Most Significant Types of Change, Events or forms of Vulnerability and Why?

5. Community-based Action

5.1 How do People in the Community Cope with Sudden Change and Difficult Times?
5.2 Are there any Types of Action that can be taken by Community Leaders in such Situations? What are these?
5.3 Are there any Types of Action that can be taken by Members of the Community Working Together? What are these?
5.4 Are there any Types of Action that can be taken by certain Groups within the Community (e.g. POs, Fisherfolks etc)?
5.5 Are there any Types of Action that can be taken by Individuals or Families? Could you give me some Examples?

6. <u>Red Cross Role</u>

6.1 Are you aware of any Activities of Red Cross Staff or Volunteers in your Community?
6.2 Could you describe these Activities?
6.3 What, in your opinion, is the Purpose of these Activities?
6.4 In your opinion, are there any Positive Outcomes of these Activities? What are these?
6.5 In your opinion are there any Negative Outcomes of these Activities? What are these?
6.6 Do you think that Red Cross Involvement in the Community has Influenced Community Life? How?
6.7 Do you think that Red Cross Involvement in the Community has Influenced Life for your Family and Friends – for the People Close to you? How?
6.8 Has Red Cross Involvement in the Community Influenced you Personally? How?

7. <u>Disaster Management</u>

7.1 Is Disaster Management Important in the Community? Why/Why Not? Which types?
Planning
Preparedness
Mitigation
Warnings and Evacuation
Rescue, Relief and Rehabilitation

7.2 Who is Responsible for Disaster Management in the Community? Why?
7.3 Are you aware of any Disaster Management Measures that have been – or are now being – Implemented in the Community?
7.4 Have You or any of your Family Members been Involved in any Disaster Management Activities for the Community? When was this?
7.5 Do you Plan in any way for Disaster Situations such as bad flooding or storm surge? Is there any way that You and your Family and Friends can Prepare for such events? How do you Respond to such events?
7.6 In the Past, do you remember (or have you heard about) People Preparing for Disasters? Was this in the Same Ways, or in Different Ways? If there has been Change, can you think of any Reasons for this?
7.7 Do you think that Disaster Management in the Community will Change in the future? If so, in What Ways will these Activities Change? Why do you think this?

8. Other

8.1 Is there anything you would like to Add, or Change about what you have told me?
8.2 Are there Any Questions that you think I should have asked that I have not?

9. Conclusions

Thank-you
Reiterate where info going, and also who eventual findings will go to.

Appendix D: List of Acronyms

BDAT	Barangay Disaster Action Team (ICDPP, PNRC trained local volunteers)
BDCC	Barangay Disaster Co-ordinating Council (local government council)
BMKF	Baco Mangyan Kalakbay Foundation (NGO supporting Mangyan development, Or. Mindoro
BRC	British Red Cross
CBFM	Community-based Forest Management, government programme
DA	Department of Agriculture (Philippine Government body)
DCC	Disaster Co-ordinating Council
DENR	Department of the Environment and Natural Resources (Philippine government body)
DILG	Department of the Interior and Local Government (Philippine Government body)
DPWH	Department of Public Works and Highways (Philippine Government body)
DRT	Disaster Response Team (DMS, PNRC trained local volunteers)
DSWD	Department of Social Welfare and Development (Philippine government body)
DMS	Disaster Management Service (of PNRC)
DMS-CBDP	Community-based Disaster Preparedness Project of Disaster Management Service (of PNRC)
DRC	Danish Red Cross
GBP	British Pound (Sterling)
ICDPP	Integrated Community Disaster Planning Programme (of PNRC)
IFRC	International Federation of Red Cross and Red Crescent Societies
KPLN	Kapulungan Para sa Lupaing ('Land is Life') (NGO supporting Mangyan development, Or. Mindoro)
KUFA	Kahupian Upland Farmers Association (PO established under CBFM, brgy. Kahupian, Sogod, So. Leyte)
LGU	Local Government Unit
LIUCP	Low-Income Upland Communities Project (Philippine government initiative, under DENR)
MDCC	Municipal Disaster Co-ordinating Council (local government council)
NGO	Non-governmental Organisation
NIA	National Irrigation Association (Philippine government body)
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration (Philippine government body)
PDCC	Provincial Disaster Co-ordinating Council (local government council)
PO	People's Organisation
PNRC	Philippine National Red Cross