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**DISASTER RESILIENCE IN
DEVELOPMENT AND
HUMANITARIAN INTERVENTIONS**

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PhD

2009

**DISASTER RESILIENCE IN
DEVELOPMENT AND
HUMANITARIAN INTERVENTIONS**

SIAMBABALA BERNARD MANYENA

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of the requirements of the
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Abstract

The connections between disaster recovery and the resilience of affected communities have become common features of disaster risk reduction programmes since the adoption of The Hyogo Framework for Action (HFA) 2005–2015. Increasing attention is paid to the capacity of disaster-affected communities to recover with little or no external assistance following a disaster. This highlights the need for a change in the disaster risk reduction work culture, with stronger emphasis being put on resilience rather than just needs or vulnerability. The aim of this thesis is to determine the extent to which development and humanitarian interventions promote resilience in disaster-prone areas. Three case studies with elements of resilience building were examined in 2002, 2004 and 2005 using an evaluation framework. Survey and participatory interviewing methods involving more than 1200 participants were employed to gain insights from the implementation of: The Catholic Commission for Justice and Peace in Zimbabwe; The Institutional Support Project in Ethiopia; and The Agricultural Rehabilitation Project in East Timor. There are no easy answers for enhancing disaster resilience through development and humanitarian interventions. However, four conclusions emerging from this study contribute to the emerging disaster resilience body of knowledge, spanning social science disciplines such as geography, environmental management and sociology. Firstly, disaster resilience is the ability to ‘bounce forward’ rather than ‘bounce back’ following a disaster. The notion of ‘bounce back’ implies the capacity to return to a pre-disaster state, which fails to capture the ‘new’ reality created by the disaster. ‘Bounce forward’ encapsulates community continuity within the context of changed realities brought about by the disaster. Secondly, resilience and vulnerability are confirmed as discrete constructs, the one not being the ‘flip side’ of the other. Thirdly, local resilience to disasters is about agency, albeit in a political and economic context. Community agency continuously creates and re-creates, and owns and controls the disaster institutional structures. Fourthly, resilience building resonates with the *contiguuum* approach - it can occur at any phase or multiple phases of the disaster cycle. Thus, the process of resilience building does not necessarily need to adopt a ‘linear’ or *continuum* approach. The contiguuum approach offers opportunities for linking (existing) resilience, relief, rehabilitation and development (LRRRD). Finally, on the basis of the author’s broader experience with similar evaluations elsewhere, the findings of this thesis are robust and generalisable and would not have been significantly different, if different case studies were used. Similarly, the focus of this thesis has been on structures and evaluation processes and outcomes; a different approach might have given rise to different findings.

Dedication

To my mother and my late father

Vuvu 'Zunga' Munsaka and Josiya Manyena Munsaka

to whom I owe everything

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Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work.

Name:

Signature:

Date:

Abbreviations and acronyms

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ALNAP	Active Learning Network for Accountability and Performance in Humanitarian Action
ANRS	Amhara National Regional State
ARP	Agricultural Rehabilitation Project
ASC	Agriculture Service Centre
BC	Before Christ
BCDP	Binga Community Development Project
BIDA	Binga Development Association
BOD	Board of Directors
BRDC	Binga Rural District Council
CADEC	Diocese Catholic Development Commission
CAFOD	Catholic Fund for Overseas Development
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBO	Community Based Organisation
CCJP	Catholic Commission for Justice and Peace
CEP	Community Empowerment Project
CFET	Consolidated Fund for East Timor
CIDA	International Development Agency
CNRT	National Council for Timorese Resistance
CRDA	Christian Relief and Development Association
CRED	Centre for Research on the Epidemiology of Disasters
CRS	Catholic Relief Services
DAC	Development Assistance Committee
DANIDA	Danish International Development Agency
DAO	District Agriculture Offices
DDC	Disaster and Development Centre
DDG	District Development Grants
DEAP	District Environment Action Project
DEC	Disaster Emergency Committee
DFID	Department for International Development
DNPWM	Department of National Parks and Wildlife Management
DPPA	Disaster Prevention and Preparedness Agency

DRR	Disaster Risk Reduction
ECHO	European Commission Humanitarian Aid Office
EEWS	Ethiopian Early Warning System
EGS	Employment Generation Scheme
EGS	Employment Generation Scheme
ESAP	Economic Social Adjustment Programme
ETB	Ethiopian Birr
EW	Early Warning
EWS	Early Warning System
FAO	Food and Agricultural Organisation
FBO	Faith Based Organisation
FHI	Food for Hungry International
FOM	Farmer Ownership Model
GDI	Gender-related development index
GDP	Gross Domestic Product
GDP	Gross domestic product
GoE	Government of Ethiopia
GoTL	Government of Timor Leste /East Timor
HDI	Human Development Index
HFA	Hyogo Framework of Action 2005-2015
HH	Household
HIV	Human Immune Virus
IAD	Institutional Analysis and Development
ICRC	International Committee of the Red Cross
IDNDR	International Decade for Natural Disaster Reduction (1990-1999)
IFRC	International Federation of the Red Cross and Red Crescent Societies
IGO	International Organisation
ILK	indigenous local knowledge
IMF	International Monetary Fund
INTERFET	International Force for East Timor
ISP	Institutional Support Project
JAM	Joint Assessment Mission
LAN	Local Area Network
LD	Line Department
LDC	Low Development Country

LRRD	Linking Relief, Rehabilitation and Development
LWA	Livestock Workers Association
MAFF	Ministry of Agriculture, Forest and Fisheries
MDC	Movement for Democratic Change
MS	Danish Association for International Co-operation
NDPPS	National Disaster Prevention and Preparedness Strategy
NGO	Non-governmental organisation
NPDPM	National Policy for Disaster Prevention and Management
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
ONRS	Oromia National Regional State
ORDA	Organization for Rehabilitation and Development in Amhara
PA	Peasant Association
PAAP	Poverty Alleviation Action Project
PAR	Pressure and Release Model
PASCs	Pilot Agriculture Service Centres
PD&NRM	Participatory Development and Natural Resources Management
PMU	Project Management Unit
PRSP	Poverty Reduction Strategy Paper
PSTD	Post stress traumatic disorders
RBL	Resilience-building learning
RDC	Rural District Council
RDCCBP	Rural District Council Capacity Building Programme
RDDC	Rural District Development Committee
RDF	Rural Development Fund
REST	Relief Society of Tigray
RFOs	Relief Food Outlets
RRC	Relief and Rehabilitation Commission
RTE	Real-time evaluation
RTL	Radio Timor-Leste
SAP	Structural Adjustment Programme
SFP	Supplementary Feeding Programme
SL	Sustainable livelihoods Framework
SPSS	Statistical Package for Social Science
SSDD	Social Science Definition Disease

TFET	Trust Fund for East Timor
TGE	Transitional Government of Ethiopia
TNC	Transnational Company
TOLACO	Tonga Language and Cultural Organisation
ToT	Trainer of the trainer
TPLP	Tigray People's Liberation Front
UK	United Kingdom
UN	United Nations
UNAMET	UN Mission in East Timor
UNDP	United Nations Development Programmes
UNICEF	United Nations Children and Education Fund
UNISDR	United Nations International Strategy for Disaster Reduction
UNTAET	UN Transitional Administration of East Timor
US	United States of America
USAID	United States Agency for International Development
VARA	vulnerability and resilience assessment
VCA	Vulnerability and Capacity Assessment
VIT	village implementation teams
VLWs	Village Livestock Workers
WAN	Wide Area Network
WCD	World Commission on Dams
WCDR	World Conference on Disaster Reduction
WFP	World Food Programme
WUA	Water Users Association
ZANU (PF)	Zimbabwe African National Union (Patriotic Front)
ZCC	Zimbabwe Council of Churches

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CHAPTER ONE

CONTEXTUALISING DISASTER RESILIENCE IN DEVELOPMENT AND HUMANITARIAN INTERVENTIONS

1.1 The context

The world continues to face disasters on an unprecedented scale. Between 1994 and 2003 more than 255 million people were affected by ‘natural’ disasters¹ globally each year. During the same period 58 000 lives were lost each year. The economic cost has increased 14-fold since the 1950s to US\$67 billion per year (Guha-Sapir, Hargitt and Hoyois, 2004). The need to reduce disaster risks has increasingly become more urgent than ever before.

The emphasis of The Hyogo Framework of Action 2005–2015 (HFA) on the connections between resilience and recovery has added a new impetus to what affected communities can do for themselves and how to strengthen their capacities, rather than concentrating on their vulnerability to disaster or their needs in emergency (IFRC, 2004; Twigg, 2007). There is a renewed focus on the capacity of disaster-affected communities to recover from a disaster with little or no external assistance. Yet, there are conceptual and practical challenges around the resilience, development and humanitarian nexus.

There are various explanations and motivations for studying disaster resilience, development and humanitarian connections. Exploring conceptual and practical issues around these three concepts is a likely means of increasing our understanding of disaster impact reduction. Availability of empirical evidence is crucial for both practice and disaster research. The current disaster frameworks, in relation to the connectedness of the resilience, development and humanitarian concepts, are inadequate, if not vague, in informing disaster risk reduction (DRR) theory and practice.

This thesis therefore examines the manner in which development and humanitarian interventions promote resilience in disaster prone areas. Three case studies from Zimbabwe, Ethiopia and East Timor are engaged in answering this research question. For the purpose of this study, the case studies have been placed within the disaster cycle theoretical framework, in order to examine resilience building at each of the phases of the

¹ ‘Natural disasters’ is used here to mean those disasters triggered by natural hazards.

cycle. The thesis includes a review of the relevant literature, methodology, the three case studies as separate chapters, a synthesis of findings and discussion and a conclusion. The following sections provide highlights of the contents of this thesis.

1.2 Research Question Rationale

If resilience is synonymous with community capacity to recover from a disaster with little or no assistance, then development and humanitarian programmes have been less successful in enhancing that ability. Current programme approaches in promoting disaster resilience tend to adopt a deficit vulnerability model where the ‘helpless’ disaster affected communities are ‘supplied’ with what they need. This is contrary to the resilience or ‘can do model’, where programmes build on ‘demand’ and the strengths of affected communities. In the final analysis, whichever approach is adopted, whether the ‘deficit’ or the ‘can do’, achieving resilience is paramount. However, with resilience being a new concept, it would be naive to ignore the dearth of experience from development and humanitarian programmes. Evaluating how development and humanitarian interventions promote the integration of disaster and development, community participation, social learning and livelihood security, *inter alia*, can provide useful lessons in informing disaster resilience oriented interventions. In addition, projects implemented at various phases of the disaster cycle are likely to provide various insights into how resilience can be promoted at those phases. The overall aim of this study was to establish the extent to which development and humanitarian programmes promote resilience in disaster prone areas. To achieve this, the aim was broken down into research objectives outlined in 1.2.1.

1.2.1 Research objectives

1. To examine the challenges around the concept of resilience within the context of disaster risk reduction (DRR).
2. To evaluate the extent to which development and humanitarian intervention promote resilience in disaster prone environments.
3. To examine contestations and opportunities emerging from the study, including the underlying philosophical questions which have implications for disaster resilience building.

To address these research questions, two frameworks were employed: the HFA; and the evaluation framework. Firstly, the HFA has five thematic areas which Twigg (2007) simplified into governance, knowledge and education, risk management and vulnerability

reduction, risk assessment and disaster preparedness and response. These thematic areas contain sub-themes in which characteristics of resilient communities are described. They formed the basis for examining the extent to which development and humanitarian interventions promote resilience in disaster prone locations. It was hypothesised that assessing some of the characteristics of resilient communities would highlight the extent to which resilience was enhanced by development and humanitarian interventions. It was considered impossible to examine all sub-themes, not only due to time and resource constraints, but also there was a risk of duplicating some of them. Four sub-themes which cut across the five themes were examined. These were integration of disaster and development, community participation, social learning and livelihood security. These sub-themes are revisited in Chapter Two.

Secondly, the humanitarian evaluations route was considered to be one of the most viable approaches to achieving the objectives of this study. The major justification is that evaluations have increasingly become integrated into project management cycles. The logical framework, for example, which has an inherent evaluation component, has become a common feature in programme and project designs. The evaluation framework has been found to be a suitable tool for not only assessing the extent to which development and humanitarian projects enhance resilience, but also in providing valuable insights into the conceptual challenges facing it. This study uses the five OECD/DAC evaluation criteria², which have become the most popular in development and humanitarian interventions. These are relevance, efficiency, effectiveness, impact and sustainability. The evaluation criteria are explored in Chapter Three.

1.3 The research process

Examining the nature and dynamics of development and humanitarian work in enhancing disaster resilience can be a complex process, taking different design formats and implementation models. Underlying the design and implementation processes are the philosophical assumptions regarding the nature of knowledge, reality and existence. Two

² The Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) evaluation criteria are associated with Alistair Hallam who pioneered a study in 1998 which sought to improve the consistency and quality of evaluation methodologies, enhance the accountability function of evaluation, contribute to institutionalising the lessons learned, and identify better methods for monitoring performance of humanitarian aid operations Hallam, A. (1998) *Evaluating Humanitarian Assistance Programmes in Complex Emergencies*. In Borton, J., Gibbons, L. and Longford, S. (Eds.) *Good Practice Review*. London, ODI, Relief and Rehabilitation Network. pp 1 - 127, O'Keefe, P., Kirkby J. and Cheetham K. (2002) *Making evaluation more effective in humanitarian assistance*. Newcastle upon Tyne. Northumbria University, Disaster and Development Centre, November 2002.

major paradigms or worldviews to theory development are positivism and subjectivism. Positivism tends to adopt an epistemological position known variously as traditional, conventional, scientific, experimental, positivist empiricist and hypothetico-deductive. Subjectivism tends to take an epistemological position known variously as inductivism, naturalistic, constructivist, interpretivist, and alternative. Positivism views social processes as being subject to casual laws, applying objectivity, rationality and rigorous scientific methods of enquiry to establish truth. It is assumed that the researcher is objective and remains detached from social phenomena to identify its regularities and causal relationships. The research process starts with a hypothesis. Experimental groups are observed, measured and statistically manipulated to establish the cause-effect relationship between variables. Positivism is mainly associated with the quantitative methodology (Bryman, 2001; Clarke, 1999; Yin, 1989; Guba and Lincoln, 2005; Wengraft, 2002; Patton, 2002) .

Subjectivists argue that proving the causality with certainty in social phenomena is problematic, given the very nature of social phenomena and the existence of multiple realities. Knowledge or truth is relative rather than absolute; it is an interpretation of lived experiences as well as a construction in the minds of individuals. Therefore, research is approached with an open mind, willingness to learn, and making no claims about what relevant questions are (Bryman, 2001; Clarke, 1999; Yin, 1989; Guba and Lincoln, 2005; Wengraft, 2002; Patton, 2002). Accepting the complexity provides the fertile ground for ‘human flourishing’ (Heron and Reason, 1997) to allow research participants to be involved in the process, as co-creators, of knowledge creation. This is associated with participatory approaches, which address power relations, poverty, inequality and oppression. Subjectivism tends to be associated with the qualitative methodology (Jackson and Kassam, 1998; Guba and Lincoln, 2005).

The two paradigms have significantly contributed to worldviews regarding the nature of knowledge, reality and existence. While they conceptually fit neatly into discrete categories; they tend to overlap in the process of knowledge construction. This study, like many studies which adopt an evaluation methodology, does not take a purist one-sided view of either positivism or subjectivism. It adopts what Patton (2002) terms ‘pragmatism’ or ‘methodological appropriateness’ which aims at superseding one-sided paradigm allegiance by increasing the concrete and practical methodological options available. Multiple methods, design flexibility and researcher reflexivity are valuable methodological features of this study.

The research process adopted by this study was guided by the pragmatic approach to find an ‘appropriate fit’ to answer the research question. The research process was neither a fixed nor a straightforward venture. It was a fluid process of finding and refining, and defining and re-defining both the research question and the empirical evidence, until these (exactly) fitted together to provide a coherent story. Milestones, which defined the significant stages in the life of the research process, were also identified with the attendant inter-linkages of preceding as well as successive events. However, this does not mean that the process was linear. It followed an iterative process; the interaction between and among stages was a continuous process.

1.4 Identification and refinement of the research question

This study was designed within the framework of Northumbria University doctorate guidelines, drawing on synergies of the author’s experiences, mainstream research activities at the Disaster and Development Centre (DDC), and PhD work. Thus, the research aim and objectives emanate from a culmination of the author’s academic and professional experience. As a Research Associate at DDC, the author specialises in disaster resilience and rural development research and consultancy in the developing world, mainly in Africa and Asia. This involves development and humanitarian evaluation consultancies, which adopt an applied research mode, with emphases on the utilisation of findings in future programmes. As an executive officer at Binga Rural District Council up to 2001, the author also draws some experience from local government administration in Zimbabwe. Rural development planning, including local and regional planning, project planning and management, coordination of development and humanitarian interventions were some of the tasks that the author undertook. In addition, the author was also a private consultant and evaluated some projects related to development programmes in Zimbabwe.

This study adopts a case study approach. Case studies ‘have all the elements of a good story. They tell what happened, when, to whom, and with what consequences.’ (Patton, 2002:10). In addition, using several kinds of case studies offers an opportunity to triangulate data, methods, theory and the researcher (Denzin, 1978). Three case studies from Zimbabwe, Ethiopia and East Timor have been used to provide evidence towards achieving the research aim and objectives. The choice of the case studies was based on three similar aspects: vulnerability to food insecurity; their spread across the disaster cycle; and different institutional, spatial and temporary scales. The study locations are not only found in developing countries with low human development indexes, but also in

environments within those countries, which are vulnerable to disasters. Livelihoods (in the study locations) are dependent on rainfed agriculture. Food insecurity is a major problem which the three locations have experienced (and are likely to continue experiencing). It is the contention of this study that development or humanitarian programmes operating in vulnerable contexts such as those in East Timor, Ethiopia and Zimbabwe inherently have an aspect of enhancing resilience. The details of each of the case studies are revisited in chapters four, five and six. However, it might suffice to highlight that the thematic ‘components of resilience’, ‘the characteristics of a resilient community’ and the characteristics of an environment which enables resilience building, outlined by Twigg (2007), seem to resonate with the goals of each of the three case studies. It may be therefore possible to shed light on what resilience *means* by better understanding what development and humanitarian agencies have been *doing* to strengthen resilience at different phases of the disaster cycle.

The case studies are spread across the disaster cycle phases. The Catholic Commission for Justice and Peace Project (CCJP) in Binga, Zimbabwe occurs at the development phase, while Ethiopia’s Institutional Support Project cuts across development, preparedness and rehabilitation. East Timor’s Agricultural Rehabilitation Project focuses on relief, rehabilitation and development connections. The spread of the study across the disaster phases may not only provide valuable insights into resilience building at each of these phases but also the question of resilience in relation to the scale of implementation of these projects.

The case studies are at different scales in relation to spatial, institutional and temporary dimensions. Geographically, the Binga case study covers the smallest area, followed by the East Timor and then Ethiopia cases. Institutionally and administratively, the Binga case study covers a district; the Ethiopian case study covers two regions while the East Timor case study covers the whole nation, albeit a small one. In terms of time, the case studies took place within a period of three years (2002-2005). These scales are useful when examining the HFA’s resilience dimensions using the evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability. However, there is need for caution. The case studies also represent different contexts. The root causes of disasters may be slightly different due to social, political and economic backgrounds. While in the Ethiopian and Zimbabwean case studies, drought triggered food insecurity, the East Timor disaster was a ‘complex emergency’, which originated from the Timorese struggle for independence from Indonesia. These differences are taken into account when examining the case studies. Finally, it should be noted that the case study material was

not gathered as secondary information. The author directly conducted fieldwork; leading evaluation teams in study design, data collection, collation, analysis and reporting. In addition, this research process involved further engagements with these locations to establish the impacts of the projects on resilience building that are still being 'felt'.

1.5 The theoretical framework

The emerging disaster resilience paradigm engages DRR, development and humanitarian theories. Resilience thinking in academia builds on Karl Marx's 'radical' theory and Max Weber's cultural and institutional ('conservative')³ theories, which have been further developed by disasters scholars, especially Kenneth Hewitt and Dennis Mileti respectively. McEntire (2004) traces the disaster paradigm from the ancient Greece philosophers' interest in development to its current connections to DRR. For example, Aristotle asserted that empirical reality and realisation of potential were subject to the laws of birth, growth, maturity and decay. During the enlightenment era, the pessimistic assumption of decline and death were challenged by an optimistic assumption that there was no end to growth and development. However, it was not until the industrial revolution's technological, social, economic and political changes that development processes came under increased scrutiny. Differences between modern societies (viewed as urban, industrial, civilised and secular) and traditional societies (regarded as rural, agricultural, primitive, static and sacred) provided a fertile ground for inquiry by scholars such as Tonnies (1957) and Durkheim (1949). These were later theorised into 'theses of development' particularly by Karl Marx and Max Weber.

According to McEntire (2004), Marx viewed development as a staged process, determined by modes of production, from tribal, ancient, feudal and capitalist to socialist society. The modes of production include human labour power, tools and equipment, and social and technical relations such as power and control. With particular interest in capitalism and its impact on development, Marx asserted that capitalism would be a key phase through which all societies would pass as they moved from slavery and feudalism through to the socialist mode of production. Capitalist mode of production would lead to class conflict between the owners of means of production and the proletariat (working class). Conflict-based relations among economic classes would inevitably result in fundamental and complete change of social, political and economic relations which

³ The terms 'radical' and 'conservative' were adopted from McEntire's (2004) paper entitled: *Development, disasters and vulnerability: a discussion of divergent theories and the need for their integration*, Disaster Prevention and Management 13 (3): 193 – 198.

eventually would determine the development trajectory (McEntire, 2004). Thus, to increase resilience to disasters (from the Marxist perspective) implies focusing on structures and cultures that create vulnerability.

Further, McEntire (2004) states that Max Weber, on the other hand, did not believe that social, political and economic changes brought about by the industrial revolution would necessarily lead to socialist forms of government. He believed that societal forms were dependent on the organisation and legitimacy of authority, informed by ideas and values of their citizens. Weber classified societies as traditional (dominated by the patriarch), charismatic (dominated by a dynamic, powerful and influential leader) or rational/bureaucratic (dominated by the civil servant). With particular interest in modern, bureaucratic institutions, Weber asserted that capitalism was the highest form of rationalisation in Western civilisation. Bureaucracy, professionalism and specialisation, according to Weber, not only led to great efficiency but also generated and produced adaptive social, political and economic systems.

Marx and Weber's perspectives of development had a profound impact on the disaster scholarship. Disaster scholars, who are inclined towards the Marxist perspective, tend to adopt a radical view of disaster causation. They contend that disasters are a result of structural disarticulation of social, political and economic relations that results in poverty, a major cause of calamities. Hewitt (1993), who has been supported by scholars like Blaikie *et al.* (1994) and Middleton and O'Keefe, (1998) rejects environmental determinism where disaster causation was blamed on nature. They contend the root causes of disasters are human beings who create vulnerability. Cuny (1983:15) asserts that "recognising poverty as the primary root cause of vulnerability and disaster in the Third World is the first step toward developing an understanding of need for change in current disaster response practices". Hewitt (1993) asserts that disaster prevention is dependent on restructuring the social, political and economic systems to reduce poverty and vulnerability to disasters. Similarly, Middleton and O'Keefe (1998) assert that the principal culprit causing humanitarian disasters, in countries like Rwanda and Sudan, resulted from a complex domination exercised by the rich world over the poor. The domination manifests itself in Transnational Companies (TNCs) in their short-term interest rather than long term returns on capital. In addition, the NGOs or 'the Good Samaritans', are subject to the (Western) donors' policy prescriptions – in many respects, they promote the interests of their principals rather than those of the 'victims' and 'beneficiaries' (Middleton and O'Keefe (1998). Thus, the Blaikie *et al.*'s (1994) Pressure and Release (PAR) model, which takes a radical interpretation of disaster causation, is

underpinned by Marxist and neo-Marxist political economy and political ecology meta-narratives. The arguments on the PAR model are later picked up in section 2.5.6 (Chapter Two, p.62).

The disaster scholars inclined to the Weberian perspective, view disaster causation as a product of human inadequacies in adjusting to natural hazards⁴. Dennis Mileti, influenced by Ian Burton, Robert W. Kates and Gilbert F. White, blames all aspects of culture relating to development for the creation of disasters (McEntire, 2004). A shift in thinking and behaviour, including institutional improvements to mitigate hazards, is viewed as essential elements of DRR. Sustainable hazard mitigation according to Mileti includes gaining more knowledge about hazards through education and training, land-use planning, early warning systems, engineering, building codes, insurance and use of technology. In their study on designing new institutions for implementing integrated disaster risk management, Gopalakrishnan and Okada (2007) assert that culture, customs and traditions also shape and colour approaches to disaster response. They suggest a blueprint for effective design and construction of efficient, sustainable and functional disaster management institutions comprising of eight key elements which include; awareness and access to information, autonomy to make decisions, affordability of technology, accountability, adaptability to local conditions and sustainability. In other words, a powerful institutional infrastructure, supported by science and technology, and integrated disaster risk management, has the potential to improve DRR implementation.

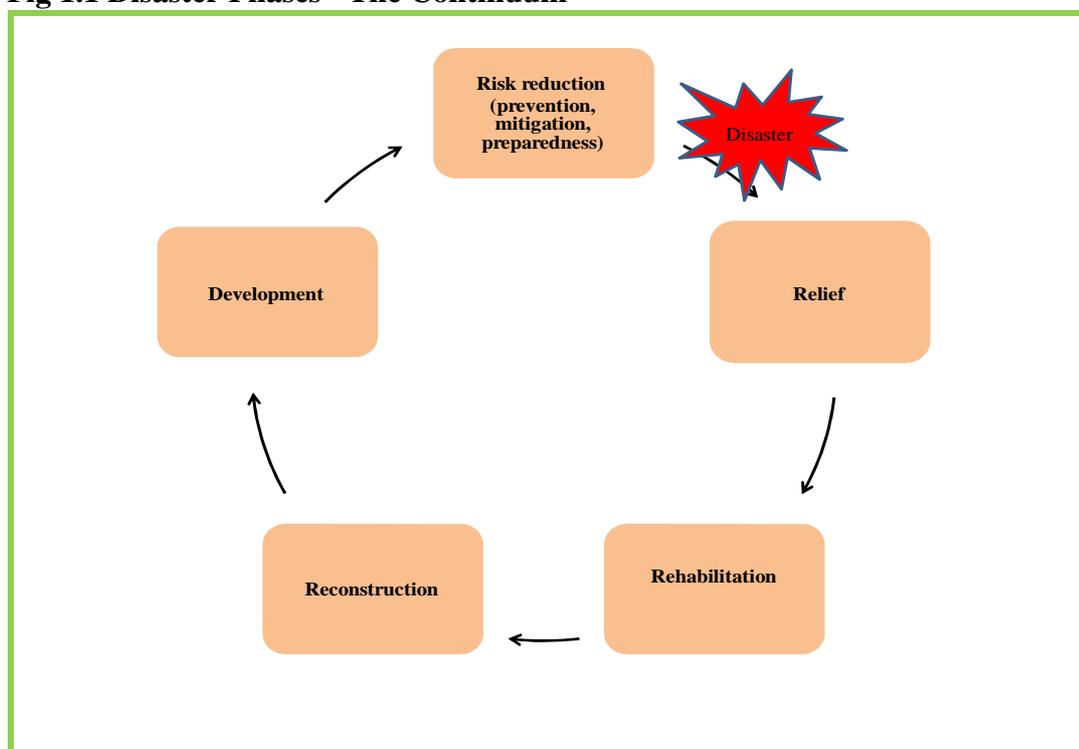
This study takes the position that the radical and ‘conservative’ theories are complementary. The weaknesses of one approach are the strengths of the other. The radical approach’s emphasis on poverty as key causal variable runs the risk of ignoring behaviour, attitudes and personal responsibility as cause of disasters. On the other hand, the emphasis on culture may ignore the constraints of the social structure (McEntire, 2004). McEntire (2004) asserts that the emphasis on vulnerability does not only serve as the focus to enable understanding of this unique and complicated relationship, but also permits explanations from both the radical and conservative theoretical camps. This is an acceptable view. However, the deficit model of vulnerable tends to adopt supply-driven approaches where disaster victims are seen as ‘helpless’ rather than demand-driven approaches where victims are viewed as having the capacity to withstand disasters. It is the contention of this study, that a resilience approach or ‘the can do’ model might be more appropriate as it emphasises building on existing local capacities.

⁴ The disaster scholars do not necessarily relate disaster causation to Weber’s three societies but more to the culture of development.

The resilience approach, however, has to contend with two major theoretical contestations around the implementation of humanitarian interventions that are intimately connected to the notion of disaster phases. First is the ‘continuum’ notion, which is also variously known as the linear, circular, staged or phased process (Cuny, 1983; Frerks *et al.*, 1995; Kirkby *et al.*, 1997; Alexander, 2002b) where the disaster phases are represented as a succession of preceding events as shown in Fig 1.1. The implementation of humanitarian programmes modelled on the continuum notion thus sequences programmes in a succession from relief through rehabilitation to development. Kelly (1996) collapses these into three categories – development context; disaster situation; and post-disaster.

The development context focuses on sustainable livelihoods, which are connected to DRR (risk assessment, prevention, preparedness and early warning). The response to the disaster situation mainly focuses on relief and recovery to save lives and livelihoods such as search and rescue, medical care and basic needs. The rehabilitation phase is mainly concerned with restoration of basic infrastructure such as education and health facilities and other basic livelihood needs. The reconstruction phase provides ‘new things’ such as construction of schools, health facilities and housing.

Fig 1.1 Disaster Phases - The Continuum



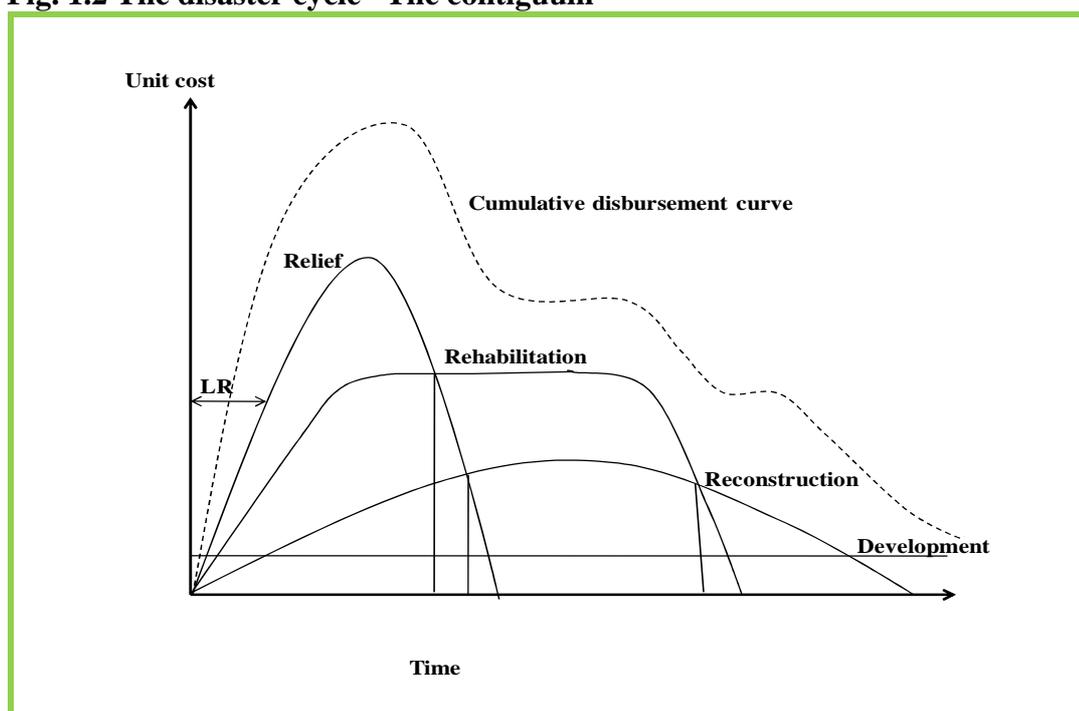
Source: Author

The major weakness of the continuum approach is its assumption that disasters are temporary with communities getting to back ‘normal’ once the cycle is complete. This is

however, often not the case as most disasters are ‘complex political emergencies’ lasting for generations such as those affecting Sudan and Afghanistan. In addition, the continuum notion is synonymous with the structural approach, which runs the danger of not only reproducing structures that caused the disaster in the first place, but also which may destroy the existing resilience. Yet, it is not easy to isolate different phases in any absolute sense through time since, at any one moment, there are simultaneous costs for different phases. For example, the relief phase may also include prevention, rehabilitation, reconstruction and development activities (Kirkby *et al.*, 1997). Other conceptual challenges include the meaning of continuum which is said to be “unclear” (Frerks *et al.*, 1995:362), “too simple as well as misleading” (Kelly, 1998:174) and “possibly no real meaning at all” (Kelly, 1996:277).

The second is the contiguum approach (Fig 1.2) where there is a simultaneous occurrence of relief, rehabilitation, reconstruction and development, implying a combination of all the phases (Frerks *et al.*, 1995; Middleton and O’Keefe, 1998).

Fig. 1.2 The disaster cycle –The contiguum



Adapted from Frerks et al. (1995)

LR stands for local response before external relief reaches the disaster victims. During this time, affected communities as first responders, mobilise available local resources to meeting basic needs of the victims.

Both the continuum and contiguum approaches do not seem to recognise the role of resilience. However, the contiguum model recognises delays in the provision of relief to disaster victims, which normally is the case. The delays in the delivery of response

means affected communities, as first responders, mobilise their own resources to mitigate disaster impacts. This includes coping strategies, search and rescue and provision of food. Thus, relief is provided through local response (LR) (Fig 1.2), which may be a symbol of the resilience of communities. Chapter Two gives a detailed account on the linking of relief, rehabilitation and development (LRRD). However, this study adopts the notion that isolation of disaster phases is important in as far as conceptual clarity is concerned. In practice, as ‘no two disasters are alike’ (Cuny, 1983:44), there is a need to allow for an organic process in which other phases are also embedded at any one time (Kirkby *et al.*, 1997).

1.6 An introduction to the case studies

To establish the extent to which development and humanitarian interventions enhance disaster resilience, three cases were explored. Although the case studies were identified with particular disaster phases, they tended to have elements of other phases as well.

1.6.1 The Catholic Commission for Justice and Peace Project (CCJP)

CCJP was implemented in the disaster-prone Binga District, Zimbabwe from 1996 to 2003. It focused on resilience building during the development phase. It paid attention to non-structural mitigation or ‘soft mitigation’ (Schneider, 2006:69) rather than structural or ‘hard’ mitigation which had achieved marginal results in Binga. CCJP would, through community awareness and education, mitigate the likelihood or consequences of food insecurity disasters in Binga by addressing, among others, social, economic and political issues as well as entitlements lost during the construction of the Kariba Dam in 1950s. Data was collected through project reports, key informant in-depth interviews and meetings, observations and participatory approaches with beneficiary communities.

1.6.2 The Institutional Support Project (ISP)

ISP was implemented in Amhara and Oromia regions of Ethiopia between 1997 and 2006. With a comprehensive DRR package, ISP focused on building the institutional resilience of the Disaster Prevention and Preparedness Agency (DPPA). Policy familiarisation, early warning and linking relief to development were the focus of the ISP’s intervention. Data was collected through project reports, key informant in-depth interviews and meetings, observations and participatory approaches with beneficiary communities.

1.6.3 The Second Agricultural Rehabilitation Project (ARP II)

ARP II in East Timor⁵ (generally referred to as ARP in this thesis), was a follow on to ARP I emergency project to improve food security of farm families and increase agricultural production in selected areas. The transition was designed to shift from the emergency focus of ARP I to supporting sustainable development activities as Timor-Leste reconstructed in the context of a rapidly changing economy. Thus, ARP would help rural communities build resilience in their farming systems in order to withstand future shocks and stresses resulting from natural and anthropogenic hazards. Data was collected through project reports, a questionnaire survey, key informant in-depth interviews and meetings, observations and participatory approaches with beneficiary communities.

1.7 Definition of terms

Several terms have been used in this study. To avoid confusion, the following key terms are defined: development; disaster; vulnerability; resilience; hazard; capacity-building; humanitarian action; and intervention.

The term ‘development’ and its implications in theory, policy and practice is hotly contested (Simon, 2003) and ‘remains an ambiguous and elusive concept, prey to prejudice and preconception’ (Adams, 2001: 6). Although the origin of the term development remain contested, a handful of scholars (for example, Sachs, 1992; Esteva, 1992) claim the age of development began with inaugural speech of US President Harry Truman in January 1949 when he referred to the southern hemisphere’s ‘underdeveloped areas’ (Sachs, 1992). The terms has not only assumed several adjectives, for example, ‘sustainable’, ‘economic’ and ‘social’, but also has geopolitical interpretations such as First, Second and Third worlds which originated during the cold war period, and later recently to North-South dichotomy following the Brandt Commission (Desai and Potter, 2008). Notwithstanding whatever contestations exist, there is a general consensus that could be viewed as a process by which people’s level of living, their quality of life and their capacity to participate in the political, social and economic systems and institutions which influence their dignity and freedom, improve (Elliot, 2001). As further discussed in Chapter Two section 2.5.3 (p.43), disaster and development are considered as two sides of the same coin, development is viewed as a process by which people’s level of living, their quality of life, their resilience to disasters is enhanced and their capacity to

⁵ East Timor is used interchangeably with Timor Leste in this study.

participate in political, social and economic systems and institutions which influence their dignity and freedom, improve.

The term has already been used several times. Following Quarantelli's (1995) question, *What is a disaster?*, there has been a general consensus on the definition of a disaster. According to UNISRD (2005), a disaster is a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. A disaster results from the combination of hazards, conditions of vulnerability and insufficient capacity or resilience to reduce the potential negative consequences of risk. Disasters combine two elements: events and vulnerable people. A disaster is fundamentally a socio-economic phenomenon. It is an extreme but not necessarily abnormal state of everyday life in which the continuity of community structures and processes temporarily fails. Social disruption may typify a disaster but not social disintegration (IFRC, 1993).

Since the late 1970s, the concept of vulnerability has gained currency in the disaster literature. Definitions of vulnerability in Box 2.1 are to some extent related to the definition of resilience while those in Box 2.2 have little or no relationship with resilience. Birkmann (2006) claims there are more than 25 definitions, concepts and methods to systematise vulnerability. In this study more than 24 definitions of vulnerability were identified (for example, Gabor and Griffith, 1980; Timmerman, 1981; UNDRO, 1982; Susman *et al.*, 1983; Watts and Bohle, 1993; Mitchell, 1989; Liverman, 1990; Downing, 1991, UNDRO, 1991; Alexander, 1993; Cutter, 1993; Blaikie *et al.*, 1994; Dow and Downing, 1995; Gillard and Givone, 1997; Comfort, 1999; Weichselgartner and Bertens, 2000; UNISDR, 2004). Despite the diversity of definitions, there is a general consensus that vulnerability to disasters is not simply determined by lack of wealth. It is determined by a complex range of interdependent physical, social, economic, and environmental factors or processes, which increase the susceptibility or risk of a community to the impact of natural and anthropogenic hazards. The concept of vulnerability is further discussed in Chapter Two section 2.2.4 (p.27). In this study, vulnerability and resilience are treated as discrete constructs.

The word hazard is used in the definition of vulnerability. A hazard is generally viewed by several scholars as a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation (Alexander, 2002; Twigg, 2004; Schneiderbauer and Ehrlich, 2006). Hazards can include latent conditions that may

represent future threats or risks and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards) (UNISDR, 2004).

Risk is an important but contested term in disaster studies which is sometimes confused with hazard and vulnerability. Thywissen (2006) lists 15 definitions of risk from a cross-section of disaster research communities. Despite the multiplicity of definitions, risk is generally understood to be the probability of harmful consequences, or expected loss of lives, people injured, property, livelihoods, economic activity disrupted (or environment damaged) resulting from interactions between natural or human induced hazards and vulnerable conditions (Twigg, 2004; UNDP, 2004; Schneiderbauer and Ehrlich, 2006). This study adopts the equation: Risk = f (Hazard, Vulnerability, Resilience) or $R=f(H, V, R)$ which means disaster risk is a function of hazard intensity, the degree of vulnerability and resilience of elements at risk.

Other authors view resilience and vulnerability as opposite poles on a continuum while others view them as independent concepts. The term resilience has already been used several times in this study and gained currency in the last decade, particularly after the adoption of the HFA in 2005. From common language usage, resilience is the ability to ‘bounce-back’ following a disaster. The concept of resilience is highly contested, with more than a dozen definitions, some of which are listed in Box 2.1 (Chapter Two, p.24) Thywissen (2006) identifies 13 definitions of resilience. Such a variety of definitions can be ‘confusing’ (Twigg, 2007) or ‘invite confusion’ (Sapountzaki, 2007). In this study, a simple working definition is offered. ‘Resilience’ can be viewed as the intrinsic capacity of a system, community or society predisposed to a shock or stress, to ‘bounce forward’ and survive by changing its non-essential elements and rebuild itself. This definition of resilience implies that respective systems are able ‘move on’ following a disaster by mobilising available resources to maintain essential structures to adapt to new changes brought about by the disaster. The concept of resilience is revisited in Chapter Two sections 2.1-2.2.5.

A disaster is normally followed by humanitarian response. Although there is a detailed discussion in Chapter Two, section 2.5.3 (p.48), there are a few salient features of the term worth stating. Humanitarian action is sometimes used as a synonym of humanitarian assistance, or action taken when there is a ‘humanitarian crisis’ or ‘complex emergency’. Juma and Suhrke (2002:7) distinguish humanitarian assistance from humanitarian action. The former has a precise and rather narrow meaning and refers to provision of material goods and services (food, water, shelter and medical aid) for a

certain category of needy people. The later can be defined within the context of international law. It consists of activities to protect and assist victims of war and similar kinds of physical violence mainly refugees and internally displaced persons.

The term ‘institution’ is common in this study and refers to such things as laws, cultures and attitudes of a particular society. There is a pronounced diversity and range of thinking on the concept of institutions with no single, universally accepted definition of the term (for example Commons, 1968; Ruttan and Hayami, 1984; North, 1989 and Aoki, 2001). It is an illusive and contested concept, with definitions reflecting different academic and practitioner backgrounds. The term ‘institution’ refers to such things as laws, cultures and attitudes of a particular society. For the purpose of this study, an institution that fosters disaster resilience is broadly defined and refers to state and civil entities and their underlying values, rules, norms of behaviour and traditions that promote and govern disaster risk reduction and resilience systems. The discussion on institutions is picked up later in Chapter section 2.5.2 (p.40).

Resilient communities have the ‘capacity’ to ‘bounce forward’ and move on following a disaster. Although the concepts of ‘capacity’ and ‘capacity-building’ are discussed later in Chapter Two section 2.5.1 (p.37), it might be useful to highlight a few aspects here. Capacity here is used to mean a combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability (UNISDR, 2004). Thus, capacity building in this study is understood as a process by which individuals, organisations, institutions and societies develop abilities to perform functions, solve problems and set and achieve objectives to enhance sustainable disaster resilience. Capacity is often preceded by adjective coping implying that society has mechanisms to mitigate and adapt to hazard events. In a range of studies, there is evidence that coping mechanisms which are short-term can undermine long-term capacity of mitigation and adaptation (O’Brien *et al.*, 2008).

Other key terms discussed in relevant sections of this thesis include interventionist and non-interventionist approaches (Chapter Two, section 2.5.2), (community participation (Chapter Two, section 2.5.4), rights-based approach to development (Chapter 2, section 2.5.4), evaluation (Chapter Three, section 3.3) and community agency (Chapter Eight, section 8.3.4).

1.8 Organisation of the study

This thesis does not provide a prescription of solutions to the challenges that face disaster prone communities in helping them build their disaster resilience. It is, however, structured in eight chapters to achieve the aim and objectives stated in section 1.2.1. The next chapter reviews resilience, development and humanitarian assistance connections. There is a complex debate on the three concepts, reflecting a wide range of perspectives, which may have implications for resilience building. This chapter resulted in a *Disasters Journal* publication entitled, ‘The concept of resilience revisited’ (see Appendix 7 for details).

Chapter Three focuses on the research methodology. It sets out the analytical frameworks. As introduced earlier in this chapter, the dimensions of the HFA are examined using the evaluation methodology. The analytical framework, including the philosophical and methodological dimensions that inform the study, are also presented. Data collection was conducted in two major forms – secondary data and field data. Secondary data was collected from the literature and reports including virtual sources. Primary data was collected from the three case study locations. However, in exploring the concept of resilience in Chapter Two, scholars were contacted to complement the secondary sources.

Chapter Four explores the Catholic Commission for Justice and Peace Project (CCJP) in Binga District, Zimbabwe. The background of project location, project characteristics and the findings are presented. For development programmes to contribute to disaster resilience, it means attending to familiar questions which revolve around entry and exit strategies, institutional issues, ability and willingness to pay and sustaining project benefits. This chapter forms the basis for three papers that have been published on disaster resilience in Binga (see Appendix 7).

Chapter Five presents the findings from the Institutional Support Project (ISP) which operated in Oromia and Amhara regions of Ethiopia. ISP integrated policy familiarization, early warning and linking relief to development projects, to realize disaster resilience. There were some aspects, which constantly emerged as challenges. Multiple pressures for time and resources resulting from workloads, limited budget, and high staff turnover can have a negative impact on the capacity of disaster prevention and preparedness. As with the case of CCJP, it would appear institutional issues in relation to custom and values, regulations, human resource development, willingness and ability to sustain project activities and impacts need consideration in resilience-building

intervention. This chapter forms the basis for a paper entitled ‘Building disaster resilience through capacity building in Ethiopia’ (see Appendix 7).

The results of the Second Agricultural Rehabilitation Project (ARP II), from East Timor are presented in Chapter Six. ARP II was a transitional project from the emergency phase of ARP I to rehabilitation. It was envisaged ARP II would lead to improved food security of farm families, through increased agricultural production. It would build resilience of the East Timorese to withstand future shocks and stresses resulting from natural and anthropogenic hazards. Similar to the Ethiopian ISP, integrating participatory natural resources management, information to farmers, animal health processes, rehabilitation of irrigation and support services for farmers, brought to the fore the issues that needed greater attention to realize a resilient food security system. There were issues which constantly emerged, with the potential of providing insights to disaster resilience oriented projects. Project design, institutional form and arrangements to support rehabilitation, the beneficiaries’ willingness and ability to pay for services after the end of the project emerged as challenges.

Chapter Seven provides an analysis of issues emerging from the literature, methodology and the three case studies. More specifically, the chapter consists of conceptual challenges of disaster resilience, the strategies adopted by the three case studies that may have implications for strengthening resilience, community agency and linking relief, rehabilitation and development (LRRD).

The emerging contributions to the disaster resilience body of knowledge spanning social science disciplines such as geography, environmental management and sociology approach are summarised in Chapter Eight. Four conclusions are made. Firstly, this study views disaster resilience as the ability to ‘bounce forward’ and move on following a disaster rather than ‘bounce back’, to signal change from the original position. The ‘bounce forward’ conception is optimistic and can have an impact on the behavioural change of potential disaster victims and service providers as well as on pre-and post-disaster planning. Secondly, resilience and vulnerability should be considered as discrete constructs as vulnerability is not the ‘flip side’ of resilience. Thirdly, local resilience is about agency and less about structure. Community agency is about continuously creating and re-creating, and owning and controlling the institutional structures. Finally, resilience building can occur at any phase of the disaster cycle which does not necessarily need to adopt a continuum approach. However, at the practical level, the effects of linking (existing) resilience, relief, rehabilitation and development (LRRRD) cannot be realised unless donors come up with appropriate LRRD programme policies in the first place.

CHAPTER TWO

REVISITING THE CONCEPT OF RESILIENCE

2.1 Introduction

The increasing inclusion of resilience in disaster and development studies has added an impetus to learning from development and humanitarian interventions. It has become regular to find documents on DRR that use or mention the term resilience. The outcome of the 2005 World Conference on Disaster Reduction (WCDR), *The Hyogo Framework for action 2005 -2015* (HFA), confirmed the extent to which the concept of resilience has gained currency in DRR science.

This chapter explores the concept of resilience within the context of development and humanitarian assistance. The first section focuses on the resilience construct with respect to its evolution, definition, models and relationship with vulnerability. It will be noted that multiple definitions of resilience are not problematic as long as they do not cloud conceptualisation. Achieving a consensus on the conceptualisation of resilience is not an end itself but has an implication on the *modus operandi* of the DRR delivery. The second section explores the HFA themes as a way of contextualising the disaster resilience construct within the development and humanitarian frameworks. The themes - capacity building, integrating development and DRR, community participation, institutional building, social learning, sustainable livelihoods, and disaster preparedness are explored. These themes put into action would provide an ideal resilient community. They are used in this thesis in conjunction with the evaluation framework to assess the extent to which CCJP, ISP and ARP enhanced disaster resilience.

2.2 The concept of resilience

2.2.1 Evolution of the concept of resilience

The decade 2005 – 2015 will experience increased attention to what affected communities can do for themselves and how best to strengthen them in the light of disaster risks they face (IFRC, 2004). This advocates a stronger emphasis on approaches to humanitarian work, DRR and development work which put resilience, rather than just need or vulnerability, at the nucleus of the debate (IFRC, 2004). The challenge has been, and is likely to be around the translation of resilience from an ambiguous construct to

one that is meaningful to the DRR theory and practice. Many attempts have been made to define resilience. However ‘the variety of academic definitions and concepts [of resilience] can be confusing’ (Twigg, 2007:5) or ‘invite confusion’ (Sapountzaki, 2007:279) such that the concept of resilience ‘has confused things’ (Paton, 2005).

The origin of the construct of resilience was based on certain assumptions of reality. Its journey to its present day usage is not a rosy one; it is loaded with contestations, especially with its affinity to, and lucid usage by, a multiplicity of disciplines. Given this reality, it is instructive to briefly explore the evolution of the concept, including how it has been modelled and whether it should be regarded a ‘paradigm’ or a theory of modern times in disaster scholarship.

Resilience originates from a Latin word *resilio* meaning ‘to jump back’ (Klein, Nicholls and Thomalla, 2003). But the original use of the construct is still contested: some say it originated from ecology (Batabyal, 1998) while others say it originated from physics (Van der Leeuw and Leygonie, 2000). However, most of the literature says the study of resilience evolved from psychology and psychiatry in the 1940s, and is mainly accredited to Norman Garnezy, Emmy Werner and Ruth Smith (Waller, 2001; Johnson and Wielchelt, 2004).

In psychology and psychiatry, resilience arose from efforts to understand the aetiology and development of psychopathology, most particularly from studies of children “at risk” for psychopathology due to parental mental illness, prenatal problems, interparental conflict, poverty or a combination of such risks (Masten, 1999; Rolf, 1999). The pioneers in the study of resilience were interested in the study of risks and negative effects of adverse life events on children such as divorce and traumatic stressors: abuse, neglect and war, for example. These studies saw the emergence of terms such as ‘*resilience*’, ‘*stress-resistance*’ and ‘*invulnerability*’. Of the three constructs, resilience has become one of the most contested, and today is being applied to a number of fields especially in disaster management.

In ecology, it gained currency following the seminal work by Holling in 1973 (Blaikie and Brookfield, 1987; Levin, 1998; Adger, 2000; Van der Leeuw and Leygonie, 2000; Stockholm Environmental Institute, 2004; Berkes, 2007) while it has also become a common term in applied and social sciences.

The entrance of the resilience construct in the disaster and development discourse is relatively new. It spread into the disaster and development literature during the last decade (of the 1990s) (Gaillard, 2007). For the construct to maintain some relevance in the disaster field, there is need to build its philosophical foundation within the disaster

body of knowledge. The entrance of the term resilience into the disaster discourse can be celebrated as a birth of a new culture of dealing with disasters. The outcome of the 2005 World Conference on Disaster Reduction (WCDR) (UNISDR, 2005) confirmed that the concept has been gradually finding more space in both theory and practice in DRR. Terms like '*sustainable and resilient communities*', '*resilient livelihoods*' and '*building community resilience*' have clearly become common terms in journal articles and programme documents. A search for 'disaster resilience' on the ISI Web of Knowledge database (2007) registered 88 journal article hits. Fifteen of them had resilience in the title related to either 'natural disaster' or 'complex emergency'. Of the 15 articles, 12 were published between 2005 and May 2007. In its policy paper entitled *Reducing the risk of disasters – Helping to Achieve Sustainable Poverty Reduction in a Vulnerable World*, one DFID objective aims to: 'Reduce the vulnerability of the poor through building capacity and livelihood resilience to disaster risk' (DFID, 2006:3). Action Aid Nepal (2006), although not describing or mentioning the word resilience except in the title, released its programme flyers with the title 'Building Community Resilience to Disasters'. There are many more examples of NGOs taking this approach. A disaster research centre at the University of Cranfield, 'The Cranfield University Resilience Centre' (2007) is one of the institutions that has included 'resilience' in its title, with the aim of improving the capacity of organisations to respond to emergency and disruptive challenges - whether natural, accidental or deliberate - through the provision of relevant education, training, research and operational support. This shows that the concept of resilience is gaining currency across disciplinary boundaries particularly with DRR communities such as environmental management, climate change, development, geography and sociology.

2.2.2 Disaster resilience: a search for a new paradigm

In exploring the extent to which development and humanitarian interventions enhance resilience in disaster prone communities, we need to move some steps backward and ask philosophical questions. The concept of resilience has gained currency in the absence of philosophical dimensions and clarity of understanding, definition, substance, and most importantly its applicability in disaster theory and practice. Its current use is in danger of disseminating further into the practitioner end of disaster and development work as an adjective for describing the quality of 'end' products of DRR interventions. Tobin (2005) argues that disaster resilience is not a new concept in practice; it is linked to community development of the 1970s. It has, however, prompted a new way of conceptualising

hazards and their consequences. It suggests focusing on ‘building something up’ rather than just ‘reducing something’ (Collins, 2005), which is the case when talking about poverty or vulnerability reduction.

Recently, as stated in Chapter One (section 1.5, p.7-8), scholars who include Hewitt (1993), Blaikie *et al.* (1994), Middleton and O’Keefe (1998) and Wisner *et al.* (2004) reject environmental determinism as an inadequate account of human disasters. It has become an acceptable view that disasters occur when a certain group of people’s vulnerability coincides in space and time with an extreme ‘trigger event’ natural hazard. Thus, the root causes of disasters lie in the political and socio-economic arena. This new conceptualisation of disasters has had an immense contribution to our understanding of the interrelationship of hazard, risk and vulnerability. But risk and vulnerability have not been conceptualized in a comprehensive way. Rather, fragmentation has been common: risk has been estimated or calculated according to different disciplinary approaches. Similarly, vulnerability has also been defined within disciplinary ‘ghettos’ (see definitions in Boxes 2.2 and 2.3). In order to estimate risk on a multidisciplinary basis, our knowledge should include the expected physical damage, victims or economic losses, social, organizational and institutional impacts. At the urban scale, for example, vulnerability must be related not only to the exposure of the material context or the physical susceptibility of the exposed elements, but also to the social frailties and level of resilience of the prone communities. It can therefore be hypothesised that resilience oriented interventions look beyond the capacity of communities to respond or absorb the impact and integrate the essential and non-essential elements of community systems to adapt and survive the shocks.

That the concept of resilience helps us to obtain a better and complete understanding of risk and vulnerability has been pointed out in the literature (Berkes, 2007). It fills a void by addressing the ‘soft perspective’ of vulnerability and to have a rethink about the popularised ‘risk = hazard x vulnerability’ equation. This means going beyond the simplistic view that the environment is hazardous only when it intersects with people. At best, this kind of reasoning reduces the scientific enquiry to an examination of two forms of nature: hazard and vulnerability (Smith and O’Keefe, 1996). In the same vein, focusing on resilience alone or folding vulnerability into resilience as if they were a single concept (O’Keefe, 2004), is likely to perpetuate the same dualistic way of viewing disasters. It will now shift the focus from hazard and vulnerability to hazard and resilience. It is likely to perpetuate the human nature versus natural nature with a danger of leaving out mutations or multiplicity of *natures* (Burton, Kates and White, 1993).

These impact on community capacity to make appropriate choices about future losses in the event of contingencies in which resilience is rooted (Mileti, 2005).

But expressing things in a new manner can stimulate or assist people to grasp abstraction. For example, the term “roadmap” or “white paper” have gained currency in developmental terms but could we say the “roadmap” or “white paper” today is the same or different from a “blueprint”? This perhaps has to do with language where societal metaphors which are popularised for a period of time, until they are replaced by another expression (Jeggle, 2005). However, words are prisons, as well as searchlights and pigeonholes, for what we see (Stibbs, 1998). Metaphors and linguistic ‘accidents’ have a historical habit of referring to something objectively real when it is not (Smith and O’Keefe, 1996). Using words without clear definition or categorisation makes it difficult to come up with a clear concept.

Disaster resilience could be viewed as a new expression describing a desired outcome of a DRR programme and does not itself deal with the unique condition. With this in mind, it would perhaps at the moment, be safe not to label it as a paradigm but ‘a lens or entry point’ or a beginning of a search for a new paradigm. An exploration of development and humanitarian programmes does highlight some of the theoretical underpinnings of the resilience construct which may shed some light into its connections with the larger DRR science.

2.2.3 Disaster resilience as a process or outcome

Is disaster resilience a process or outcome? Answering this question may be a fundamental step not only towards building a resilience paradigm but also understanding how it can be mainstreamed into development and humanitarian interventions. The definition of the term resilience, even from the fields of psychopathology and ecology where it has found more space, is still contested (Glantz and Johnson, 1996; Adger, 2000). In the disaster field, with Sociology and Geography at the nucleus of the scholarship and research, inroads have been made on the definitional issues as shown in Box 2.1. The definitions are diverse; reflecting the complexity of society and thinking about society and disasters. However, unless we clarify and obtain minimum consensus on the defining features, we will continue to talk past one another (Quarantelli, 1995) on what disaster resilience entails.

Resilience has been generally defined in two broad ways: as desired outcome(s) or as a process leading to a desired outcome(s) (Kaplan, 1999). Admittedly, categorising

definitions into outcome-oriented or process-oriented is no easy task and the distinction may seem unnecessary. However, a close look at the definitions in Box 2.1 reveals a gradual refinement over the period represented in the way we conceptualise disaster resilience: from more outcome-orientation to more process-orientation.

Box 2.1 Definitions of resilience

Author	Definition
Wildavsky (1991)	Resilience is the capacity to cope with unanticipated dangers after they have become manifest, learning to bounce back.
(Holling, 1995) Holling (1995)	It is the buffer capacity or the ability of a system to absorb perturbation, or the magnitude of disturbance that can be absorbed before a system changes its structure by changing the variables
Horne and Orr (1998)	Resilience is a fundamental quality of individuals, groups and organisations, and systems as a whole to respond productively to significant change that disrupts the expected pattern of events without engaging in an extended period of regressive behaviour.
Mallak (1998)	Resilience is the ability of an individual or organisation to expeditiously design and implement positive adaptive behaviours matched to the immediate situation, while enduring minimal stress.
Mileti (1999)	Local resiliency with regard to disasters means that a locale is able to withstand an extreme natural event without suffering devastating losses, damage, diminished productivity, or quality of life without a large amount of assistance from outside the community.
Comfort (1999)	The capacity to adapt existing resources and skills to new systems and operating conditions.
Paton, Smith and Violanti (2000)	Resilience describes an active process of self-righting, learned resourcefulness and growth - the ability to function psychologically at a level far greater than expected given the individual's capabilities and previous experiences.
Kendra and Wachtendorf (2003)	The ability to respond to singular or unique events.
Cardona (2003)	The capacity of the damaged ecosystem or community to absorb negative impacts and recover from these.
Pelling (2003)	The ability of an actor to cope with or adapt to hazard stress.
Resilience Alliance (2005)	Ecosystem resilience is the capacity of an ecosystem to tolerate disturbance without collapsing into a qualitatively different state that is controlled by a different set of processes. A resilient ecosystem can withstand shocks and rebuild itself when necessary. Resilience in social systems has the added capacity of humans to anticipate and plan for the future.
UNISDR (2005)	The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase this capacity for learning from past disasters for better future protection and to improve risk reduction measures

Source: Author

It may not be doubted that earlier authors were thinking of resilience as a process to reach an outcome. However, use of the terms ‘cope’, ‘bounce back’, ‘withstand’, or ‘absorb negative impacts’ to return to ‘normal’ within a shortest possible time, tend to emphasise reactive stance. This description might be more appropriate to objects that are

capable of regaining their original shape after bending, stretching, compression or other deformation. When referring to people, the essence of resilience centres on a quick recovery from shock, illness or hardship. One who is resilient may be considered irrepressible; buoyant; enduring; flexible: the person who bounces back – unchanged – from exposure to stresses and shocks (Vickers and Kouzmin, 2001). Disaster resilience is seen as the ‘shield’, ‘shock absorber’ or ‘buffer’, which moderates the outcome into benign or low negative consequences. Indeed, the goal of disaster risk management is to ensure minimal loss of lives and livelihoods following a disaster and for the affected community or system to return to ‘normal’ within a shortest possible time. Whilst it would be unreasonable to present this in a negative light, it is also appropriate to point out that resilience is arguably about people’s capacity far beyond the minimum of being able to cope. It can be hypothesised that merely defining resilience on the basis of minimum standards of development and relief is an inadequate conceptual and practical application of the approach that fails to realise people’s aspirations to be out of the zone of high risk altogether.

The danger of viewing disaster resilience as an outcome tends to reinforce the traditional practice of disaster management, which takes a reactive stance (McEntire *et al.*, 2002). Disaster management interventions tend to follow a paternalistic mode, which can lead to activities being skewed towards supply rather than demand. Activities such as community capacity building, mitigation and emergency preparedness planning, which have great impact upon response and recovery operations, may be neglected (McEntire *et al.*, 2002). The United Kingdom’s (UK) Resilience Programme, for example, is laudable and will improve the coordinated response capabilities of emergency services, other government agencies and utilities. However, broad scale community involvement does not form part of the government’s resilience strategy. In the event of disasters that will overstretch emergency services, the emergency response will ‘naturally’ become the responsibility of the affected communities. Some see the resilience programme as a new version of the paternalistic civil defence approach used during the Cold War (Alexander, 2002a) applied in the wake of more complicated terrorist threats. The outcome-oriented disaster resilience programmes tend to follow command and control styles, which are at risk of preserving the status quo, and which might entrench exclusion, and distract from the inequality, oppression and entitlement loss, that causes proneness to insecurity and disaster.

Viewing disaster resilience as a deliberate process (that leads to desired outcomes) comprising series of events, actions or changes to enhance the capacity of the affected

community when they are confronted with singular, multiple or unique events places emphasis on the human agency role in disasters. The terms ‘capacity’, ‘learning’, ‘organising’ signal community agency within the process of building disaster resilience. Disaster resilience is viewed as a quality, characteristic or result that is created or developed by processes that foster or promote it. Put differently, resilience is not a science nor does it deal with regularities in our experience but an art that deals with singularities as we experience them (Weinberg, 1985). For instance, recognizing the human role in disasters, taking responsibility for action, having a disaster plan, building capabilities to implement the plan, purchasing insurance, and sharing information about recovery priorities are processes that can enhance resilience for an individual, group, community or nation to deal with unique destabilizing events. In this instance, resilience is thus a goal that we should strive to achieve or a quality that we should try to obtain (McEntire, 2005). Development and humanitarian evaluations can be one of the sources of information through which communities can learn by doing. The (social) learning could take the form of the Freire’s (1993) *Pedagogy of the Oppressed* inclusive adult education of critical radicalism and transformative change to enhance both human and social capital assets. This can result in individual adaptation, which comes about through activities which depend on the agency and participation of group members in discourse, imitation, shared collective or individual action (Adger and Kelly, 1999). The assumption here is that agency can stimulate the generation of other capital assets such as financial, physical and natural assets.

The concept of ‘adaptation’ has featured in some of the definitions, particularly those related to ecological systems; this dimension of resilience is more on the process-oriented outcome. Adaptation makes resilience both a contextual and personal construct because it depends on the high-risk status or exposure of the people at risk and their personalised adaptive strategies. Many of the current uses of resilience acknowledge reciprocal interactions between human and natural systems, underscoring the necessity to learn from past events (Berkes, 2007). But resilience also has a futuristic dimension as adaptation occurs in the post disaster phase as a strategy to mitigate future disasters. Communities in the drought stricken Zambezi Valley in Zimbabwe have adapted to unreliable rainfall by growing *nzembwe*, a drought-resistant millet variety to mitigate drought spells that are experienced during the rainy season. In other words, these communities have maintained their core values or assets but have changed or expended non-essential elements such as growing crops like maize, which require high amounts of rainfall. This means that enhancing systems resilience (capacity to survive) is a process,

which builds on the ability of that system to change non-essential attributes, to adapt in order to survive.

This has important implications for policy particularly for development and humanitarian interventions. For example, if we see a rural community as unsustainable and threatened by seasonal flooding in Bangladesh or Mozambique, or an earthquake in Gujarat, do we respond by 1) forced resettlement where the core system, the local livelihoods and culture can be lost, or 2) adaptive rural livelihoods development *in situ* where livelihood and culture are preserved? The core difference here is in the object to which we are conferring resilience (Pelling, 2005). Individuals, communities or nations have a degree of resilience, which can be defined in terms of their essential core survival values or assets-life, livelihoods and culture. From this vantage point, the outcome of any 'disaster resilience' programme will be to enhance the core essential values, assets and resources that can be applied to the process of adapting to adverse circumstances. Lessons from evaluations of humanitarian action are therefore likely to yield to nought unless they address core essential values of the benefiting society.

2.2.4 Vulnerability and resilience

For development and humanitarian interventions to inform resilience programmes, much of the above background suggests that unpacking the connections between vulnerability and resilience demands further attention. The goals of most disaster and development programmes are either directly or indirectly aimed at reducing vulnerability, at least when represented by the NGO sector and significant sections of national government Poverty Reduction Strategy Papers. At the same time, and as pointed out in earlier sections, there is now an increased focus on resilience. Resilience and vulnerability are common and related concepts in a number of scientific disciplines (Klein *et al.*, 1998; Berkes, 2007) and have gained currency in work on disaster reduction. A key question, however, that emerges concerns the relationship of one to the other. Is resilience the opposite of vulnerability, resilience a factor of vulnerability, or the other way round? Again, these are not easy questions with singular answers. Addressing this relationship is however key to assisting in defining the meaning, implications and applications of resilience to other related concepts such as development and humanitarian work.

The term vulnerability entered the disaster discourse in the 1970s. O'Keefe *et al.*, (1976) argue, in *Taking the naturalness out of natural disasters*, that disasters were more a consequence of socioeconomic vulnerability than natural factors.

Disaster marks the interface between an extreme physical phenomenon and a vulnerable human population. It is of paramount importance to recognise both of these elements. Without people there is no disaster ...Time is ripe for some precautionary planning which considers vulnerability of the population as the real cause of the disaster – a vulnerability that is induced by socio-economic conditions that can be modified by man, and it is not just an act of God⁶.

O’Keefe *et al.*, (1976:566-567)

Mechanical and systems engineers first used the expression vulnerability in relation to different forms of construction, such as housing, bridges and factories (Twigg and Bhatt, 1998). However, the concept’s popularisation is mainly credited to Peter Timmerman and his monograph entitled *Vulnerability, Resilience and the Collapse of Society*, in which he begins to link the concepts of resilience and vulnerability (Cardona, 2003). But vulnerability as a concept ‘does not rest on a well developed theory; neither is it associated with widely accepted indicators or measurements’ (Watts and Bohle, 1993:45). Recent efforts in developing vulnerability indicators are encouraging although they still remain uncoordinated between disaster communities (see Adrianto and Matsuda, 2002; Wei *et al.*, 2004; Turvey, 2007; Adrianto and Matsuda, 2004; Carreno, Cardona and Barbat, 2007 for efforts being made to develop the disaster vulnerability index).

There are more than two dozen definitions of vulnerability. Some of them are listed in Boxes 2.2 and 2.3. The multiplicity of definitions is important and potentially useful to the theoretical development of this domain as well as examining the implications of understanding, and theoretical development for the way we chose to understand and react to the critical issues that vulnerability studies represent. One further reason is, however, encapsulated in the following:

Science can only win when scholars focus upon an idea and bring their unique perspectives to the elucidation of this idea ... We must continually re-examine exciting ideas to make sure that they are worthy of the intellectual resources focused upon them.

(Kaplan, 1999:18)

The multiplicity of definitions is a reflection of philosophical and methodological diversities which have emerged from disaster scholarship and research. What is encouraging is the general consensus which seems to show that vulnerability to disaster is determined not simply by lack of wealth. It is produced by a complex range of physical, economic, political, social susceptibility or predisposition of community to

⁶ This was picked up in 1984 by Anders Wijkman and Lloyds Timberlake in their ‘*Natural Disasters: Acts of God or acts of Man?*’

damage in the case of a destabilising phenomena of interdependent natural (hazard) and anthropogenic pressures (O'Keefe *et al.*, 1976; Susman, O'Keefe and Wisner, 1983; Cutter, 1996; Twigg, 1998; Weichselgartner, 2001; Pelling and Uitto, 2001; Cutter, Boruff and Shirley, 2003; Cardona, 2004b; Wei *et al.*, 2004; Wisner *et al.*, 2004; Collins, 1998, Collins, 2009). The literature makes a distinction between human vulnerability, social vulnerability and physical vulnerability: non-human elements are described in terms of ecological and environmental fragility.

Box 2.2 Definitions of vulnerability more related to disaster resilience

Author	Definition
(Timmerman, 1981)	Vulnerability is the degree to which a system acts adversely to the occurrence of a hazardous event. The degree and quality of the adverse reaction are conditioned by a system's resilience (a measure of the system's capacity to absorb and recover from the event)
(Pijawka and Radwan, 1985)	Vulnerability is the threat or interaction between risk and preparedness. It is the degree to which hazardous materials threaten a particular population (risk) and the capacity of the community to reduce the risk or adverse consequences of hazardous materials releases
(Dow, 1992)	Vulnerability is the differential capacity of groups and individuals to deal with hazards, based on their positions within physical and social worlds
(Watts and Bohle, 1993)	Vulnerability is defined in terms of exposure, capacity and potentiality. Accordingly, the prescriptive and normative response to vulnerability is to reduce exposure, enhance coping capacity, strengthen recovery potential and bolster damage control (i.e., minimize destructive consequences) via private and public means
(Blaikie <i>et al.</i> , 1994)	By vulnerability we mean the characteristics of a person or a group in terms of their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard. It involves a combination of factors that determine the degree to which someone's life and livelihood are put at risk by a discrete and identifiable event in nature or in society
(Green <i>et al.</i> , 1994)	Vulnerability to flood disruption is a product of dependence (the degree to which an activity requires a particular good as an input to function normally), transferability (the ability of an activity to respond to a disruptive threat by overcoming dependence either by deferring the activity in time, or by relocation, or by using substitutes), and susceptibility (the probability and extent to which the physical presence of flood water will affect inputs or outputs of an activity)
(Watts and Bohle, 1993)	Vulnerability is best defined as an aggregate measure of human welfare that integrates environmental, social, economic and political exposure to a range of potential harmful perturbations. Vulnerability is a multilayered and multidimensional social space defined by the determinate, political, economic and institutional capabilities of people in specific places at specific times
(Weichselgartner and Bertens, 2000)	By vulnerability, we mean the condition of a given area with respect to hazard, exposure, preparedness, prevention, and response characteristics to cope with specific natural hazards. It is a measure of capability of this set of elements to withstand events of a certain physical character

Adapted from Weichselgartner (2001)

The question of whether resilience and vulnerability are positive and negative poles on a continuum depends on the definition of the two terms. If we accept definitions in Box

2.2, where vulnerability is related to the degree of capacity, then vulnerability is closely related with the level of resilience.

There is no fundamental difference in the definitions of resilience (Box 2.1) and the definitions of vulnerability in Box 2.2. This suggests that the two concepts are viewed as opposites or two sides of the same equation on a continuum. The definitions are therefore dependent on the reference framework or distance from the furthest point of the negative and positive poles. If one is more on the positive pole of the continuum, then one becomes more resilient than being vulnerable and the opposite is the same. The Resilience Alliance (2005) views vulnerability of a system as resulting from reduced resilience. In other words, something very vulnerable is not very resilient and vice versa. In this case, resilience is a factor of vulnerability and vice-versa (O'Keefe, 2005). But this kind of interpretation is rather simplistic and myopic and lends itself to what Klein, Nicholls and Thomalla (2003) term circular reasoning: a system is vulnerable because it is not resilient; it is not resilient because it is vulnerable.

If we accept definitions in Box 2.3, which show little or no relationship with definitions of resilience, then vulnerability and resilience may not be related at all. Vulnerability is seen as: a 'threat' or 'exposure' to a hazard; degree of potential for loss; or circumstances that put people at risk including social, economic, political, technological, biophysical and demographic aspects. But definitions in Boxes 2.2 and 2.3 are also closer to the definition of risk and some of them implicitly include the concept of disaster resilience because they are more broad and comprehensive; most of them have been contributing to the conceptual confusion.

Vulnerability could be viewed as a reflection of the intrinsic physical, economic, social and political predisposition or susceptibility of a community to be affected by or suffer adverse effects when impacted by a dangerous physical phenomenon of natural or anthropogenic origin. It also signifies a low level, rather than lack, of disaster resilience limiting the capacity to recover; each system has some degree of resilience. Disaster resilience could be viewed as the intrinsic capacity of a system, community or society predisposed to a shock or stress, to adapt and survive by changing its non-essential attributes and rebuild itself.

Box 2.3 Definitions of vulnerability with some or no relationship with resilience

Author	Definition
(Gabor and Griffith, 1980)	Vulnerability is the threat (to hazardous materials) to which people are exposed (including chemical agents and the ecological situation of the communities and their level of emergency preparedness). Vulnerability is the risk context
(UNDRO, 1982)	Vulnerability is the degree of the loss to a given element or set of elements at risk resulting from the occurrence of a natural phenomenon of a given magnitude
(Susman <i>et al.</i> , 1983)	Vulnerability is the degree to which different classes of society are differentially at risk
(Mitchell, 1989)	Vulnerability is the potential for loss
(Liverman, 1990)	Distinguishes between vulnerability as a biophysical condition and vulnerability as defined by political, social and economic conditions of society. She argues for vulnerability in geographic space (where vulnerable people and places are located) and vulnerability in social space (who in that place is vulnerable)
(Downing, 1991)	Vulnerability has three connotations: it refers to a consequence (e.g. famine) rather than a cause (e.g. drought); it implies an adverse consequence (e.g., maize yields are sensitive to drought; households are vulnerable to hunger); and it is a relative term that differentiates among socioeconomic groups or regions, rather than an absolute measure or deprivation
(UNDRO, 1991)	Vulnerability is the degree of the loss to a given element or set of elements at risk resulting from the occurrence of a natural phenomenon of a given magnitude and expressed on a scale from 0 (no damage) to 1 (total loss). In lay terms, it means the degree to which individual, family, community, class or region is at risk from suffering a sudden and serious misfortune following an extreme natural event
(Alexander, 1993)	Human vulnerability is function of the costs and benefits of inhabiting areas at risk from natural disaster
(Cutter, 1993)	Vulnerability is the likelihood that an individual or group will be exposed to and adversely affected by a hazard. It is the interaction of the hazard of place (risk and mitigation) with the social profile of communities
(Dow and Downing, 1995)	Vulnerability is the differential susceptibility of circumstances contributing to vulnerability. Biophysical, demographic, economic, social and technological factors such as population ages, economic dependency, racism and age of infrastructure are some factors which have been examined in association with natural hazard
(Gilard and Givone, 1997)	Vulnerability represents the sensitivity of land use to the hazard phenomenon
(Comfort, 1999)	Vulnerability are those circumstances that place people at risk while reducing their means of response or denying them available protection

Adapted from Weichselgartner (2001)

One view is that the two concepts should be considered as discrete constructs. People can possess characteristics that can make them vulnerable and that can influence their capacity to adapt at the same time. Until it can be demonstrated to the contrary, the two concepts should be viewed as discrete (Paton, 2005). A good parallel is Herzberg's two-factor theory; they essentially impact job satisfaction and job dissatisfaction, which

Herzberg argues are not opposites.⁷ The absence of job dissatisfaction does not mean that you have job satisfaction. Here, too, with resilience: the absence of vulnerability does not make one resilient (Mallak, 2005). It can be argued that while vulnerability is not necessarily the ‘flip side’ of resilience, it does not mean that we can fold vulnerability into resilience or vice versa (O’Keefe, 2004). The implications of the relationship between vulnerability and resilience are picked up latter in Chapter Eight.

2.2.5 Disaster resilience in relation to people and physical infrastructure

Exploring whether resilience relates to people or physical structures or both can help increase our understanding and application of the concept to wider frameworks including development and humanitarian work. The establishment of Resilience Alliance, a network of ecology scientists to inform policy on sustainable development through research (Klein *et al.*, 2003), and the adoption of the term by UNISDR in its strategy for 2005-2015, underpins the importance of the concept in modern times. Yet it still remains uncertain whether resilience refers to natural, social, technological or economic systems, for example. It can be argued that people may respond and recover effectively after a disaster whereas physical infrastructure resist to a point and then fail. It is true that resilience can be applied to people, communities, institutions and the natural environment. However, it is also feasible to discuss reducing the vulnerability of buildings and other infrastructure, but they do not adapt per se. Reducing infrastructural vulnerability is important to ensure their availability for people in post disaster. To the extent they afford people the opportunity to adapt, they can be implicated in this context (Cardona, 2005).

But separation of people from “structures” to say that people can have an adaptive behaviour and structures only can be adapted sounds rather simplistic. While human beings should be at the centre of any resilience programme, human beings do not live in a vacuum but instead are part of systems that impact on losses and the locality’s ability to deal with those losses (Mileti, 2005). Indeed, the ecology literature is littered with illustrations of societies, cities, communities and habitats, for example, being complex

⁷ Herzberg’s two factor theory is one of the prominent theories of motivation in organisational management. Robbins and Coulter (2007) note that Fredrick Herzberg’s two-factor theory (also called motivation-hygiene theory) proposes that intrinsic factors such as achievement and recognition are related to job satisfaction, while extrinsic factors such as salary and supervision are associated with job dissatisfaction. They further note that Herzberg also believed that opposite of satisfaction was not dissatisfaction. Removing dissatisfying characteristics from a job would not necessarily make the job more satisfying (or motivating). In addition, the factors that led to job satisfaction were separate and distinct from those that led to job dissatisfaction. In other words, satisfaction and dissatisfaction are not viewed as opposites on a continuum.

dynamic systems in the process of adaptation. If we accept the definition of resilience incorporating the concept of adaptation, then structures can adapt like other complex systems. Most scholars contacted as part of the information gathering for this chapter were of the opinion that resilience should have a wider application⁸. Viewing resilience from a broader vantage point ensures capturing interrelationships and linkages between systems. Several disciplines including human geography, human ecology and ecological economics have hinted parallels between ecosystem resilience and social resilience, yet it is not clear whether communities dependent on resilient ecosystems are themselves inherently more resilient (Adger *et al.*, 2005). It maybe a truism that resilient individuals may exist in non-resilient systems and resilient systems may have individuals who are not resilient. For instance, if one is apathetic about disasters (which may hurt his/her ability to cope with a disaster after it occurs), he / she may not invest in disaster resistant construction. Also, if buildings crumble to the ground in an earthquake, a community's resilience may be jeopardised, as roads are impassable due to debris (which hinders emergency response and the delivery of aid).

A different emphasis in this respect is also called for. Resilience should not refer to the nature of people in systems so much as the nature of the system itself. Wisner *et al.*, (2004) argue in their recent contributions that there only exists human vulnerability while physical structures can be referred to as being unsafe. It is an acceptable view. However, broadening resilience to include infrastructure and other aspects external can be beneficial especially in examining the interrelationships of *resiliencies*. That humans are in an unsafe condition because, for example, the buildings, or the crops are vulnerable to some disturbing phenomena, would be an understandable way of viewing resilience. Also a community is unsafe because its organization is deficient, its economy is weak, that is, it has low capability to absorb the impacts, it has low capabilities to recover, would be another way of viewing resilience (Cardona, 2005). However, the systematic treatment of the concept of disaster resilience, especially from the development and humanitarian vantage point, requires the delineation between vulnerability and resilience, which are to some extent blurring the conceptualisation of the term. Thus, models, which are briefly explored in the section that follow, can help us describe, explain and predict disaster scenarios, the resilience and recovery of communities, and consequently any role of intervention strategies.

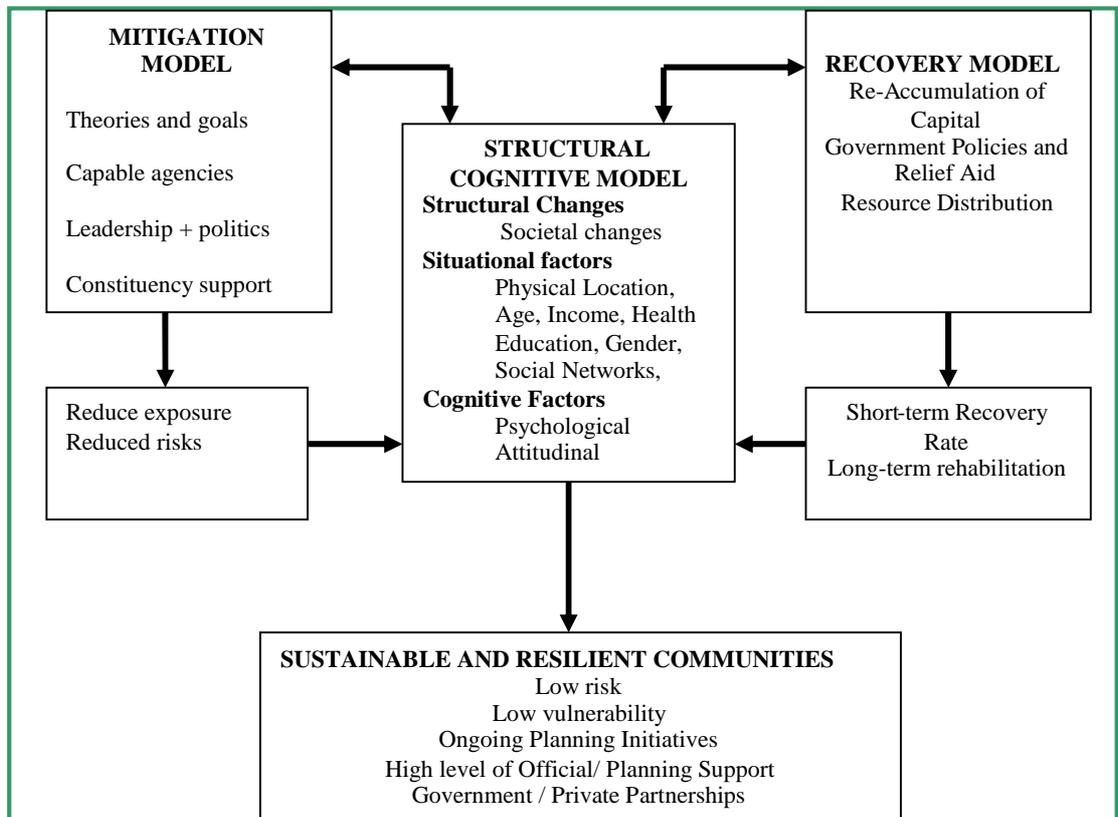
⁸ The scholars who were contacted by email included Phil O'Keefe, Omar Cardona, Dennis Mileti, Ian Davis, Ben Wisner, David McEntire, Terry Jeggle, Andrew Collins, Mark Pelling, Douglas Paton and Larry Mallak. These are acknowledged and are part of the reference list.

2.3 Modelling resilience

The preceding sections have referred to the existence of a complex and problematic relationship between disaster resilience and hazards, involving many social, economic, political and physical factors. Notwithstanding the uniqueness and complexity between disasters, there may be similarities in the way communities embed resilience into pre-disaster and post-disaster scenarios, which can be modelled.

Of several models, Tobin's (1999) model (Fig 2.1) was found to be appropriate to this study because of its holistic view of sustainability and resilience of communities in hazardous environments such as those in CCJP, ISP and ARP study locations.

Fig. 2.1 Sustainable and resilient community framework of analysis



Adapted from Tobin (1999:14)

The framework adopts an ecological approach, utilizing aspects of the socio-political ideas and the political economy and human ecology approach, thus providing a holistic approach of viewing disasters. Mitigation and recovery are linked by the structural cognitive aspects, which play an important role at both phases of the disaster cycle. Integration of three separate models: the mitigation model; the recovery model; and the structural-cognitive model, is its major strength, which other models fail to do. For example, Paton and Johnston's (2001) models of 'risk perception - risk reduction

behaviour process' and 'resilience to hazards effects' and Bradely and Grainger's (2004) social resilience model are generally limited to behavioural aspects. Details of these models are summarised in Appendix 1.

Tobin's mitigation model focuses on the pre-disaster situation where goals are clearly articulated, sufficient resources made available, and commitments made for the long term. Clear policy objectives, political will and technical skills including leadership and managerial competency are fundamental to the implementation of sound mitigation efforts. In the recovery model, Tobin suggests a focus on the pertinent factors that will facilitate recovery. Simple clean-up and restoration operations to get community back on its feet are inadequate. Long-term rehabilitation processes which take into account prevailing socio-economic conditions and structural constraints, as well as local participation of marginalised groups, are essential ingredients of success.

The structural-cognitive model focuses on structural as well as cognitive constraints. The structural constraints can deter development by preserving old systems thus reproducing the structure that could have contributed to the cause of the disaster. Cognitive constraints are those psychological and attitudinal perceptions, which can create favourable or unfavourable environments. These may be influenced by aspects such as cultural, economic factors, age gender and ethnicity. Bringing the socio-psychological dimension, such as personal characteristics, judgement using experiences and community practices can increase disaster resilience. Some of the characteristics of sustainable and resilient communities from Tobin's model, which are relevant to this study, are summarised in Box 2.4.

Box 2.4 Characteristics of sustainable and resilient communities

- Lowered levels of risk to all members through reduced exposure to the geophysical event
- Reduced level of vulnerability of all members of society
- Planning for sustainability and resilience must be ongoing
- High level of support from responsible agencies and political leaders
- Incorporation of partnerships and cooperation at different government levels
- Strengthened networks for independent and interdependent segments of society
- Planning at the appropriate scale

(Tobin, 1999)

2.5 The HFA and resilience-building

As stated in the introduction of this chapter (section 2.1, p.19-21), The 2005 World Conference on Disaster Reduction (WCDR) held in Kobe, Hyogo, Japan which culminated into the HFA, initiated a strategic and systematic approach to building disaster resilience (UNISDR, 2007:5). The WCDR emerged from a complex history of disaster and development connections. For the purpose of this study, the journey of

WCDR began with the address by Dr. Frank Press, then President of the National Academy of Sciences, at the Eighth World Conference on Earthquake Engineering in 1984 where he proposed an international decade to address natural disaster reduction. In 1987, the United Nations adopted a resolution (42/169) declaring the 1990s the International Decade for Natural Disaster Reduction (IDNDR) (Alexander, 1991; Lechat, 1990).

Of several of its impacts, IDNDR brought more debate to the search for disaster solutions including ‘an opportunity to apply scientific and technological breakthroughs for the good of people and a mechanism to link ongoing activities’ (Lechat, 1990:6). McEntire (1997) debates four challenges experienced during the IDNDR decade; namely, the violation of human rights, a low degree of relief co-ordination, difficulties and drawbacks of providing aid, and dilemmas of development. In reviewing the decade, Bhatt (2000) reports that some 70 leading South Asian individuals and organisations met in New Delhi at the Policy Forum entitled ‘Future of Mitigation, South Asian Disasters’, to explore the agenda for action and research on disasters. Some of the recommendations included vulnerability reduction for poor communities, building capacity for communities, and improvement in performance in relief operations, gender mainstreaming and improvement in funding. In the search for disaster solutions, Bates *et al.* (1991) emphasised the role of social sciences such as anthropology, sociology, political science, social psychology, social geography, economics and communications.

A mid-term review of the implementation of IDNDR in 1994, known as the Yokohama Strategy, re-affirmed the relationship between DRR and development. For example, disaster prevention, mitigation, preparedness and relief were identified as crucial elements which can contribute towards the implementation of sustainable development policies (WCNDR, 2004). The review of the Yokohama Strategy in 2005, also known as the World Conference on Disaster Reduction (WCDR), adopted what has become known as the Hyogo Framework of Action 2005-2015 (HFA). The HFA focuses on building resilience of nations and communities to disasters, integrating DRR with outcomes of the 2002 Johannesburg World Commission on Sustainable Development. UNDP (2004) notes that risk management and reduction was an integral paradigm that built on and incorporated all the previous strategies from the perspective that all development activities had the potential to increase or reduce risks. The HFA slightly shifted the emphasis towards resilience building rather than on the deficit model of vulnerability. Resilience oriented DRR is viewed as a strategy for achieving

sustainable development and vice versa. The HFA comprises five themes that can contribute to resilience-building, namely;

- Governance
- Risk identification, assessment, monitoring and early warning
- Knowledge and education
- Reduction of underlying risks factors
- Disaster preparedness

Twigg (2007) has further developed the HFA. For the purpose of this study, we shall call it 'The Twigg Framework'. The Twigg Framework identifies the components, characteristics, and enabling environment for building resilience. While the Twigg Framework can be used to assess the resilience enhanced by humanitarian and development projects, there is need for caution. Because the Twigg Framework was still under development at the time of this study, it still suffered from being overly broad and covering almost 'everything under the sun' within the disaster and development realm. This is, however, its strength as it is not prescriptive about, for example, when, where and how to use it, but rather provides a menu from which resilience characteristics of interest can be chosen. Table 3.9 summarises the components, characteristics and enabling environments for resilience, which have been used to assess the extent to which resilience was enhanced by CCJP, ISP and ARP. These are integrating development with DRR; community participation; institutional building; training; and sustainable livelihoods. Before discussing each of the relevant resilience components under the specified theme, there is need to explore the concept of capacity building which appears to be *sin qua non* in development and humanitarian assistance.

2.5.1 Capacity-building

Boxes 2.1 and 2.2, reveal that resilience is a function of building capacities of communities and individuals. It is the contention of this study that development and humanitarian interventions present unique opportunities to building local capacity through, *inter alia*, training, technical assistance, technology transfer, information exchange, network development and management skills and professional linkages. Capacity building is relatively a new concept. It rose to a higher level of prominence since the mid-1990s. But 'capacitation' was used as early as 1974 in an effort to measure and promote relief and development programmes by donors (Wolfe, 1996). A 'capabilities approach' was later pronounced in the 1980s by various development scholars like Amartya Sen, whose work on 'entitlements' has been influential in shaping

the analysis of famine causation and prevention. Sen argues that any intervention that strives to improve people's quality of life is best achieved by giving them access to a wider sector of capabilities (Sen, 1981).

Similarly, the HFA places considerable emphasis on capacity building which may be viewed as the 'catalyst', the 'in thing', 'the engine', 'the brick and mortar' or the 'heart' of resilience-building. The term capacity is not immune from what can be termed 'the Social Sciences Definitions Disease' (SSDD). In contrast to many areas in the natural sciences, most of the social science key concepts either derive from or enter into ordinary language. When a term has strong roots in ordinary language, it is potentially very confusing to stipulate a definition without paying any explicit attention to the prior ordinary language meaning of the term. In the end social scientists grapple with refining and redefining ordinary language meanings so they can fit into disciplinary discourses (Fearon, 1999). Like many social science concepts, capacity building is a contested and illusive concept (Harrow, 2001; Wubneh, 2003). It has become 'merely a euphemism referring to more little than training', a 'cliché', and 'too broad a concept to be useful' (Potter and Brough, 2004). Mengers (2000) asserts that capacity building may become a mantra, a cure to all ailments. As stated in Chapter One section 1.7 (p.16), capacity building is sometimes used interchangeably with 'institution building', 'institutional and organizational development' and 'institutional capacity building' (Jones and Blunt, 1999).

However, capacity is not the same as capacity building. Rather, the absence of capacity necessitates capacity building. This means capacity building efforts must be informed by an assessment of existing capacity (Antwi and Analoui, 2008). Chaskin *et al.* define capacity as:

The interaction of human capital, organizational resources and social capital existing within a given community that can be leveraged to solve collective problems and improve and maintain the well-being of that community.

(Chaskin *et al.*, 2001:7)

The interaction may operate through informal social processes. This can be manifest in the form of organized efforts by individuals, organizations, and social networks that exist among them and between them and the larger systems of which the community is a part. In this case, capacity is related to the performance of tasks of individuals, group, community, institution or organisation affected by disasters to recover with minimal or no assistance at all. For the community to perform the tasks depends on the availability of, and access to resources, social networks, leadership and supportive environment for

participation (Chaskin *et al.*, 2001). The multiplicity of definitions of capacity building, (such as those stated in Box 2.5) is a result of shifts in development emphases.

Box 2.5 Definitions of capacity building

Author	Definition
Wubneh (2003:169)	Capacity building is the process of transforming a nation’s ability to effectively implement policies and programmes for sustainable development
Hilderbrand and Grindle (1994:100)	The ability to perform appropriate tasks
Eade and Williams (1995a:33)	Strengthening the capacity of the poor to organize together and to recognize their common interests in working for a fairer world
Kenny (2007:209)	Refers to specific approaches, strategies, and methodologies used for the purpose of improving the performance of individuals, communities, community organizations, and countries to carry out particular functions
Potter and Brough (2004:336)	Consists of meeting a hierarchy of needs which all need to be considered in a logical order if investments in development are to pay off.
UNDP (1997)	A process by which individuals, organisations, institutions and societies develop abilities to perform functions, solve problems and set and achieve objectives

Source: Author

In the 1950s and 60s, the emphasis was on institution building. In the 1970s, it shifted to development management and in the 1980s the focus was on private sector development. By early 1990s, capacity building was viewed as central to development (Wubneh, 2003). For the purpose of this study, capacity building is a process by which individuals, organisations, institutions and societies develop abilities to perform functions, solve problems and set and achieve objectives to enhance sustainable disaster resilience.

Resilience-oriented capacity building processes comprise specific approaches, strategies and methodologies to transform the ability of individuals or groups so they can perform functions following a disaster event. The ability of the individual or group to carry out particular functions and responsibilities depends on overall magnitude of the disaster, size of the tasks, the resources available to perform them, the framework within which they are discharged as well as the individual or group capabilities – knowledge, skills and attitudes. The term ‘group’ is used here broadly and refers to organisations and institutions involved in strengthening disaster resilience. These include regional, national, sub-national and local and international institutions and organisations, including Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs) and Faith Based Organisations (FBOs). Resilience building can be targeted at different scales such as regional, national, sub-national and individual levels depending on the objectives, magnitude of the issues to be addressed and availability of resources.

Capacity building approaches are diverse. However, the common elements include:

- The creation of an enabling environment, with appropriate policy and legal frameworks;
- Human resource development and the strengthening of managerial systems;
- Institutional development, including community participation.

(Franks, 1999:52)

A sample of projects reveals that capacity interventions are beset with numerous challenges which need further investigation. Institutional arrangements, participation, decentralisation and training are some of the issues which need further investigation. In a capacity building study in Africa, Wubneh (2003) concludes that the gestation period, integration of programme elements and institutional setting must be carefully considered at each of each stage of the project. Similarly, in a study on decentralisation in municipal governments in Mexico, Grindle (2006) concludes capacity building initiatives were dependent on the formal and informal institutions that determine the scope for introducing change. The changes can only be effective if reciprocated by supportive measures of state governments. In their study on regional training centres in Romania, Nientied and Racoviceanu (2000) stress the need for a conducive governance context for capacity building to be successful. The CCJP, ISP and ARP interventions highlight some of the inherent challenges of using capacity building in enhancing resilience. The following sections explore the components of resilience according to the Twigg Framework with the context of HFA.

2.5.2 Institutional building

That the institutional dimension has been historically neglected in DRR research and scholarship has been posited by Gopalakrishnan and Okada (2007). The simplicities around the conceptualisation of institutional resilience in current debates, within disaster theory and practice, are a manifestation of lack of a connectedness between DRR and institutional analysis. Yet, there is an increasing interest in institutions as systems meant to adapt, to evolve and adjust, and to resist shocks and rapid changes in their environment.

Implicit in HFA's resilience building process is institutional capacity development. In order to build and maintain the ability of people, organizations and societies to manage their risks successfully themselves, UNISDR (2007) argues for institutional capacity-development. Training and specialized technical assistance that aim to strengthen the capacities of communities and individuals to recognize and reduce risks in their localities can be sustained through institutions. Development and humanitarian

projects, especially those implemented in high-risk locations, can provide insights into the extent to which institutional capacity development is enhanced by such projects.

As already mentioned in Chapter One section 1.7 (p.16), the term institution is defined variously in the institutional analysis literature (see for example, Commons, 1968; Ruttan and Hayami, 1984; North, 1989; Pejovich, 1995; Ostrom, Schroeder and Wynne, 1993; Aoki, 2001; Vatn, 2005) and in most cases used interchangeably with 'organisation' (Uphoff, 1986). However, the term 'institution' refers to such elements as laws, cultures and attitudes of a particular society. For the purpose of this study, an institution that fosters disaster resilience is broadly defined and refers to state, civil and traditional entities and their underlying values, rules, norms of behaviour and traditions that promote and govern DRR and resilience systems. An institution is viewed as an instrument for action with an inherent value to its recipients, beyond its mere instrumentality (McGill, 1995).

This study makes a distinction between 'traditional' and modern institutions. According to Eade and Williams (1995b) traditional institutions are 'indigenous' institutions that have authority and capacity to mobilise people or communities for collective action, usually along village, chiefdom, religious or ethnic lines. This study adopts the position that traditional institutions, including those in case study locations, are the vehicles of culture, customs and value systems in which resilience is embedded. Notwithstanding that traditional institutions may be a force for social cohesion, social capital and livelihood protection and creation, they may also place constraints upon groups of people (Eade and Williams, 1995) such as women, children and the disabled. Eade and Williams (1995) further argue that the legitimacy of traditional leadership may be universally accepted within a community or may be subject to disagreements, especially if there is conflict between modern institutions. Furthermore, traditional beliefs, values and customs may be incompatible or at variance with the goals of external interventions. Some of the strategies may destroy rather than enhance the livelihood and resilience system built over centuries.

Modern institutions are those that originate from modernity and based on the modernisation theory, particularly the Weberian bureaucratic system. These include government, intergovernmental and non-governmental organisation systems. In most countries, state institutions are decentralised, that is, authority is devolved or deconcentrated from national to local levels. Like traditional institutions, modern institutions are carriers of Western cultural values and customs which may be at variance

with local values. This is therefore potentially the case with the interventions of humanitarian assistance programmes.

According to Twigg (2007) organisational capacity and coordination by lead institutions are crucial in DRR. In relation to disaster preparedness and early warning systems, for example, a resilient community has clearly defined roles and responsibilities of local disaster planning and response organisations. There are also defined and agreed co-ordination and decision-making mechanisms between community organisations and external technical experts, local authorities and NGOs. The success or failure of development and humanitarian projects to enhance institutional capacity depends on the existence or absence of an enabling environment. The existence of national and local policy and institutional frameworks that recognise and value local community in DRR activities, as integral aspects of the national DRR system, is likely to enhance and sustain resilience. Defined and agreed structures, roles and mandates for government and non-government actors in disaster planning and response, decentralised to all levels, is likely to foster coordination, cooperation and accountability. Decentralisation should include local decision-making, mobilising resources including human resources development and budgeting. Decentralised structures are able to better adopt a holistic approach to DRR with a coordinated planning and information system among agencies such as early warning, disaster response and development. Based on the above analysis this should engage the active participation and ownership of relevant stakeholders.

The success or failure of development and humanitarian projects to enhance institutional capacity also lies in incongruencies between interventions and local contexts. Leach (1995) argues that a major cause of the poor performance of institution-building projects in developing countries lies in the potential incompatibility of the development project with the host institution into which it is introduced. The incompatibility originates in the different "organisational culture" to which the project and the host institution subscribe. Changing either the project or the host institution organisation culture, could be possible ways of reducing the tension. However, it might be easier for the project to adapt to the local conditions than the institution to adapt to the project. In the context of resilience building, adapting the project might be feasible as long as the adaptation process builds on the existing resilience. Adamolekun (1990) argues that to build institutional capacity for development it is essential to pay attention to the values that underpin the institutions being developed or strengthened. Preserving rather than eroding local values, and recognising them as essential elements of the target community, might provide the foundation on which to build resilience.

Connected to the incorporation of values into the project design, is the project intervention strategy, which can take the form of interventionist or non-interventionist. An interventionist strategy, in the context of this study, is where a project creates a parallel structure to the establishment to empower communities to be their own agents. The projects adopting a non-interventionist approach tend to operate within the existing establishment. Adopting either of the strategies has implications for the entry and exit strategies. Thus, this study assessed the extent to which CCJP, ISP and ARP attempted to enhance institutional capacities in order to contribute to the resilience of target communities. Local value systems, institutional arrangements, and entry and exit strategies, among others, were major considerations in assessing resilience in the three locations.

2.5.3 Integrating development with DRR

Integrating development with DRR is essentially getting into the disaster – development connections debate. As pointed out in Chapter One section 1.5 (p.7), the evolution of the disaster paradigm has been largely influenced by the development paradigm. That there is a link between disasters and development has become a familiar view (McEntire, 2004b; Middleton and O’Keefe, 1998; Schipper and Pelling, 2006; Cuny, 1983).

Much ink has been split over the relationship, or lack of it, between development and humanitarian assistance... it is impossible to separate the disaster from issues of development with any meaningful political and economic sense.

(Middleton and O’Keefe, 1998:158)

Thus, resilience thinking is implicated in the disaster and development equation. Development and humanitarian interventions such as the CCJP, ISP and ARP, can provide some insights into these connections.

Connections between disaster and development paradigms

The emerging disaster resilience paradigm engages DRR, development and capacity building theories. Table 2.1 illustrates the evolution of both the disaster and development paradigms from the 1950s to the 2000s. There is however need for caution when analysing Table 2.1. Presenting the evolution of the two paradigms in a neat fashion is important for conceptual clarity. However, in practice, the evolution was not as neat as presented; there were some organic process in which multi-disciplinary debates overlapped into or across decades. Table 2.1 was therefore constructed with these challenges in mind. It only attempts to identify dominant themes that had impact on both disaster reduction and development and the extent of their convergence or divergence.

Table 2.1 Disaster and development paradigms 1950s to 2000s

Paradigm/Year	1950s	1960s	1970s	1980s	1990s	2000s
Development Paradigm	Modernisation, dual economy model, backward agriculture, community development, lazy peasants	Transformation approach, technology transfer, mechanisation, agricultural extension, growth role of agric., green revolution	Redistribution with growth, dependency theories, basic needs, integrated rural development, state agric. policies, state-led credit, green revolution continues	Structural adjustments, free markets, rise of NGOs, rapid rural appraisal (RRA), food security and famine analysis, decentralisation	Micro credit, participatory approaches, stakeholder analysis, rural safety nets, gender and development (GAD), environment & sustainability, poverty reduction, vulnerability	Sustainable livelihoods, good governance, participation, social protection, poverty eradication, vulnerability reduction; climate change, resilience
Disaster Paradigm	Geo-physical natural hazards, nature-society interaction, cost-Benefit analysis	Satisficing risk, quantifying risk	Hazard paradigm (natural, technological, social) land degradation, erosion, disaster planning, vulnerability	Biological hazards, construction of risk, tech. hazards, participation, primary health care, entitlement theory, vulnerability	Complex emergencies, vulnerability reduction gender, private market, participation, human ecology of disease, risk assessments	Participation, vulnerability, climate change, resilient livelihoods, DRR, resilience, psychosocial, new humanitarianism

Source: Burton, Kates and White (1993) ; Ellis and Biggs (2001)

The disaster and development paradigms appear to have had little in common during the 1950s and 1960s save for the interest in applying scientific and technical knowledge to solve disaster and development problems. Elliot (1994) asserts that the development paradigm then was dominated by ‘modernisation’ theories, which were influenced by neoclassical economists. These were modelled by scholars like Hirschman and Rostow as a staged process. Once a critical ‘take-off’ period was reached through savings and investment, development would flow or ‘trickle-down’ from the core (developed region) to the periphery (less developed region).

The disaster paradigm evolves from the hazard paradigm (Burton, Kates and White, 1993). Although disasters have affected human beings since time immemorial, there appeared to be no links between the disaster and development paradigm during the 1950s and 1960s. Disasters were construed as geo-physical hazards, or acts of God, and mitigating them depended on the cost-benefit analysis which continued to be used through to the 1970s.

By the 1970s, the modernisation approach could not deliver the envisaged development. Elliot (1999) states that the inequalities between and within countries worsened. To address worsening inequalities, ideas included redistribution with growth, integrated rural development and basic needs approach. In addition, the (radical) dependency theory, popularised by scholars such as Andre Gunder Frank in 1967, argued that development barriers lay in the international division of labour rather than lack of capital or entrepreneurial skills, as was promoted by the modernisation thinking (Elliot, 1999). On the disaster paradigm front, from the 1970s onwards, technical professionals, such as engineers and architects, began to focus on the varying impact of hazards on different kinds of structures, such as buildings. There was a shift from a hazard focus to the physical impact of the hazard. Physical and structural mitigation measures such as levees and flood defence, based on technical designs would help communities to resist disasters. Cost-benefit analysis was the major decision tool to initiate mitigation projects. In countries, where costs of mitigation projects were beyond affordability, it was difficult to undertake them (UNDP, 2004).

In the 1980s, the development front saw the emergence of the neo-classical development paradigms. Structural adjustment programmes (SAPs) and neo-liberalisation blueprints promoted by the Bretton Woods institutions – the International Monetary Fund (IMF) and World Bank to guide development programmes. It was envisaged SAPs would lead to restructuring of Low Development Countries’ (LDC) economies so that they could maintain both growth rate and the viability of their balance

of payments in the medium term (Reed, 1996). The SAPs have had disastrous effects, 'they have cured nothing at all ...they have caused untold human suffering' (George, 1997:207). SAPs were renamed, Poverty Reduction Strategy Papers (PRSPs) because the term SAP was so tainted as they led to chronic economic crises in LDCs (McGregor, 2005; Brazier, 2004). Nonetheless, during the 1980s, food security and famine analysis also emerged which had some implication on the disasters paradigm. Sen's entitlement theory appealed to both development and disaster scholars and its influence is therefore still present in the evaluation of resilience in humanitarian assistance addressed by this thesis.

Parallel to Sen's entitlement theory was the broadening of the hazard paradigm which introduced concept of vulnerability in the mid-1970s and popularised in the 1980s. According to UNDP (2004), social scientists provided compelling evidence that disasters were something more than just acts of God. This signalled a shift from the hazard mitigation to social and economic vulnerability (O'Keefe *et al.*, 1976). They argued that the impact of a natural hazard depended not only on the physical resistance of a structure, but also on the capacity of people to absorb the impact and recover from loss or damage. In addition, there was mounting evidence that natural hazards had widely varying impacts on different social groups and on different countries. Wisner *et al.* illustrate how the Guatemala earthquake of 4th February 1976 impacted on different social classes.

The earthquake killed 22,000 people living in unsafe housing in the rural highlands of Guatemala as well as within dangerous squatter settlements in Guatemala City. It left the upper and middle classes virtually unscathed. This was the first major earthquake widely recognised as having such a markedly selective impact, hence its common designation by people on the street as a 'class-quake'.

(Wisner *et al.*, 2004:279)

Through the 1980s disaster causation thus shifted from the natural event towards the development processes that generated different levels of vulnerability. Since then gender, participatory approaches and vulnerability, among others, became common elements of both disaster and development paradigms. The disaster and development connections became subject of debate at international forums such as the 1994 Yokohama World Conference on Natural Disasters, the 2002 Johannesburg Summit on Sustainable Development and the 2005 World Conference on Disaster Reduction. Thus, as stated in Chapter One section 1.7 (p.13), this study adopts the notion that disaster and development are two sides of the same coin. Disasters are indicators of 'unsolved development problems' (Wijkman and Timberlake, 1984) if not 'failed development' (Anderson, 1985) which increases the vulnerability of people to natural hazards (Twigg,

2004). Fordham (2003: 57) asserts that “many development programmes planned are undertaken without ensuring they do not exacerbate hazardous conditions or make people (and particularly women) more vulnerable to disasters”. Disasters can also undermine hard won development. Following Hurricane Mitch which occurred in October 1998, the Honduran Prime Minister was reported to have remarked that the economic losses set his country's economic development back at least 20 years (IFRC, 2002). Christoplos, Mitchell and Liljelund (2001) and De Haen and Hemrich (2007) suggest the harmonisation of disaster and development into a new policy narrative that can promote sustainable livelihoods, culture of prevention and rights-based approaches.

According to UNDP (2004) developing countries tend to have a higher burden of disaster effects as compared with the developed countries. Eleven percent of the people exposed to drought, earthquakes, floods and windstorm hazards live in low-developing countries, and account for 53 percent of people who lose their lives. Disasters cause distortion in national budgets, moving away from capital expenditure to relief and rehabilitation. However, in as much as disasters cause distortion to hard won development gains, they also ‘have a creative side. They can spur a society toward radical – sometimes even beneficial – change’ (Wijkman and Timberlake, 1984: 125). They offer windows of opportunity for strengthening affected communities (Cuny, 1983) to withstand future disasters. Disasters highlight the inherent weaknesses in society, such as building styles in earthquake and hurricane prone regions, land ownership patterns and poor leadership (Cuny, 1983). Humanitarian aid has become a source of much needed resources to support long-term development. Over the past 30 years, an increasing percentage of Official Development Assistance (ODA) has been spent on humanitarian assistance; up from around three percent in the 1970s to between 10 percent and 14 percent in recent years (Walker *et al.*, 2005). The notion of linking relief, rehabilitation and development (LRRD) attempts to address relief needs while simultaneously paying attention to long-term development.

According to Buchanan-Smith and Fabbri (2005), the origins of the LRRD debate can be traced back to the African food crises of the mid to late 1980s although interest in this topic really flourished in the second half of the 1990s. But Schmalbruch (2003) associates the origin of LRRD with the European Commission’s creation of European Coordination of Humanitarian Office (ECHO) in 1992 when a discussion about the so-called ‘grey zone’ between humanitarian assistance and development started.

Long-term issues which LRRD addresses include restoration of social services, governance, food security and production, economic revival and job creation (UNDP,

1998; Kelly, 1998). LRRD has provoked debate which has manifested itself in the revisiting of the 'disaster cycle' (Frerks *et al.*, 1995; Kelly, 1996; Kirkby *et al.*, 1997) as outlined in Chapter One. Moreover, there is inadequate evidence in the literature which supports how disaster resilience can be enhanced by LRRD. First, LRRD is an important goal but many constraints need to be overcome in achieving it have been noted. Using case studies from the Horn of Africa's chronically vulnerable areas, Maxwell (1999), concludes that the success of LRRD programming was a function of, among others, availability of information for planning which in most cases can be problematic to obtain. Secondly, the LRRD approach assumes emergencies are temporary and postulates a return to normality, yet some crises such as those in Sudan, Afghanistan and Great Lakes Region of Africa have persisted for more than a decade. Therefore, whilst this thesis addresses how resilience may be enhanced in the humanitarian context, humanitarian action is beset with controversies. The section that follows further discusses the concept of humanitarian action in its relation to resilience building.

Humanitarian action

Humanitarian action, founded on the conviction that all people have equal dignity by virtue of their membership of humanity (Terry, 2002), has *de facto* become synonymous with disaster response and relief systems. With increased access to information, through improvement in technology; and as the impulse to help remains strong and unyielding (Weiss and Collins, 2000); the world of humanitarian action has become more globalised (Fernando and Hilhorst, 2006). Refugees in countries affected by war such as Sudan, Somalia and Iraq or those affected by 'natural' disasters such as Ethiopia, Pakistan and Bangladesh, have become familiar features on TV screens, newspapers and the internet. Common are pictures or footage of "[c]hildren with stick limbs and pot-bellies, weakened by hunger till they are unable to flick away the flies that converge on their tears" (Jabry, 2003). The pictures are shown on humanitarian grounds to raise awareness for well-wishers to donate resources to save human lives and suffering.

Despite poignant representations of human suffering, there is a 'conceptual fuzziness' about the definition of or principles of humanitarian action (Weiss and Collins, 2000) particularly in relation to resilience. As mentioned in Chapter One, section 1.7 (p.15), humanitarian action is sometimes used as a synonym of humanitarian assistance, or action taken when there is a 'humanitarian crisis' or 'complex emergency'. Juma and Suhrke (2002:7) distinguish humanitarian assistance from humanitarian action. The former has a precise and rather narrow meaning and refers to provision of material goods and services (food, water, shelter and medical aid) for a certain category of needy

people. The later can be defined within the context of international law. It consists of activities to protect and assist victims of war and similar kinds of physical violence mainly refugees and internally displaced persons. However, humanitarian action, or rather humanitarianism, has been mainly associated with 'war' disasters than those triggered by 'natural' hazards (Terry, 2002; Weiss and Collins, 2000; Vaux, 2001). Recently, the term is increasingly being applied in both war and general disasters (Vaux, 2006), especially following the acceptance that disaster causation is a combination of anthropogenic and natural hazards (Blaikie *et al.*, 1994; Wisner *et al.*, 2004). This offers an opportunity to assess the extent to which resilience building occurs across disaster types, notwithstanding the hazard events which trigger them.

A combination of internal conflicts with large scale population displacement, fragile socio-economic and natural hazards such as drought and flooding lead to what has become generally known as 'complex emergencies' (Hallam, 1998), 'humanitarian crises' (Vaux, 2001) or 'complex humanitarian emergencies' (Brennan and Nandy, 2001). The term 'complex emergency' was coined in Mozambique in the late 1980's as a way for aid agencies to acknowledge that humanitarian assistance needs were being generated by armed conflict as well as by periodic 'natural disaster' events, such as cyclones and droughts. The use of terms such as 'civil war' and 'conflict' were avoided as they were sensitive in the Mozambican context at the time (Hallam, 1998). In mid-1990s, the term 'political' was added and since then the term has commonly become known as 'complex political emergencies' (CPE), following various studies. The Leeds University DFID-funded study that was entitled *Complex Political Emergencies – From Relief to Sustainable Development?* (see Cliffe and Luckham, 2000; White, 2000; Milas, and Latif, 2000; Green, 2000; Goodhand *et al.*, 2000; Munslow and O'Dempsey, 2008) had a significant contribution to the conceptualisation of the CPEs. There are two notable contributions of the CPEs concept to the disaster theory and practice.

First, the concept of CPEs has become a way of differentiating those situations where armed conflict and political instability are the principal causes of humanitarian needs from those where natural hazards are the principal cause of such needs (Hallam, 1998; Albala-Bertrand, 2000a; Albala-Bertrand, 2000b; Buchanan-Smith and Christoplos, 2004). CPEs are characterised by armed conflicts, social disruption, food shortages, state collapse, or where the stated is contested or seriously weakened, political instability, great human suffering due to collapse of infrastructure such as health and education, large population displacement resulting in internally displaced peoples (IDPs) and refugees (Cliffe and Luckman, 1999; Brennan and Nandy, 2001). The number of

CPEs has increased over the last 20 years. Munslow and O'Dempsey (2008:464) state the major reason for the increase in CPEs:

During the cold war, from the end of Second World War until the fall of the Berlin Wall in 1989, the communist and capitalist groupings internationally kept internal conflicts within their allied states under check. The end of cold war uncertainties unleashed a massive explosion of CPEs in the Balkans, the former Soviet Union, Africa and parts of Asia in particular.

Examples of most recent CPEs include Sudan, Somalia, Afghanistan, Zimbabwe, East Timor, Democratic Republic of Congo and Sri Lanka.

The use of the term 'complex' is potentially confusing, as it may imply that a 'natural' disaster cannot be 'complex' (and is somehow 'simple'). In other words, conflict-related emergencies occurring prior to the 1980s (such as that in Biafra in 1968-71) were not 'complex'. Yet, many of the characteristics of those emergencies and the dilemmas faced by donor organisations and humanitarian agencies were similar to more recent emergencies occurring in Eastern Europe, Asia and Africa (OECD, 1999). Terry (2002) views the use of the terms 'CPEs' and 'humanitarian crises' as blurring rather than illuminating the contemporary context: it confuses the specificities of war, famine, epidemics, drought, population displacement and so on. It disconnects the consequences from the causes in the name of permitting the assignment of international response. Disconnecting the consequence from the cause may imply de-linking the resilience that existed before the disaster occurred from the resilience necessary for recovery. This appears to be the reality of the 'new humanitarianism' (Terry, 2002) or the world of 'new wars' (Hoffman and Weiss, 2006) including terrorism which tends to disconnect consequence from the cause.

Secondly, despite the confusion over the use of the term, CPEs conceptualisation confirms that disasters are socially constructed; a further rejection of environmental determinism as an inadequate account of human disasters. The debate on CPEs, particularly following 'the fateful neglect by the international community of the genocide of 800,000 Tutsi and moderate Hutu in Rwanda in 1994' (Munslow and O'Dempsey, 2008: 465) allows a more holistic approach to viewing DRR. Munslow and O'Dempsey (2008) further state that the divide between humanitarian and development institutions in relation to their separate mandates, roles and funding mechanisms came under scrutiny in the Rwandan humanitarian response. While the reality on the ground was that, there would be a seamless transition from relief to rehabilitation and then development, institutional complexities of funding and restricted mandates prevented any such easy transition. Instead of institutional arrangements providing the solution to the

humanitarian crisis, they became a significant part of the problem which contributed to the erosion of, instead of enhancing, the existing resilience. While CPEs attempt to address disasters from a holistic view, the extent to which they address structural problems, the underlying causes of chronic disasters, remains one of the conceptual and practical challenges. It can be argued that CPEs are limited to facilitating response rather than addressing wider issues that causes disasters. Part of this problem emanates from the earlier discussion (p.10-12) on the disaster cycle and the continuum approach, which assists policy decisions in funding particular phases of the disaster such as relief, rehabilitation, reconstruction and development. In addition, explorations on the extent to which development and humanitarian interventions have attempted to apply lessons from CPEs in building resilience, are limited.

Similarly, they have been limited exploration of the connections between resilience and humanitarian assistance. The most notable work, which comes closer to exploring the two concepts, is Juma and Suhrke's (2002) 'eroding local capacity' through international humanitarian action in Africa. Many would agree that resilience is relatively new concept while humanitarianism has been in existence since humankind. However, it is not until the 19th century that humanitarianism took on a new interpretation. According to Weiss and Collins (2000) modern humanitarian action is associated with the battle of Solferino in 1859. It was later institutionalised and codified into the International Organisations (IOs) such as the International Federation of the Red Cross and Red Crescent Societies (IFRC) and the United Nations system including the International Court of Justice, UN Charter, the Hague conventions and the Geneva conventions. Additional protocols, and other binding conventions, whose structures may have a bearing on community resilience following a disaster, include the 1951 UN Refugee Convention and the 1967 protocol which define the term 'refugee' and set out minimum standards for their treatment

Wars have provided an impetus to the codification of humanitarian law. Schimmel (2006) asserts that traditionally, humanitarianism and politics were perceived as polar opposites. Humanitarianism insisted on its non-partisan stance. However, the thread emerging from the literature is that humanitarianism cannot be disentangled from geopolitics (Middleton and O'Keefe, 1998; Weiss and Collins, 2000; Terry, 2002; Juma and Suhrke, 2002). The silence of humanitarian action literature on 'natural disasters', suggests that natural disasters' contribution to the evolution of the concept may be insignificant. Yet, military assets are deployed during natural disasters. For example, military assets were employed during the response to the Indian Ocean earthquake-

induced tsunami of December 2004 (Pettit and Beresford, 2007) and during Hurricane Katrina in 2005 in USA (Menzel, 2006).

Codification and institutionalisation of humanitarian action was accompanied by frameworks, standards, principles or codes to guide the process of restoring the rights of individuals deprived of them by disaster circumstances. Three of the seven fundamental principles of the ICRC: humanity; impartiality; and neutrality, provide the most broadly accepted principles to guide humanitarian action. They form the basis of various codes of conduct that have appeared in recent years (Vayrynen, 1999; Hoffman and Weiss, 2006). The ‘humanitarian imperative’ rather than simply a ‘humanitarian impulse’ (Weiss and Collins, 2000) is a concern for the person in need (Vaux, 2001) based on the conviction that all people should have equal dignity by virtue of their membership of humanity (Terry, 2002). Impartiality is about fairness and implies that assistance is based on need. Recipients are not discriminated on the basis of nationality, race, religion or other factors. Neutrality denotes a duty to refrain from being partisan or undertaking activities that further the interests of one party to the conflict or compromises those of the other (Terry, 2002). The use of military assets, particularly in ‘natural’ disasters, can be problematic and sometimes undesirable as it may sacrifice the principle of impartiality and independence (Vayrynen, 1999). Whatever contestations exist, the humanitarian imperative has continued to lead individuals and governments to mobilise resources to assist those who are affected by disasters. However, the likelihood of existing resilience within recipient locations has been rarely specified in the process of humanitarian assistance.

It is suggested that humanitarian action is awash with challenges, controversies and paradoxes (Terry, 2002). Middleton and O’Keefe (1998) provide evidence of the politicisation and commercialisation of humanitarian aid in Somalia, Rwanda, Kenya, Sudan, Mozambique, Afghanistan and Azerbaijan crises. The danger of politicisation of relief resources by military faction leaders (like in the case of Bosnia, Rwanda and Somalia) prolongs the conflict (Vayrynen, 1999). Juma and Suhrke (2002) illustrate how humanitarian action has eroded local capacity in Africa. Parakrama (2001:128) argues that humanitarian assistance “is endless in time and it has no end or goal for itself”. It is not a means to end human suffering by addressing its root causes as well as its effects but a means that has no end in both senses of the term (Parakrama, 2001). Notwithstanding the challenges, there are windows of opportunity in integrating relief, rehabilitation and development. Although the HFA was mainly designed to reduce disaster risks triggered by natural hazards, its contents can be applied to assessing resilience enhanced or

reduced by humanitarian programmes following a ‘complex emergency’ such as in the case of ARP in East Timor.

2.5.4 Community participation

In the context of HFA, participatory principles are *sin qua non* to building resilient communities. Indeed, participation has become overwhelmingly popular (Michener, 1998) if not a development orthodoxy (Cornwall, 2003) since the early 1990s, but with origins earlier than that. Three typologies (see Appendix 2) are used to gauge the level of participation in relation to strengthening resilience - Arnstein’s (1969), Pretty (1995) (cited in Cornwall, 2008) and White (1996) typologies. Arnstein’s and Pretty’s typologies describe a spectrum defined by a shift from control by authorities to control by the people or citizens. They both remind us that participation is about power and control (Cornwall, 2008). White’s typology reminds us that different stakeholders have different interest for employing the participation approaches.

Participatory approaches were popularised in the 1970s, particularly by several scholars with Paul Freire’s popular education being one of the outstanding ones (Estrella and Gaventa, 1998). However, it was not until the 1980s that Robert Chambers, ‘the guru of participation’ (Mohan, 2008b:1742), ignited the ‘participatory revolution’ through the introduction of Rapid Rural Appraisal (RRA) in 1983, which has since then assumed a plethora of different techniques and methods favoured by individuals and organizations (Chambers, 2007).

Two of several reasons cited by Morse (2008) which gave rise to participation, are linked to development delivery failures and social sciences research influence. First, there was a gradual disenchantment during the 1960s amongst social scientists with macro-economic policies as the tool for development. Second, with influences from scholars such as Lewin’s (1948, cited in Morse, 2008:345) ‘action research’, there was a growing apathy among social scientists against traditional scientific assumptions, particularly the value-neutrality of the researcher and the requirement that the researcher have complete control over the research process. More importantly, research was to directly facilitate social change (Starrin and Svensson, 1991). The participative reality challenges the status quo: it addresses power relations; it addresses larger issues of poverty, inequality and oppression (Jackson and Kassam, 1998); it is emancipatory, promotes freedom and self-determination; and often explicitly intends to respect communal forms of living that are not Western (Guba and Lincoln, 2005). Connell (1997) argues that participation is an emancipatory concept and practice of development.

Inequalities and inequities are addressed together in order to reconfigure society to the benefit of the majority as it empowers people to develop people as they see fit. It is claimed participation gives the poor more voice and choice in development (Cornwall, 2006) and disaster programmes. The assumption is that community-initiated programmes build on the felt needs of the target groups and have a likelihood of succeeding. There are several examples of the benefits of community participation in disaster and development programmes. In a study on urban sector lending in India, Mengers (2000) concludes capacity building programmes drafted in a bottom-up and demand-driven fashion are a better guarantee for ownership, commitment and positive results.

Participatory approaches have their shortcomings. The limitations range from the conceptual to practical ones. Participation is an ambiguous (Michener, 1998), vague (Cornwall, 2008), multiple, partial and contentious (O'Reilly, 2004) concept. Cornwall and Brock (2005) argue that participation is one of the 'buzzwords' in development policy discourse. They contend that 'participation', 'empowerment' and 'poverty reduction' which once spoke of politics and power have become re-configured in the service of today's one-size-fits-all development recipes, open to an apoliticised form that everyone can agree with. Quaghebeur, Masschelein and Nguyen (2004) argue that participation is always part of an operation of power, that helps to govern people so they can behave themselves in a particular determined way. Smith (1998) asserts that participation may be a means of indoctrination, but also places responsibility for development with those least able to bear it. It has become a kind of forced labour. Thus, people targeted by development and disaster programmes may be treated as objects in 'self-help' schemes that have not been designed by those affected. In a study on local capacity in DRR in the Philippines, Allen (2006) warns against treating community-based capacity building programmes as a panacea to disaster management problems as they have the potential both to empower and disempower communities.

As much as participation is a process and means for increasing community agency in tackling development and disaster problems, the problems affecting them are not often tackled at the local level. For example, it can be very hard for a small cooperative in Africa to change the rules governing international trade when the World Trade Organisation is dominated by developed nations (Mohan, 2008a). In addition, from a democratic perspective, simply being able to participate is major achievement. But for the poor, their lack of resources to meet their practical needs means that any participatory process which does not yield tangible benefits can be meaningless (Mohan, 2008b). In

other words, participatory approaches are likely to be meaningless if they do not respond to satisfying their basic needs such as food and water.

Notwithstanding the limitations, participation remains one of the central tenets of the HFA. Its practical role is being widely recognised through exercises such as vulnerability capacity assessment (IFRC, 2005; IFRC, 2009; Pelling, 2007). Besides, in developing countries including Zimbabwe, Ethiopia and East Timor, benefits from participatory approaches may be derived from even the weakest form of participation such as cooperation, enlistment, contributions, utilization and consultation (Smith, 1998). Thus, assessing the extent to which resilience was enhanced by CCJP, ISP and ARP participatory approaches constitute an important aspect of examining the nature of disaster resilience in development and humanitarian interventions. The participatory approach, which has come relationship with the rights-based approach to development, is explored briefly in the preceding section.

Rights-based approach to development

The rights-based approach (RBA) is a relatively new entrant to the development discourse. Until about two decades ago, development and human rights lived in perfect isolation (Marks, 2004; Uvin, 2007). Although both development and human rights have a temporal coincidence of being born out of World War II, they run by two disparate institutions. The Bretton Woods Institutions (The World Bank and the International Monetary Fund) were charged with development promotion while the United Nations Human Rights Commission was charged with the protection and promotion of human rights. Development was dominated by economists and narrowly conceived as economic growth where human rights had little relevance at all. The human rights, enshrined in the Universal Declaration of Human Rights in 1948 by the United Nations (UN), were a preserve for lawyers (Sengupta, 2002; Nyamu-Musembi and Cornwall, 2004; Uvin, 2007). Yet, 'human rights and human development share a common vision and a common purpose — to secure the freedom, well-being and dignity of all people everywhere' (UNDP, 2000:1).

The right to development was proposed by a Senegalese Judge Keba M'Baye in 1972 in the context of elimination of injustices and inequalities under the rubric of the New International Economic Order (Centre for Development and Human Rights, 2004). However, it was not until 1986 that a 'right to development' was adopted by the UN General Assembly. Uvin (2007) states three main reasons why the right to development gained currency in the 1990s in development theory and practice. Firstly, the end of Cold War opened door to greater missionary zeal. Secondly, the failure of structural

adjustment programmes, was viewed as lack of government accountability and prompted a major push for ‘good governance’ and ‘democracy’. And thirdly, a more holistic definition of development was necessary due to the failure of economic growth models to deliver sustainable development.

RBA to development has been mainstreamed by multilateral and bilateral institutions and international NGOs such as the World Bank, UNICEF, UNDP, SIDA, DFID and CARE. Similarly, because of the inherent intimate connections between development and DRR, RBA have become inextricably linked to DRR interventions. Yet what exactly constitutes the right to development and RBA remains unclear. Whatever tensions exist between the two concepts, is subject to different interpretations depending on disciplinary and practical orientations, which is not the attention of this study. However, a brief exploration of some of RBA definitions (Box 2.6) might shed insights on what it entails.

Box 2.6 Definition of rights-based approach

Author	Definition
Mary Robinson (2001)	A rights-based approach is a conceptual framework for the process of human development that is normatively based on international human rights standards and operationally directed to promoting and protecting human rights.
UN Secretary-General (1998)	A rights-based approach to development describes situations not simply in terms of human needs, or developmental requirements, but in terms of society’s obligations to respond to the inalienable rights of individuals, empowers people to demand justice as a right, not as a charity, and gives communities a moral basis from which to claim international assistance when needed.
ActionAid Kenya (2002)	A rights-based approach affirms that all citizens are entitled to the resources that satisfy their basic needs. Additionally, every citizen – rich and poor – has the right to information and participation in the development process.
Amnesty International (2002: 4)	An ethical approach to globalization can mean nothing less than a rights-based approach to development. We must struggle not only against torture, arbitrary detention and unfair trials, but also against hunger, illiteracy and discrimination if human rights are to be meaningful in developing countries.
Johnson and Forsyth (2002: 1592)	... rights-based approaches are generally associated with a universal system of rights, in which minimum standards of well-being are extended to the widest possible constituency.

Source: Author

The use of terms ‘normative’ and ‘standards’ denotes that RBAs do not only put values and politics at the very heart of development practice but also associated with a universal system of rights, in which minimum standards of well-being are extended to the widest possible constituency (Johnson and Forsyth, 2002, Nyamu-Musembi and Cornwall,

2004). The Sphere Minimum Standards in disaster response relating to food security, nutrition, water and sanitation, food aid and shelter takes makes the ‘rights-based approach operational’ (Dufour *et al.*, 2004:132) by incorporating basic human principles embodied in the Humanitarian Charter such as right to life with dignity, non-discrimination, impartiality and participation (Sphere Project, 2004).

By stipulating an internationally agreed set of norms, backed by international law, it provides a stronger basis for citizens to make ‘claims’ on their states and for holding states to account for their duties to enhance the access of their citizens to the realisation of their rights and entitlements (Uvin, 2007). In claiming or demanding their rights in relation development, and indeed in DRR processes and outcomes, can help communities, as ‘right-holders’, identify root causes of underdevelopment and disaster causation and ‘demand’ solutions from ‘duty-bearers’. This encourages the redefinition of the nature of the problem and the aims of development enterprise into claims, duties and mechanisms that can promote human respect and dignity (Uvin, 2007; Gready, 2008). The use of the term ‘empower people’ means RBAs are about building community-capacity to enable them to claim their entitlements through negotiation, lobby and advocacy. RBAs are not only a vehicle for improving good governance but also for enhancing the relationship between state and its citizens. Increased government and NGOs accountability to communities shifts the frame from viewing them as development (or DRR) clients or customers but to that of citizens with ability to demand the fulfilment of their rights from obligation-holders. It makes the participation of communities in development and humanitarian programmes more meaningful to realise both their practical and strategic needs (Uvin, 2007; Gready, 2008). Thus, RBAs can work both to sharpen the political edges of participation in the wake of the instrumentalism produced by mainstreaming, and to make critical linkages between participation, accountability and citizenship (Mitlin and Patel, 2005).

RBAs make improvements of capacity-building programmes that are often based purely on providing the clients or communities with the skills to ‘manage projects’ to provide basic services, such as building of schools, roadways and provision of income-generation schemes, thus making the communities continuously dependent on outside agencies. In other words, RBAs are about agency (Cornwall and Nyamu-Musembi, 2004; Mitlin and Patel, 2005) as they attempt to empower communities to (radically) influence change from an existing state to an improved state of resilience.

The definitions in Box 2.6 do not only differentiate RBAs from a needs-based approach (NBA) but also make an emphasis on ‘ethics’ and that aid should ‘do no

harm'(Anderson and Woodrow, 1989). NBAs tend to be associated with meeting needs based on charitable intentions to secure additional resources for delivery of services to marginalised groups. RBAs tend to be oriented towards ethical obligations that have a strong foundation in human dignity; for existing resources to be shared more inclusively and equally, and assisting the marginalised people to assert their rights to those resources, thus supporting Sen' assertion of development as freedom (2002).

The three case studies, particularly the CCJP case study in Chapter Four, might shed light on the extent to which development and humanitarian interventions attempt to apply RBAs. Given that most poor people have little access to the institutions that might enforce their rights, and that the interface between different legal systems governing their access to entitlements makes the process of recognising and claiming rights complex. In addition, resource limitations demand the establishment of priorities, which in turn may undermine the RBAs, particularly the principle of indivisibility, may pose a dilemma when dealing with competing rights. In relation to DRR, Young *et al.* (2004) in their reflection on how operational standard like the Sphere Minimum Standards could give content to human rights, they question the meaning of RBA in terms of the role of humanitarian agencies as duty-bearers of rights, given that the primary responsibility rests with state governments.

2.5.5 Social learning

People-centred development and humanitarian programmes have an inherent institutional and community learning. In this study, it was hypothesised that resilience building is a social learning process which enables communities to strengthen their resilience to survive destabilising events. Adger *et al.* (2005) argue that social learning, the diversity of adaptations, and the promotion of strong local social cohesion and mechanisms for collective action have all enhanced resilience and continue to guide planning for future climate change. According to Cutter *et al.* (2008) social learning occurs when beneficial impromptu actions are formalized into institutional policy for handling future events and is particularly important because individual memory is subject to decay over time. Manifestations of social learning include policy making and pre-event preparedness improvements. When improvisation and social learning take place, they directly alter the inherent resilience for the next event.

Social learning is mainly associated with Bandura's (1971) Social Cognitive Theory (Bandura, 1986) which recognises the bidirectionality between socio-structural and personal influences. This integrates often regarded as rival conceptions of human

behaviour or represents different levels and proximities of causation. Thus, it rejects a dualism between personal agency and a disembodied social structure (Bandura, 1999). The core constructs of Social Cognitive Theory are observation learning, imitation, and modelling. The social dimension was adopted in this study on the basis that learning occurs within a social context (O'Brien, 2008) and that social-cognitive principles underlie people's learning about what matters in the social world (Higgins, 2000). Resilience or lack of it is a social construction shaped, mainly, by the social environment such as political and economic conditions. Thus, individuals, groups and institutions continuously learn as they recreate their resilience to appropriately respond and adapt to ever-changing hazard and vulnerability risks.

Cutter *et al.* (2008) distinguish between learning in the context of the adaptive resilience process and “lessons learned” in the coping process. Lessons learned are debriefings after the event is over and are used to identify what went right and what went wrong in the response. In reality, lessons learned are merely lessons identified. They are commonly formulated as recommendations that may or may not be implemented in time for the next hazard event or at all, providing a differentiation between this and social learning.

Allied to the social learning theory is the Freirian pedagogy of transformative change, or liberation education, which is rooted in praxis or action in order to shape and change the world (Freire, 1993). In the context of resilience-building, both staff and communities who undergo training act ‘either as agents of the state or as agents of transformative change; either perpetuating the status quo or creating the context to question’ (Ledwith, 2001:1). Workshops, on-the-job training and formal training courses are some of the examples, through which community actors learn and reflect on their actions. Here the community actors include individual, groups, formal and informal institutions or organisations. This study therefore explored the effectiveness and sustainability of social learning strategies adopted by the three case studies in their attempt to enhance resilience.

2.5.6 Sustainable livelihoods

Sustainable livelihoods are a component of resilience under the risk management and vulnerability theme in the Twigg Framework. Resilient communities are characterised by, among others: equitable distribution of wealth and livelihood assets in the community; livelihood diversification at household and community level, including on-farm and off-farm activities in rural areas; fewer people engaged in unsafe livelihood

activities or hazard-vulnerable activities such as rainfed agriculture in drought-prone locations; and food security with communities practising hazard-resistant agricultural such as soil and water conservation methods, cropping patterns geared to low or variable rainfall, hazard-tolerant crops. Thus, resilient communities have the ability to mobilise their livelihood assets to withstand the impacts of, and recover from destabilising events. The assets here refer to both material and social resources. Scoones (1998:5) asserts that a “livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base”. An analytical tool, commonly referred to as the sustainable livelihoods framework (SL) has been developed. SL makes an emphasis on establishing the vulnerability context (problems, shocks and stresses), what people have (assets and capitals) and what people do (livelihood activities) in addressing livelihoods issues. As a result, it has become common for development research and scholarship to explore the level of ‘capitals’ (financial, natural, physical, human and social) as well as the shocks and trends that affect people’s livelihoods and their strategies for improving them (Carswell and Jones, 2004; Scoones, 1998; DFID, 1999).

The SL has several limitations. For example, it tends to place more emphasis on the deficit or vulnerability model than the ‘can do’ or resilience model. As stated in Chapter Two, section 2.2.4, the danger with the vulnerability model is that it tends to adopt a ‘supply’ model where ‘victims’ or ‘beneficiaries’ need ‘help’ rather than building on their strengths. Besides the SL’s vagueness and lack of clarity on the connections between environmental sustainability within overall livelihood sustainability, SL treats livelihoods issues as politically neutral. This “contrasts starkly with the fundamental role that power imbalances play in causing poverty” (Ashley and Carney, 1999:33-34). Thus, a framework that goes beyond the SL and builds on existing strengths, taking into account wider political influences might be useful not only in determining community capacity but also improve our understanding of the meaning of resilience. The SL approach provides an angle from which to interrogate the extent to which projects attempt to protect and create livelihood assets so that the disaster impacts can have a benign outcomes on the at risk communities. Because of the limitations, the SL is used here in conjunction with other frameworks.

Several conceptual models have been developed that assist research and development agencies in establishing the vulnerability context. According to Cutter *et al.*

(2008) the most often cited conceptual models for hazard vulnerability include: pressure and release model (Wisner *et al.*, 2004); vulnerability and sustainability framework (Turner *et al.*, 2003); and hazards-of-place model of vulnerability (Cutter, Mitchell and Scott, 2000; Cutter, 1996) and the Vulnerability and Capacity Assessment (VCA) (Anderson and Woodrow, 1989). The Pressure and Release (PAR) (Wisner *et al.*, 2004) and the VCA have been the most influential (Twigg, 2001).

Vulnerability and Capacity Assessment

The VCA underlines the importance of the three categories of capacity analysis - material, social and attitudinal dimensions (Anderson and Woodrow, 1989). The VCA was developed as a framework based on the assumptions that development is the process by which vulnerabilities are reduced and capacities are increased. Relief efforts which do not strengthen people's existing development capacities necessarily intensify their vulnerabilities (Anderson and Woodrow, 1989). Twigg (2001) identifies two limitations of the VCA. First the VCA is an overarching framework which does not provide indicators of vulnerabilities and capacities. For it to be useful in livelihoods analysis, specific indicators have to be developed. Secondly, the physical/material category includes hazards, but when applied in practice VCA tends to underestimate the significance of natural hazards by concentrating on human aspects of disasters. Thirdly, it falls short of addressing the increasing interest in a resilience approach to disaster reduction, being more focused on what is missing and potential capacity, rather than actual lived resilience.

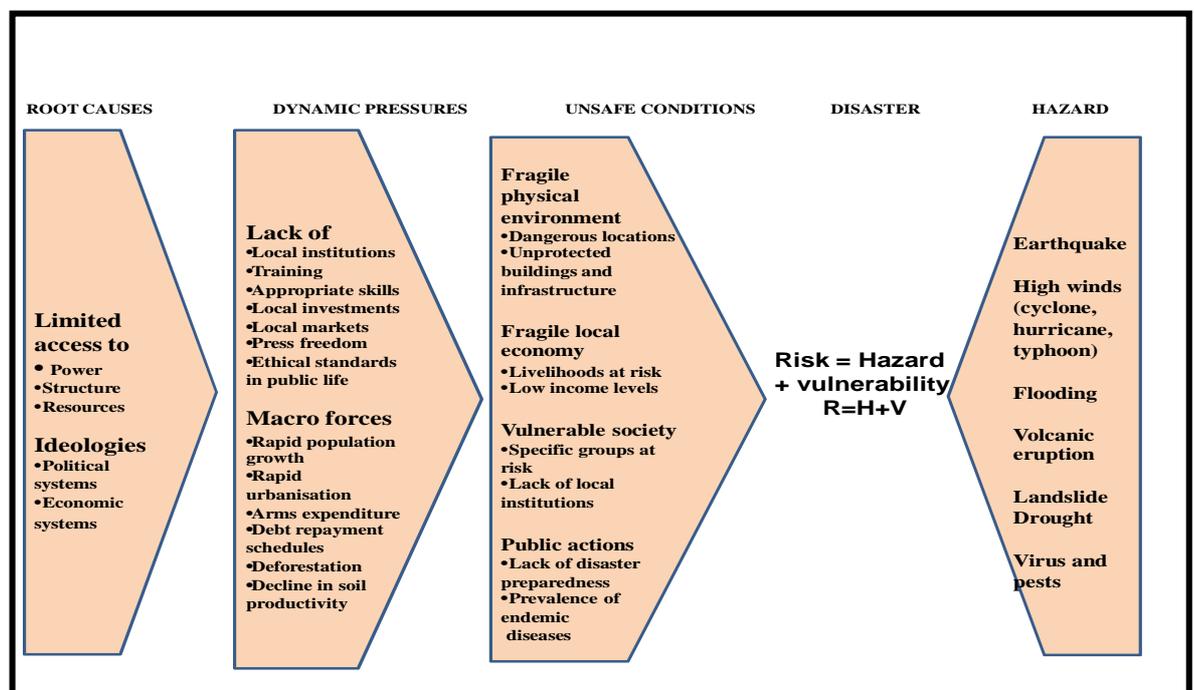
The Pressure and Release (PAR) Model

The PAR model in Figure 2.2 helps to explain disaster causation when hazards affect vulnerable people. Thus, disaster is conceptualised as an intersection of two opposing forces: those generating vulnerability on the one side and the physical exposure to hazard. To relieve the pressure, vulnerability has to be reduced. The PAR does not only help us to analyse social processes that increase people's vulnerability to disaster but also shows that the causes of disaster may not be immediately obvious or visible. There are three levels of progression to vulnerability:

- *Root causes or underlying causes.* The root causes of vulnerability lie in the economic, demographic and political processes that affect the allocation and distribution of resources between different groups of people. Root causes reflect the distribution of power in the society including gender.

- *Dynamic pressures.* These are processes which impact on the root causes leading to particular forms of vulnerability. Rapid population growth and urbanisation, loans and debt repayment, currency devaluation leading to rise of prices and basic needs and services; continuing deterioration of land due to erosion and deforestation, and growing demands on land continue to apply pressure on people living in the margins, thus, pushing them towards unsafe conditions.
- *Unsafe conditions.* Usually, these conditions are highly visible forms of vulnerability and include living in dangerous locations, being unable to live unsafe buildings, engaging in dangerous livelihoods or having minimal food entitlements (Twigg, 2001).

Fig. 2.2 The Pressure and Release model



Source: Wisner et al. (2004)

The PAR model has made a significant contribution to the conceptualisation of disasters. It brings the integration of the hazard and vulnerability paradigms by providing a ‘chain of explanation’ or framework for analysing the vulnerability and hazard contexts of a location of interest. As pointed out in Chapter One, section 1.5 (p.8), the PAR model derives from the fusion of the political ecology and political economy view points. The literature on political ecology (Blaikie and Brookfield, 1987; Blaikie et. al, 1994; Pelling, 1999; Le Billon, 2001; Wisner and Walker, 2005; Donner, 2007) and political economy (Mluwanda, 1989; Green; 1993; Albala-Betrand, 1993; Keys, Masterman-Smith, 2006; Cohen and Erker, 2008; Jones and Murphy, 2009) strands have taken slightly different

arguments to understanding disasters. The political ecology theoretical framework is based on the assumption that there exists a constant shifting dialectic between society and environmental resources within classes and groups within society. While political ecology analyses were applied more in the global South, its application is becoming evident in the North. According to Simon (2008), the current post-Katrina period has highlighted the effectiveness of political ecology when compared with conventional analyses and planning which have demonstrably failed. Thus, political ecology challenges the hegemonic discourses of environment and economic development (Simon, 2008) which have been extended to DRR. The political economy thread argues that disaster causation was a function of structural relationships of production and consumption which increase poverty and vulnerability (Middleton and O'Keefe, 1998).

Blaikie *et al.* (1994) PAR model, in the first edition of *At Risk*, was criticised, particularly by Middleton and O'Keefe (1998) for being myopic by oversimplifying disaster causation to a function of the political ecology of risk. Thus, directing attention from other fundamental root causes which are manifest in, *inter alia*, social ecology and political economy. However, Blaikie *et al.* (1994) recognise the weaknesses of the PAR model by introducing the access model to link it to Sen's entitlement theory. In their second edition of *At Risk*, Wisner *et al.* (2004) recognise that the root causes to disasters were broader than political ecology of risk. Notwithstanding the numerous case studies of the second edition of *At Risk* which probably divert attention from fundamental conceptual arguments raised in the first edition, the political ecology and political economy strands have been integrated and offer a broader view of disaster causation. In analysing the disaster contexts of the Ethiopian, East Timor and the Zimbabwean case studies, PAR was used broadly, beyond the political ecology of risk, to include political economy and access to resources (entitlements). Thus, although the East Timor disaster was triggered by a civil conflict, the PAR model was used to demonstrate that *all* disasters are 'complex' and subjects of 'politics' rather than simply triggered by 'natural' hazards.

2.5 Conclusion

The resilience construct has increasingly gained space in the disaster and development discourse. Strengthening communities, by building on their existing capacity, to recover from disasters quickly with minimal or no assistance, has gained currency in recent years amid the increase in disaster losses and impacts. Thus, development and humanitarian resources can be a catalyst in enhancing resilience of the communities affected by or at

risk of disasters. The gap identified here is in understanding the nature and effectiveness of development and humanitarian interventions in terms of engaging disaster resilience.

The debate on the resilience construct reflects a wide range of perspectives. Like most social sciences constructs, resilience suffers from what may be termed as the ‘Social Sciences Definitions Disease’ (SSDD). The multiplicity of definitions should be viewed in the positive sense as long as they do not cloud conceptualisation which has implications for both disaster theory and practice. Arguably, this is far from just a matter of semantics, but rather a reflection of the diversity of meaning, understanding and presumably action in this field of research and development. Specifically, we might simplify this situation by considering the choices open to funding agencies to channel their resilience building support into capacity building. The increased awareness of resilience in disaster and development work does not necessarily mean the abandonment of support for infrastructure, but it does suggest the need to mainstream resilience building through people at the centre of DRR and recovery. The debate on the concept is picked up in Chapter Seven-Eight.

The evolution of both the disaster and development paradigm shows more convergence than divergence in recent years. Arguably, disaster and development seem, and as confirmed by the HFA, to be factors of each other. The assumption is that achieving sustainable development means achieving resilience and the reverse is also true. Thus reducing disaster risks can help achieve sustainable development goals, while development programmes which adopt DRR can help reduce vulnerability and enhance resilience.

Linked to disaster-development connections, is the complexity of applying humanitarian aid resources to reduce disaster risks as well as achieve sustainable development. The assumption of the LRRD approach that emergencies, particularly complex emergencies, are temporary can be misleading. Crises in Sudan, Afghanistan and Africa’s Great Lakes Region have persisted over decades. Ethiopia has continued to experience food insecurity disasters since the 1970s. The extent to which humanitarian resources can contribute to both development and resilience is one of the lessons that might be learned by development and humanitarian interventions, but which needs further examination.

HFA underscores the central role of capacity-development in building resilient communities. Most capacity programmes are premised on participatory principles. However, treating capacity building as a panacea to increasing resilience through participatory methodologies, may also be a polemic lacking practice based research.

Allen (2006) warns that capacity building programmes have the potential both to empower and disempower communities. Chapter Three engages with the analytical framework adopted for the three cases studies of this thesis providing insights into both these conceptual and practical issues relating to disaster resilience in development and humanitarian interventions.

CHAPTER THREE

ANALYTICAL FRAMEWORK

3.1 Introduction

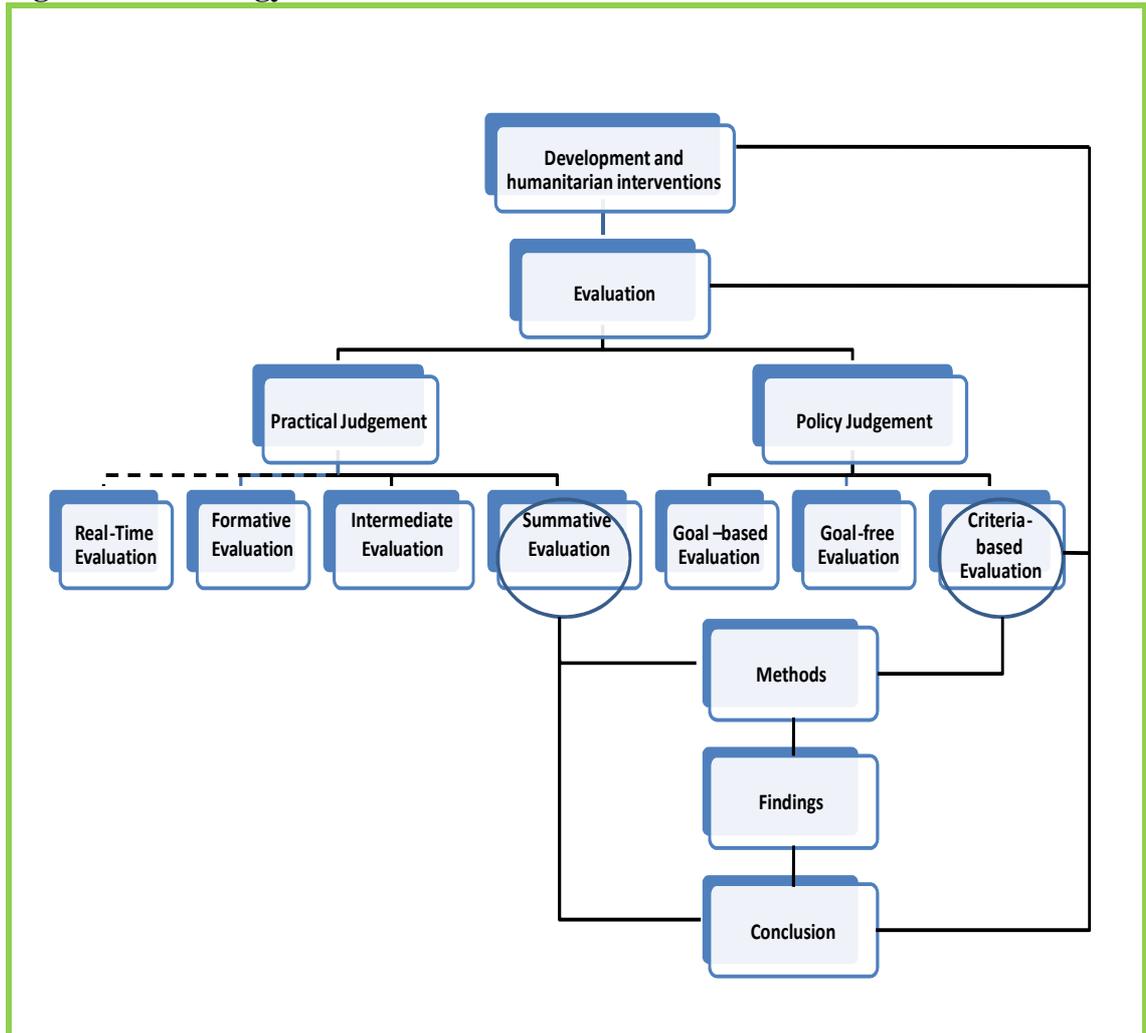
Examining the manner in which development and humanitarian interventions promote resilience in disaster prone areas can be problematic. An evaluation approach, which has increasingly become an in-built component of most development and humanitarian intervention designs, can be utilised by researchers to understand and document the day-to-day reality of resilience development of beneficiaries. On the contrary, studies designed 'outside' or, detached from the intervention may experience difficulties in accessing some data sources such as documents, key informants and vulnerable groups.

The evaluation methodology was adopted to assess the extent to which CCJP, ISP and ARP enhanced the resilience of the respective communities. Evaluation has become a norm rather exception in development and humanitarian work, mainly for the purpose of accountability and lessons learning. Evaluating development and humanitarian action like disaster research, is unique and context specific. Methodologically, evaluations have theoretical similarities, but differ in the design and execution according to the prevailing situations. Being applied research, evaluations utilise findings, understandings and explanations of basic research to inform their design and implementation. This has several implications. Chief amongst them are philosophical and methodological challenges. This means evaluations, like any other research, are not philosophically neutral. They are built on certain assumptions about the nature of knowledge, reality and existence. Secondly, because evaluation research does not have a methodology of its own (Clarke, 1999) it is amenable to adopting what is on offer in the research field.

This chapter is devoted to the discussion of evaluation as a methodology for assessing lessons that can be learned from development and humanitarian interventions in their attempts in enhancing resilience. Fig 3.1 summarises the methodological structure of the study. The literature review on the development and humanitarian interventions was explored in the Chapter Two. This chapter begins with an exploration of the concept, evolution and types of evaluation. The value of evaluations is broken down into two major themes: practical judgements; and policy judgements. The practical judgements theme is further broken into evaluation types, which include formative, intermediate and summative evaluation. Similarly, the policy judgements theme is further

broken into evaluation models, which include goal-based, goal-free and criterion-based. This study used the summative evaluation with the analysis based on the criteria model to establish the extent to which development and humanitarian interventions enhanced resilience. The second section discusses the philosophical underpinnings that guided this study. The quantitative and qualitative paradigms are discussed in relation to their relevance to the evaluations. The third section focuses on the methods and techniques related to the fieldwork including the limitations of each of the case studies.

Fig 3.1 Methodology structure



Source: Author

3.2 Evolution of evaluation

In recent years, evaluation has experienced phenomenal growth and could be one of the fastest growing disciplines in the world (Cracknell, 2000). Evaluation is a new discipline but an ancient practice (Scriven, 1991). It is probably the most common form of reasoning used by people virtually all the time and all humans are nascent evaluators (Mathison, 2005). The evolution of evaluation can be traced from the time humans first

made judgements about whether to build campfires and used weapons to survive to contemporary times where evaluation has matured as a profession (Shadish and Luellen, 2005). Shadish and Luellen also claim that Chapter One in the Book of Daniel in the Bible's Old Testament describes a quasi-experiment evaluation which sought to establish the effects of a Hebrew versus a Babylonian diet on health. Personnel evaluations were also carried out in China as early as 4000 to 2200 BC (Guba and Lincoln, 1982; Scriven, 1991; Shadish and Luellen, 2005).

However, it was not until the 19th century that the concept became popularized, mainly credited by Joseph Rice's educational research in the 19th century (Guba and Lincoln, 1982). Despite the diversity of the evaluation field, and each specialty having its own history, most commentators link the history of evaluation to the United States of America's (US) 20th century history (Guba and Lincoln, 1982; Cracknell, 2000; Shadish and Luellen, 2005; Mathison, 2005). The massive expenditure of the US government in social programmes in the pre-and-post World War II era called for more accountability. For example juvenile delinquency, manpower development training and education were allocated funding for evaluation. University scientists, private sector and public sector responded to the government's request for evaluation (Shadish and Luellen, 2005). According to Cracknell (2000) by 1960s and 1970s evaluation had become a profession in its own right as a result of mandatory evaluation procedures built into many US federal and state-funded welfare and education programmes.

On the development aid front, it was not until the late 1970s that evaluation became an integral component for the Organisation for Economic Co-operation and Development (OECD) programmes. On the professional front, methods and theories were as diverse as the professions themselves. In the majority of cases sociologists and psychologists conducted experimental evaluations, educators focused on testing during evaluation, anthropologists used qualitative methods while those from management used management information systems (Shadish and Luellen, 2005). The literature indicates that evaluation was on an upward trend (Weiss, 1972; Flaherty and Morell, 1978; Guba and Lincoln, 1982; Cracknell, 2000; O'Keefe *et al.*, 2002). The Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) and OECD/DAC maintain the most comprehensive evaluations databases. But these cannot comprehensibly illustrate the extent of increase in the number of evaluations since it is up to the members and some non-members to submit such evaluation report.

The growth of evaluation is manifest in the increasing number of evaluation societies, journals, conferences and evaluations that are being carried out. A search on

the OECD/Development Assistance Committee (DAC) and UK Evaluation Society websites revealed that there were at least 25 evaluation societies spread across the globe. There is a steady increase of evaluation societies emerging in other parts of the world such as in Nigeria, Sri Lanka, Malaysia, Kenya and South Africa (UK Evaluation Society, 2005; OECD/DAC, 2006). The case material for this study, which was collected from East Timor, Ethiopia and Zimbabwe using an evaluation methodology, is among those which confirm the growing importance of the utilisation of evaluations in informing policy particularly through disaster and development research.

3.3 Definition of evaluation

Evaluation is a multi-faceted concept. It is ‘an elastic word’ (Weiss, 1972:1) used in a ‘myriad of contexts, settings and circumstances’ (Clarke, 1999:1). The disparity in conceptualisation can be traced to the lack of a unified undergirding theory of evaluation (Jemelka and Borich, 1979). From the definitions in Box 3.1, evaluation can be viewed as a deliberate and systematic process of collecting information about an ongoing or completed programme or project. It is used as a basis for making judgements about the project or programme outcomes and also informs policy, the design and implementation of future programmes. In the context of disaster resilience, evaluation would be possibly used to assist institutions and communities to mainstream resilience in their DRR activities. For example, in drought prone areas of Zimbabwe and Ethiopia, an evaluation could establish the community’s adaptation strategies to climate change, protection and creation of assets and use of relief resources to achieve medium to long-term development.

The terms such as ‘judgement’, ‘decision-making’, ‘policy’ and ‘efficiency’ and ‘effectiveness’ are used here to signal the currency of accountability in the field of evaluation. Rogers (2005:2) defines accountability as “a state of, or a process for, holding someone to account to someone else for something – that is, being required to justify or explain what has been done”. In the case of evaluation, programme managers, staff and politicians are accountable to community, citizens, service users, tax payers, advocacy groups, relevant professions, international organisations and donors (OECD/DAC, 1991; Rogers, 2005). According to Rogers (2005), the common form of accountability focuses on meeting targets, outcomes or outputs. Discrepancies are reported between targets and performance to funders with the assumption that the information will inform subsequent policy decisions. Incentive systems are put in place to motivate employees towards the achievement of goals. Rogers (2005) suggests a movement away from the narrow focus

on goals to what he calls ‘real accountability’, which is characterised by upward and outwards accountability and open room for manoeuvre to respond to emerging needs. Information is made accessible to citizens together with some process for feedback and consequences.

Box 3.1 Definitions of evaluation

Scriven (1991:9)	Evaluation is the process of determining the merit, worth and value of things, and evaluations are the product of that process.
OECD/DAC 1991)	An evaluation is an assessment, as systematic and objective as possible, of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors
Weiss (1972) as quoted in Clarke (1999:2)	Evaluation is a type of policy research, designed to help people make wise choices about future programming. Evaluation does not aim to replace decision makers’ experiences and judgement, but rather offers systematic evidence that informs experience and judgement. Evaluation strives for impartiality and fairness. At best, it strives to represent the range of perspectives of those who have a stake in the programme
UNDP (2002)	Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome
European Commission (2005)	Evaluation is the “ <i>judgement of interventions according to their results, impacts and needs they aim to satisfy</i> ”. The key notion in this definition is that it is a process that <i>culminates in a judgement (or assessment)</i> of an intervention. Moreover, the focus of evaluation is first and foremost on <i>the needs, results and impacts</i> of an intervention
Fournier (2005:139)	Evaluation is an applied inquiry process for collecting and synthesizing evidence that culminates in conclusions about state of affairs, value, merit, worth, significance, or quality of a programme, product, person, policy, proposal or plan.
Patton (2002:10)	Programme evaluation is the systematic collection of information about activities, characteristics, and outcomes of programmes to make judgements about programmes, improve programme effectiveness, and or/inform decisions about future programming”
Stufflebeam (2001:11).	Evaluation means a study designed and conducted to assist some audience to assess an object’s merit and worth

Source: Author

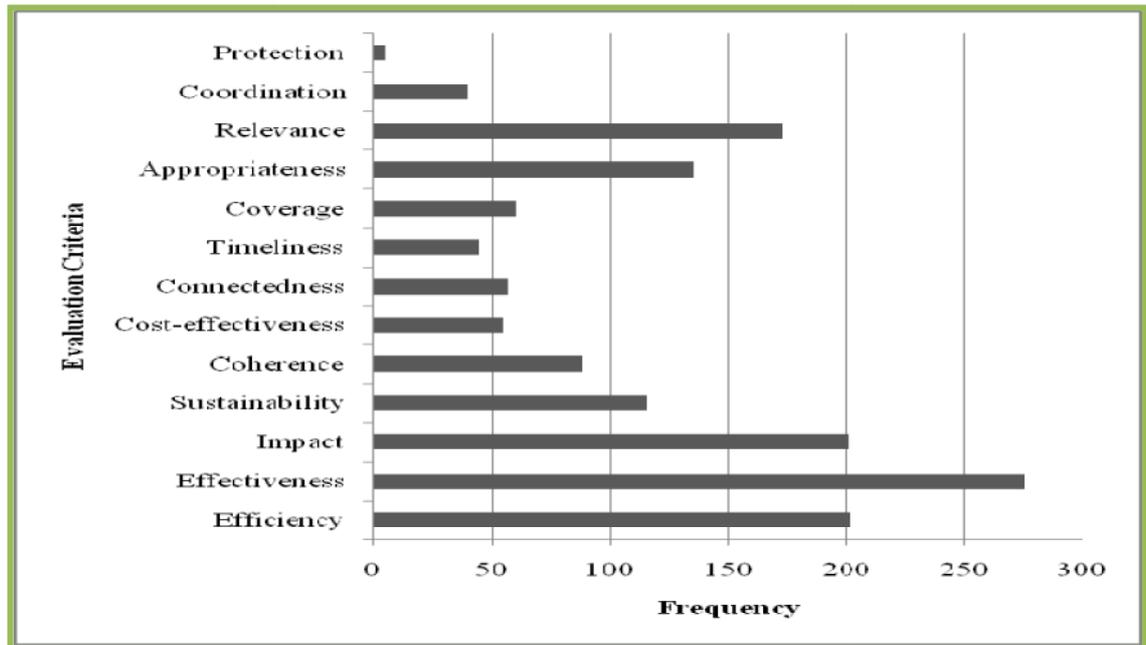
Accountability also has a political dimension. Pawson and Tilley (Pawson and Tilley, 1997) assert that engaging in evaluation constitutes a political statement as evaluation is reformist with its basic goal being to develop initiatives which help to solve social problems. In these circumstances, linkages between evaluation and disaster resilience can be possible. For example, in evaluating an HIV and AIDS programme, the evaluator is likely to point out how the political system responded in reducing the HIV and AIDS

prevalence rates. The healthcare delivery system for patients to access anti-retroviral drugs, the relationship between traditional and political support structures and the priority the government accords to HIV and AIDS are likely to be highlighted. The evaluation report may in some instances indicate how individuals, households and communities built their coping strategies on an existing resilience. This has, however, not been part of any focussed study on disaster resilience in development and humanitarian interventions.

The terms such as ‘make wise choices about future programmes’, ‘lessons learned’ and ‘evidence that informs experience’ denote the role of evaluation in providing lessons for future programmes through feedback (OECD/DAC, 1991). According to UNDP (2002) a lesson learned is an instructive example based on experience that is applicable to a general situation rather than to a specific circumstance. It is the experiential and evaluative knowledge, which can reveal how and why different strategies work in different situations, leading to setting examples of ‘good practice’. Absent from the definition is the potential for lessons being provided to recipients of the interventions at the local level. The lessons learned tend to be programme oriented in the form of ‘recommendations’ rather than being broad to include lessons specific to recipients of the programmes and how they can be implemented. It can be claimed that the focus is therefore in building the capacity of donors and development agencies in designing policies and programmes while the capacity or resilience of beneficiaries is of peripheral importance, if not of little relevance.

The use of the terms ‘relevance’, ‘efficiency’, ‘effectiveness’, ‘impact’ and ‘sustainability’, denote some criteria used in assessing interventions. OECD defines evaluation as an assessment, as systematic and objective as possible, of an on-going or completed project, programme or policy, its design, implementation and results. Evaluations are carried out to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors. Criteria are a central element of any evaluation, whether they are determined at the beginning of the evaluation or emerge during the evaluation process (Davidson, 2005). Through the author’s analysis of 330 evaluation report summaries for the period 1997 – 2007, contained in the Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) database, thirteen criteria were in use (see Fig. 3.2).

Fig 3.2 Distribution of evaluation criteria 1997 – 2007



Source: Author's analysis based on ALNAP (2007) evaluation database

Lacey (2003: 71) defines criteria as “something providing a conclusive way of knowing whether something exists or whether a word is used correctly.” According to the *Oxford English Dictionary* (Soanes, 2002), a criterion is a standard by which something may be judged or decided. A criterion, according to Scriven (1991), is a measure that is used to validate a predictive test. The concept of criteria stems from the works of Ludwig Wittgenstein (1889 – 1951) which drew wide philosophical interest. But what Wittgenstein precisely meant by criteria is still disputed (Lacey, 2003). In evaluation, criteria is used rather in a looser way to include indicators of success or merit (Scriven, 1991). Criteria, whether determined at the beginning or during the process, are central to, and continue to gain currency in, any evaluation. Goal-free or open-ended evaluations tend to uncover other criteria that also inform the conclusions of the evaluation (Davidson, 2005). Box 3.2 summarises a set of evaluation criteria appropriate for consideration in this study. It should be noted that protection and cost-effectiveness have been left out. Protection is an activity rather than a criterion, while cost-effectiveness is considered under efficiency.

Box 3.2 Evaluation criteria

<i>Criterion</i>	<i>Definition/description</i>
Relevance or Appropriateness	Relevance is concerned with assessing whether the project is in line with local needs and priorities (as well as donor policy). Appropriateness is the tailoring of humanitarian activities to local needs, increasing ownership, accountability and cost-effectiveness accordingly. It can be used for all evaluation types except those with a mainly institutional focus.
Connectedness	Connectedness refers to the need to ensure that activities of a short-term emergency nature are carried out in a context that takes longer-term and interconnected problems into account. It can be used for evaluations assessing institutional structures and partnerships.
Coherence	The need to assess security, developmental, trade and military policies as well as humanitarian policies, to ensure that there is consistency and, in particular, that all policies take into account humanitarian and human-rights considerations. It can be used for joint evaluations, large-scale evaluations and those with a focus on policy.
Coverage	The need to reach major population groups facing life-threatening suffering wherever they are. It can be used for all evaluation types except those with a mainly institutional focus
Efficiency	Efficiency measures the outputs – qualitative and quantitative – achieved as a result of inputs. This generally requires comparing alternative approaches to achieving an output, to see whether the most efficient approach has been used. It can be used for all evaluation types where adequate financial information is available.
Effectiveness	Effectiveness measures the extent to which an activity achieves its purpose, or whether this can be expected to happen on the basis of the outputs. Implicit within the criterion of effectiveness is timeliness. Can be used for single-sector or single-agency evaluations.
Impact	Impact looks at the wider effects of the project – social, economic, technical, and environmental – on individuals, gender- and age-groups, communities and institutions. Impacts can be intended and unintended, positive and negative, macro (sector) and micro (household). Can be used for multi-sector, multi-agency evaluations; joint evaluations; sector-wide evaluations
Sustainability	The extent to which the objectives of an activity will continue (to be reached) after the project assistance is over’

Adapted from (ALNAP, 2006)

That evaluation is applied research has long been accepted by scholars including Weiss (1972), Clarke (1999), Shaw (1999), Cracknell (2000) and Patton (2002). The use of the terms ‘research’, ‘applied inquiry’, ‘systematic collection of information’ and ‘assessment’ denotes that evaluation is a type of applied research which focuses on practical problems faced by societies and how they could be solved (Patton, 2002; Clarke, 1999). The debate on the differences or similarities between research and evaluation stems from the little consensus on how to define research or evaluation (Shaw, 1999). Philosophical challenges of evaluation are attended to in later sections. It might,

however, be sufficient to go by Fournier's (2005) assertion which states that conclusions made in evaluations encompass both an empirical aspect (that something is the case) and a normative aspect (judgement about the value of something). It is this value feature that distinguishes evaluation from other types of enquiry such as basic research, clinical epidemiology, investigative journalism, or public polling (Fournier, 2005). The use of the terms 'impartiality', 'fairness' and 'credibility' denotes how rigorous the methodology should be. But more importantly, these terms tend to be associated with objectivism rather than with subjectivism which are addressed later in this chapter.

3.4.1 Formative evaluation

Often called *ex-ante*, mid-term review, ongoing or interim evaluation (Cracknell, 2000), formative evaluation focuses on the process of new programmes. Scriven (1991:168-169) views formative evaluation as being typically conducted during the development or improvement of a programme or product. It is conducted, often more than once, for the in-house staff of the programme with the intent of improving organisational performance. For example, prior to the commencement of an intervention, a baseline study can be conducted by the staff (sometimes assisted by an external evaluator) to set benchmarks for monitoring and implementation of the project. For example, the impact study of ARP II in East Timor also served as a baseline study for ARP III. Lincoln (2005) further explains the purpose of formative evaluation as that of determining whether a programme is unfolding as planned, identifying obstacles or unexpected opportunities, and identifying midcourse corrections that will increase the likelihood of the programme's success. In the context of humanitarian interventions, it seeks to provide immediate feedback to the implementing agency about the status of project activities so that project revisions may be made. It provides an important opportunity to assess the project's progress in meeting its objectives while at the same time identifying opportunities for enhancing the resilience of beneficiaries and stakeholders. For example, the inter-agency real-time evaluation (RTE) of the humanitarian response to the Darfur crisis conducted by Broughton, Maguire, and David-Toweh (2006) recommended actions that were to be taken to improve the operational response through lessons learned during the initial phases of the response.

Patton (2002) views the purpose of formative evaluation as that of forming or shaping a specific programme, policy, group of staff or product without an attempt to generalise findings beyond the setting in which the evaluation takes place. Formative evaluations are analytic (Scriven, 1991) in nature and are designed to produce qualitative

and quantitative data and insights during the early developmental phase of an intervention. That includes an assessment of the feasibility of programme implementation; the appropriateness of content, methods, materials, media, and instruments; and the immediate behavioural impact of an intervention for a well-defined population. Patton (2002) goes on to assert that formative evaluations tend to rely heavily on qualitative rather than quantitative methods focusing on processes, case studies and implementation.

Formative evaluations are normally conducted by an internal or external evaluator or (preferably) a combination of staff (Scriven, 1991). Involving local stakeholders and beneficiaries can be an important feature of evaluations to ensure the intervention remains responsive to their needs as well as contributing to the enhancement of their resilience.

3.4.2 Intermediate evaluation

Although the evaluation of CCJP, ISP and ARP were carried out at the end of their gestation period, they used some information collected during the project implementation. This type of evaluation is sometimes referred to as mid-term, *in vivo* or process evaluation (Cracknell, 2000). According to ECHO (1999), it is an analysis of the performance of a programme or project while it is being implemented. The focus is on the relevance of its operational objectives relative to its overall objectives, and on matters relating to implementation and management. It describes what the intervention has achieved and what its initial effects have been, using information available. This type of evaluation is carried out internally or externally, or a mixture of the two (ECHO, 1999). Intermediate evaluation can play a significant role in feeding back to stakeholders, particularly local institutions and communities. These may include aspects that may need urgent attention rather than waiting until the end of project or summative evaluation.

3.4.3 Summative evaluation

Originated by Michael Scriven in 1967 (Stufflebeam, 1974; Henry, 2005), summative evaluation is sometimes referred to as outcome evaluation, *ex-post*, or maturity evaluation (Cracknell, 2000). It is conducted after the completion of the programme or between phases for on-going programmes. All the three case studies, CCJP, ARP and ISP fall into the summative category. Beneficiaries of summative evaluation are mainly some external audience or decision-maker (Scriven, 1991), which are primarily the funders in

the case of the study included in this thesis. Summative evaluation is mainly concerned with a programme's overall effectiveness and involves the assessment of anticipated (or unanticipated) results or outcomes of a programme. For credibility reasons, summative evaluation is normally conducted by a mixture of both internal and external evaluators (Scriven, 1991). Measurements, assessments or tests are performed after development to determine the efficacy and return-on-investment of an intervention in relation to the project inputs and processes. However, Scriven (1991) warns that summative evaluation should not be confused with outcome evaluation. Summative evaluation focuses on both the process and the outcomes while outcome evaluation focuses on the outcomes. However, in this study outcome evaluation is treated as one of the types of summative evaluation.

Impact or outcome evaluation

Impact evaluations, such as the ARP and ISP studies, are also often called outcome or payoff evaluations (Scriven, 1991) and mainly focus on outcomes rather than processes or inputs. Steps in an impact or outcome evaluation are summarised in Box 3.3. Evaluating impacts can be a complicated exercise; what to count as an impact can be a purely objective or subjective point of view. Firstly, a clear understanding of what constitutes an outcome or impact needs to be considered, as one of the key design issues. Secondly, enumerating the expected effects of the intervention as outlined in the programme document might be also a useful exercise. Quantification of resilience is however likely to fall short of a true representation of its role in development and humanitarian interventions.

Box 3.3 Steps of an impact evaluation

Identification: Noting whatever changes (impacts) have taken place that can be attributed to the intervention. Impacts include short or long term; proximal or distal; primary or secondary; intended or unintended; positive or negative; and singular, multiple or hierarchical which can be measured at individual, organisational, community levels and policy or governmental levels. Impacts can also be categorised as: technical, economic, socio-cultural, institutional and environmental impacts.

Measurement: Trying to quantify or assess the significance of the changes (impacts). Participatory research methods will generally be more appropriate for this purpose.

Attribution: Trying to establish causes of the changes, especially the extent to which they be attributed to the intervention.

Assessment: Drawing together all the threads, and forming judgement on the impacts in relation to aid input: making recommendations for future aid activities of a similar kind.

Adapted from Cracknell (2000:240)

Scriven (1991:250) views outcomes or impact as post-treatment effects; but which are often effects during treatment. In relation to CCJP, ARP and ISP, the post-treatment

effects are those changes which have been brought by these interventions in enhancing community resilience. Mark (2005) views outcomes or impact as changes, results, and impacts that maybe short or long term; proximal or distal; primary or secondary; intended or unintended; positive or negative; and singular, multiple or hierarchical which can be measured at individual, organisational, community levels and policy or governmental levels. At individual or household level, outcomes can include changes in attitudes, knowledge and skills while at the organisational level changes can affect policies, practices and capacity. At the community level, outcomes can include changes in the way communities self-organise in food for work programmes and changes in supplementary feeding programmes to improve school attendance. At the government or policy level laws, regulations or funding sources can be changed to ensure the sustainability of the supplementary feeding programme.

Since outcome or impact evaluation focuses on effects, results or consequences, the key methodology focuses on the determination of causation. But the concept of 'causation' continues to be controversial since David Hume's *Treatise of Human Nature* of 1739 (Lacey, 2003). In the context of this study, causation simply entails the evaluator determining the relation between the policy, process or resources, which are thought of as somehow producing or responsible for the outcome.

3.5 Evaluation Models

The use of models, also referred to as approaches (Stufflebeam, 2001), has long been recognised in the evaluation field. A model is a simplified representation of reality in the form of a generalised or simplified statement of the characteristics of the real world. The term 'model' is loosely used to refer to a conception or approach or sometimes a method of doing evaluation (Scriven, 1991). Modelling is the way in which differences in evaluation theory and practice can be acknowledged and commonalities and differences in approaches are marked (Schwandt, 2005). Evaluation models are categorised in a variety of ways (Guba and Lincoln, 1981; Hansen, 2005; Patton, 2002; Fournier, 1995; Greene, 1988; Shaw, 1999; Stufflebeam, 2001). The section that follows explores three models that are common in the evaluation literature: goal based; goal-free; and criteria-based.

3.5.1 Goal-based evaluation

All the three case studies had an aspect of measuring the extent to which project goals were achieved. A goal may be thought of as a deliberate statement of an intended

outcome of a particular programme and operationalised into measurable objectives (Tucker, 2005). Goal-based evaluations are “based on and knowledge of - and referenced to – the goals and objectives of the programme, person or product” (Scriven, 1991:178). In other words, goal-based evaluation measures the extent to which a programme or intervention has attained its specific objectives.

Christie and Alkin (2005) assert that goal-based or objective-based evaluation originated from educational evaluation and has been credited to Ralph Tyler’s 1942 manuscript, *General Statement on Evaluation*. Tyler’s influence is manifest in the objective-based theoretical models such as the behavioural objectives, performance objectives and measurable objectives. Further mutations of the objective-based evaluations can be seen in: objective based tests, which measure well-defined behavioural objectives; criterion-referenced tests, which measures instructional performance criteria; and norm-referenced tests, which measures an individual’s performance in relationship of others who have taken a test (Christie and Alkin, 2005). The basic strategy of this approach is to measure if predefined goals are fulfilled or not; to what extent and in what ways. The approach is deductive and often related to harder measurable goals. This is in tandem with the traditional way of understanding goal-based evaluation and tends to concentrate on technical and economical aspects rather than human and social aspects.

Few would disagree with Patton’s (2002) assertion that what is measured depends on the character of the goals. Either a quantitative approach or a qualitative approach could be used. It can also be argued that there is no imperative relationship between a goal-based approach, and a quantitative process. The difference between a quantitative and qualitative strategy is that the quantitative strategy aims to decide if the goals are fulfilled and which goals are fulfilled. The fulfilment of the goals will be expressed in quantitative numbers. ARP partly fulfils this description. There are also goals of social or human character which mainly relate to CCJP and ISP. The fulfilment of these types of goals is preferably expressed in qualitative terms. The qualitative process has also a better possibility to describe how the goals are fulfilled. This means that the qualitative approach aims at achieving richer descriptions. However, the goal-based evaluation was not a preferred choice, as it does not have indicators of success or merit interpretation in resilience terms, which this study could base itself on.

3.5.2 Goal-free evaluation

First proposed by Michael Scriven in the 1970s, the goal-free model means doing fieldwork and gathering data on a broad array of actual effects or outcomes. In resilience oriented evaluations, as in the case of CCJP, ISP and ARP, the actual effects may include the capacity of local institutions and communities enhanced by the project, and measures put in place to enable communities to implement the learning experiences. These are then compared with the observed and the actual needs of programme participants. The goal-free model adopts an interpretative approach which would be quite relevant with a resilience oriented evaluation. The aim is to gain a deeper understanding of the nature of searching for ‘actual effects’ of what is to be evaluated (Patton, 2002). The basic strategy of this approach is inductive and holistic aimed at countering the logic-deductive limitation inherent in the goal-based model. With the involvement of a wide range of stakeholder groups being an essential element, this approach is likely to capture unintended effects to inform resilience programming. This can also be a practical obstacle where time or resources for the evaluation are short. Patton (2002) further argues that while the goal-free model is more compatible with the qualitative enquiry as it requires capturing directly the actual experiences of the programme participants in their own terms, the quantitative enquiry can also be employed. The goal-free model was not a logical choice. The major weakness is that the evaluator makes a deliberate attempt to avoid all rhetoric related to programme goals; no discussion about goals is held with staff; no programme brochures or proposals are read; only the programme’s outcomes and measurable effects are studied. The assumption in this study was that the evaluation process can also contribute to resilience building by involving the implementers and the targeted communities to learn from both the process and the outcomes of the evaluation. All the three case studies involved both staff and community members in the evaluation processes.

3.5.3 Criteria-based evaluation

All the three case studies were subjected to criteria-based evaluation. Criteria have become a central element of any evaluation. Most humanitarian evaluations are assessed using the OECD/DAC criteria to determine the relevance, efficiency, effectiveness, impact and sustainability of the intervention. In this study, the word criteria is not necessarily used in relation to pre-ordinate designs, as it is used in ‘hard’ sciences which tends to prioritize technical and quantitative data.

Criteria-based approaches include checklists, heuristics, principles or quality ideals and these are grounded in, and derived from, one or more specific perspectives or theories. Patton (2002) identifies four sets of criteria which are applied to evaluation: the traditional scientific criteria; social and constructivist criteria; artistic and evocative criteria; and the critical change criteria. The evaluator adopting the traditional scientific research criteria will emphasize objectivity, with rigorous statistical manipulations. The evaluator strives for causal explanations and generalisability and this may be used in combination with qualitative approaches such as the grounded theory like in the ARP study. Proponents of the social and constructivist criteria view the world as socially, politically and psychologically constructed and are interested in understanding specific cases within a specific context, rather than in hypothesizing generalisations and causes across time and space. Involving beneficiaries in discussions, as was the case in CCJP and ISP, can bring to bear the ‘feeling’ of the beneficiaries about relevance, efficiency, effectiveness, impact and sustainability of the intervention.

3.6 Philosophical challenges

Development and humanitarian evaluation can be conducted at any stage of the project for the purposes of accountability and lessons learning. As applied research, evaluation “aims to produce information to account for the resources used and also contribute to knowledge to reduce failure to future programmes (Clarke, 1999). While the methodology for development evaluation has grown since the 1970s with the introduction of the OECD criteria, it is intriguing to note that evaluation of humanitarian action does not have a methodology of its own. It relies on the social science methodology. This lends itself to philosophical questions which are dominant in social science research - about what evaluation is, whether it is a science or art and what constitutes as knowledge in evaluations. These questions are important if lessons learned from humanitarian evaluations are to contribute knowledge in building disaster resilience.

The design and implementation of evaluation process is based on certain assumptions regarding the nature of knowledge, reality and existence. Clarke (1999) identifies four key elements to knowledge construction. Firstly, there are issues surrounding the methods and procedures such as data collection and analysis techniques. Secondly, there is need to consider general methodology, which relates to the overall logic of inquiry and the general principles by which research tools and techniques are applied. Thirdly, there are questions on ontology, which are concerned with the being

and nature of reality. Finally, there are questions of epistemology, which are concerned with knowing and nature, and limits of knowledge. The first two are concerned with the practical aspects of knowledge construction while the later consider the philosophical assumptions underlying research and practice.

There are two major paradigms or ‘world views’ to theory development, positivism and subjectivism. Central to the debate of these two (divergent) paradigms are the relative merits and demerits of each of them. The positivist paradigm takes an epistemological position known variously as traditional, conventional, scientific, experimental, (Bryman, 2001), empiricist and hypothetico-deductive. The subjectivist approach takes an epistemological position known variously as naturalistic, humanistic, constructivist, interpretivist, postpositivist, holistic-deductive and alternative (Clarke, 1999). The positivist paradigm tends to adopt the quantitative methodology while the subjectivist tends to adopt the qualitative methodology. As stated in Chapter One, section 1.3, this study did not take a purist one-sided view of either positivism or subjectivism. Pragmatism or methodological appropriateness (Patton, 2002) was adopted to increase the concrete and practical methodological options that were available.

3.6.1 The positivist paradigm

The intellectual debate on the authority of positivism, despite its long journey, is still much alive today. Following September 11 attacks, the Bush administration, in the United States of America, is reported to have focused on evidence-based progress, policies and programmes in educational evaluations (House, 2005). First proclaimed by Auguste Comte in the 19th century, the positivist approach has developed various mutations and associated with a number but disparate philosophical schools of thought (Hughes and Sharrock, 1990). Hughes and Sharrock (1990) refer to positivism as orthodoxy because its legitimacy was unquestioned for some time. Endorsed by John Stuart Mill, Herbert Spencer, Emile Durkheim, and Karl Marx, albeit in various versions, there was a belief that society could follow the same logic of enquiry as that employed by the natural sciences (Hughes and Sharrock, 1990). In other words, the social world can be studied according to the same principles, procedures, ethos and laws as the natural sciences.

As social processes are seen as being subject to casual laws, applying objectivity, rationality and rigorous scientific methods of enquiry to establish truth, it is assumed that the researcher can identify regularities and causal relationships of social phenomena. Based on the assumption that the investigator is objective and remains detached from

phenomenon under study, the research process starts with a hypothesis or tentative explanation (Clarke, 1999). Testing the hypothesis to either accept or disprove it involves collecting facts, while the hypothesis remains fixed throughout the research process. To achieve this, survey methods and experimental designs are employed, which limit the interaction that takes place between the researcher and the researched (Clarke, 1999). Research instruments are decided in advance, such as highly structured questionnaires or interview schedules, which contain predetermined, standardised categories into which individuals responses are fitted. Systematic sampling techniques are employed to control bias and ensure internal validity (Bryman, 2001). Box 3.4 summarises the scientific method in relation to evaluation.

Box 3.4 Evaluation and the scientific method

- The evaluator is separate from the practitioners and from the practice supposedly in order to ensure neutrality and objectivity.
- Practice is conceptualised as informed by a medical/treatment model with defined inputs and measurable outcomes;
- Causal relationships are sought between inputs and outputs;
- Different interventions are applied to control and experimental groups so that the differences in outcomes can be measured and compared, and these differences are related in causal ways to differences in inputs.
- Interventions in the control and experimental groups are controlled for the period of the intervention so that measurements can be made, thus not allowing for practice as a developing and changing process;
- Decisions are made about intended outputs depending on their susceptibility to measurement, thus simplifying what may otherwise be complex, diffuse and multifaceted goals and processes.

Adapted from Everitt and Hardiker (1996:46-47)

Experimental designs and evaluations

Experimental research designs are said to provide the best way of arriving at causal explanations in evaluations (Rossi and Freeman, 1993) and “tend to be very strong in terms of internal validity” (Bryman, 2001:39). That randomised experimental designs are of proven scientific merit in evaluations is an acceptable view. Thus, logic and rules of scientific method are an indispensable component for establishing the effectiveness of interventions and amounts to identifying relative causality.

To establish the extent to which ARP had enhanced community resilience, of several experimental designs, a post-test control group quasi-experimental design was adopted to establish the cause and effect relationship between variables. Using a questionnaire survey, both the people who participated and those who did not participate in ARP were purposively selected for the study. For example, one of the questions this

researcher asked while conducting the evaluation study in East Timor was ‘Did the vaccination of your animals reduce the number of deaths or sickness?’ The policy which is the subject of evaluation was the independent variable (the cause) whilst the reduction or non-reduction in deaths is the dependent variable (the effect). Those who were exposed to the treatment were compared with those that were not exposed.

There were several reasons for choosing the post-test control group. For example, pre-test, post-test, control group design was inappropriate as both those who participated and those who did not participate in ARP were supposed to have been measured before and after the intervention. In humanitarian evaluations following civil conflicts such as ARP, pre-test, post-test, control group designs can be problematic considering the nature of interventions. Similarly, it is rather difficult to conduct a pre-test, post-test, control group designs in rapid-onset disasters where there is little or no warning. The South East Asian Tsunami in 2004 and the Pakistan earthquakes of 2005 are examples of disasters triggered by natural hazards where there was little, if any warning at all. Even, in slow-onset disasters, the treatment in most cases is based on appropriate eligibility criteria, making it impossible to construct a conventional group. For example, the EGS in Ethiopia had clear eligibility criteria and targeted chronically food insecure populations to benefit from relief resources. Creating a control group would not only be problematic but also would have been unethical, as it would entail withholding relief aid to those who met the criteria. That would be counter the purpose of relief aid to save lives of people at risk of famine.

Clarke (1999) identifies potential limitations of the randomised experimental designs: ethical considerations; comparability; potential of creating inequities between groups; and conflict between the experimental and control group. Ethical concerns may cause providers of relief in humanitarian situations to object to randomisation as a method of assigning individuals to treatment and non-treatment groups (Clarke, 1999). For instance, how would a humanitarian agency provide health care services to one group in a refugee camp in Darfur, Sudan while denying the other group access to the same service for the purpose of carrying out an experiment to meet evaluation criteria? Even if individuals may agree to participate at the beginning to the treatment, individuals may drop out with time. This may not reflect the true results of the experiment. A further problem besetting the randomised experiment is its potential of creating inequities between groups. Conflict may arise between the groups with those not receiving treatment potentially feeling discriminated against. However, normally what happens in ‘complex emergencies’ (O’Keefe *et al.*, 2002, Buchanan-Smith and Collinson, 2002) is

that the observed effects may also be by chance due to problems of attribution. This is where effects may be caused by factors operating at the same time as the programme but are not necessarily related to it.

In summary, evaluation is about generating evidence of the effectiveness of humanitarian action. The positivist approach provides one of the several ways of achieving this. The use of experimental and control groups mimics a laboratory environment where the duty of the researcher's or evaluator's is to make observations and measurements from a neutral and objective positionality. Statistical manipulations are employed to establish the cause-effect relationship between the input and the outcome. Consistent with Everitt and Hardiker (1996), this study recognised the merit in employing the positivist paradigm in evaluation research. However, the aim of this study was not to establish whether there is a cause-effect relationship but to judge the effects of the programme on resilience building in the study locations. The limitations of the positivist paradigm form the rationale for the subjectivist paradigm.

3.6.2 The subjectivist paradigm

Although all the three projects had aspects of each of the research paradigms, CCJP and ISP predominantly adopted the qualitative approach. The quantitative design was not a logical choice as the aim and nature of study was not to explain casual relationships but rather to understand complex relationships and meanings between variables. Clarke (1999) asserts that conventional approaches offer little insights into social processes which account for the changes observed. Instead, they encourage evaluators to identify predetermined objective indicators of success, use standardised measuring instruments and adopt formal methods of data analysis. Not all evaluators of humanitarian action reduce human behaviour to mimic that of natural sciences. Hermeneutics, the study of interpreting and understanding has become one of the philosophies underpinning humanitarian evaluations. Idealism, phenomenology, postmodernism and critical theory are examples of mutations of hermeneutical philosophy which focus on meaning and reject naturalistic approaches to human behaviour (Graham, 1997).

Of several qualitative mutations, a constructivist design was more appropriate for CCJP and ISP. This allowed project participants including primary and secondary stakeholders and the evaluator to construct their experiences from their (multiple) social realities. It was not possible, and indeed not desirable, to separate the evaluator (observer) from the project stakeholders (observed). This was contrary to the positivist claim that the observer can be independent from the observed. Rather knowledge or truth

was viewed as a construction in the minds of individuals. The constructions do not exist outside of the persons who construct them and are not part of some objective world that exists apart from their constructors (Clarke, 1999). Evaluators following a constructivist standpoint need to understand and experience the context in which the programme operates. This will help them discover the policy makers, staff and beneficiaries' experience of the programme. In relation to participant observation in this study, is that the researcher himself has originated from a disaster prone location, where there has been a history of displacement, drought and political emergency.

CCJP and ISP were approached by the researcher with an open mind, open heart, willingness to be taught and to learn. Making no claims to know what relevant possibly answers were to guiding questions helped reveal the intrinsic aspects of the connectedness of the intervention with the past and the future. And accepting the complexity, or rather, the 'messiness' of multiple realities, provided the fertile ground for 'human flourishing' (Heron and Reason, 1997) to allow beneficiaries to be involved in the process, as co-creators, of knowledge creation. This landed itself to the participatory methodology, which is attended to later in this chapter.

3.7 Limitations of qualitative research

The questions posited in the previous section illustrate problems likely to be encountered by an evaluator using the qualitative methodology. Bryman (2001) identifies four major criticisms levelled against the qualitative methodology:

- *Being too subjective* – qualitative researchers are said to be too impressionistic and subjective. Evaluation findings tend to rely too much on the evaluator's often unsystematic views about what is important, which also depend on the personal relationship created between the evaluator and the organisation being evaluated.
- *Difficult to replicate* – Reliance upon the evaluator's ingenuity, absence of standard procedures to follow, being dependent on subjective observation and judgement and biases are some of the aspects which make qualitative research difficult to replicate.
- *Problems of generalisation* – respondents in a qualitative study are not meant to be representative of a population like in a quantitative study. With small samples, it can be impossible to know how the findings can be generalised to other settings.
- *Lack of transparency* – It is sometimes difficult to ascertain how the research was conducted. For instances, it is sometimes unclear how participants were chosen, how the analysis was done to arrive at the conclusions.

However, this study viewed these limitations as not inherent weaknesses of the qualitative research. Rather the weaknesses were a manifestation of how the research has been engaged with and written up. It is important here to note that more secure evidence for the overall findings of this thesis derive from the process of exploring three different case study regions.

3.8 Participatory evaluation

Participatory evaluation is a relatively recent (Brisolura, 1998) but growing family of participatory approaches through which “evaluators, researchers, facilitators, or professional evaluators collaborate in some way with individuals, groups, or communities who have a decided stake in the programme, development project, or other entity being evaluated” (Cousins and Whitmore, 1998:5). Participatory evaluation draws on “many established traditions that have put participation, action research and adult education at the forefront of attempts to emancipate disempowered” (Pretty *et al.*, 1995:55).

According to King, Cousins and Whitmore (2007), participatory evaluation was popularised in 1988 by Cousins and Whitmore (1998). However, participatory evaluation is rooted to Guba and Lincoln’s (1989) ‘fourth generation evaluation’ which they assert is ‘characterised by negotiation between various stakeholders, participation in every stage of the evaluation process and focus on action’ (Estrella and Gaventa, 1998:14). Of several variants of participatory evaluations such as those listed by Estrella and Gaventa (1998), two types of participatory evaluation were proposed by Cousins and Whitmore (1998) – practical and transformative evaluation. The core premise of the former is that stakeholder participation in evaluation will enhance evaluation relevance, ownership, and thus utilization. The later is radical and invokes participatory principles and actions to democratize social change (Cousins and Whitmore, 1998). Barakat, Chard and Jones (2005) contrast traditional and participatory evaluation. They contend that the conventional (‘top-down’) evaluation theory and practice in which aid evaluation, particularly post-war contexts, is exclusively geared towards project accountability and performance. Thus, it largely fails to question the culturally and ideologically determined assumptions of value which underpin post-war reconstruction interventions. Participatory methods, in the case of East Timor, enabled understanding of both the visible effects of war and reconstruction and the invisible, emotional and attitudinal changes which are the determining factors in developing a harmonious nation. Differences between conventional and participatory evaluation are summarised in Box 3.5.

Box 3.5 Differences between conventional and participatory evaluation

	Conventional	Participatory
Who plans and manages the process?	Senior managers, or outside experts	Local people, project staff, managers and other stakeholders, often helped by a facilitator
Role of 'primary stakeholders' (the intended beneficiaries)	Provide information only	Design and adapt the methodology, collect and analyse data, share findings and link them to action
How success is measured	Externally defined, mainly through quantitative indicators	Internally defined indicators, including more qualitative judgements
Approach	Predetermined	Adaptive

Source: Institute of Development Studies (1998)

The shortcomings of participatory approaches have been stated in Chapter Two (but not specifically to participatory research). Participation is, however, subjective – it means different things to different people. Box 3.6 summarises some of the limitations of participatory research and their remediation.

Box 3.6 Limitations of participatory evaluation and their remediation

Limitation	Remediation
Produces certain types of information which can be brief and superficial	Unstructured, open and flexible tools can produce large amount of information
Presence of others affects personal accounts	Group work can promote inclusion, and information sharing and education
Unequal power and representation amongst participants, and between participants and researcher	Being imaginative in creating conditions which give opportunity for participation and as well as minimising the power relationships involved.
Social and political factors can effect change to the detriment of the participants	Involvement of key stakeholders across the social and political arena can reduce conflicts

Adapted from Pain and Francis (2003)

3.8.1 Participatory research tools

Whichever type is adopted, participatory evaluation uses a plethora of tools which include use of secondary sources, semi-structured interviews, mapping, timelines, oral histories and biographies, seasonal calendars, spider diagrams, role plays, Venn diagrams, observation, matrix and pairwise ranking, flowcharts, transects, and pie charts (Fuller, O'Brien and Hope, 2003; Chambers, 2002). In relation to this study, the participatory tools in Table 3.1 were employed to assist participants in analysing the experience of the interventions.

Table 3.1 Participatory tools

Tool	Use	Advantages	Disadvantages
Mapping	Provides visualisations resource (agro-ecological zones, land tenure and land use), social (health, wealth and well-being), and mobility mapping	Catch attention of participants; detailed information generated	Problematic for mapping large landscapes outside local use; can raise expectations or generate conflict with neighbours
Timelines	Identification of project milestones in their local area, highlighting changes they had noticed over time as well as predict future changes.	Simple and flexible to use; basis for problem analysis	Past sensitive past may be raised; relies on memory
Spider diagram	Identifying problems and their solutions - the group starts with a central issue or question which is written on a flip chat. Lines are drawn to connect issues which are linked and related to these. It can be done by the entire group, small randomly mixed groups or by small focus groups such as project staff and local leaders. If done in small groups each will create its own spider diagram which can be compared and contrasted with those of other groups (and stimulate discussion)	Simple to use; easy for people to do; adaptable; visual; can be translated quantitative data that participants can understand; basis for 'brainstorming'	Oversimplify situations; does not deal with feedbacks, cross linkages; vulnerable to domination by powerful voices in a group
H-Form	Based on the drawing of a large letter "H". Participants identify positive and negative project features (on either side of the H bar). This can be done by the entire group, small randomly mixed groups or by small focus groups. If done in small groups each will create its own H-Form which can be compared and contrasted with those of other groups (and stimulate discussion).	Simple to use; diverse data about successes, failure and possible solutions can be generated; basis for 'brainstorming'; can be translated quantitative data	Limits discussion to successes, failures and solutions; can raise expectations; arguments can create conflicts; limited to literate people
Focus group discussions	Topics are predetermined and new questions or insights arise as a result of discussion and visualised analyses. About six to ten people are involved. Tools such as spider diagram, timeline, H-Form and mapping can be used as a discussion aid.	Generation of in-depth data; consensus building; observation of behaviour, attitudes and language; data triangulation;	Individuals withhold information; vulnerable to disagreements and domination by powerful; costly / time-consuming
Transect walk	Walking through project sites by participants, providing insights into practical delivery of projects; and serving to cross-check the verbal data collected. It involves outdoor activities, on-field observation, discussions, and diagramming	Simple, adaptable, can generate cause-effect relationship data;; data triangulation	Limited to what is currently observable; depends on whether conditions;

Source: (Mitchell and Branigan, 2000; Pretty *et al.*, 1995; Chambers, 2002)

3.9 Data collection methods

Data collection was guided by three principles: using multiple sources; creating a case study database; and maintaining chain of evidence (de Weerd-Nederhof, 2001). With scant information on disaster resilience, ten disaster scholars were contacted by emails for their opinion on the concept. Eight evaluators were contacted by emails for their opinion on whether resilience should be an additional evaluation criterion or be embedded in existing evaluation criteria. The research methodology and data collection tools for the three case studies were guided by the commissioning organisations' needs and resource constraints. CCJP and ISP generally adopted the participatory research because these organisations wanted to 'hear the voices' of the project beneficiaries. ARP adopted a quantitative approach to establish the cause-effect relationship between policy and project outcomes. However, there were elements of both qualitative and quantitative approaches in each of the case studies, which were mainly driven by pragmatic needs. The following section summarises the methods that were used for data collection for each of the case studies.

3.9.1 Catholic Commission for Justice and Peace (CCJP)

The evaluation adopted a participatory approach, involving 60 participants drawn from six sample committees, 60 ordinary community members, 12 CCJP staff members, 12 community advisors and 26 community chairpersons or representatives. Key informants (KIs) comprised four Catholic Church Parish priests, six councillors, six chiefs, six kraal heads, five officers drawn from government, Binga RDC and NGOs that were operating in Binga. There were three main stages to the evaluation process: training and learning; data collection and information sharing. These are in turn discussed in the following sections.

Training and Learning

Three research teams were assembled; each consisting of two full-time project staff, one senior community adviser and two members of CCJP community committees (one male and one female). The team members attended a two-day workshop, at which the purpose and methodology of the evaluation were discussed, including the guidance that were initially prepared by the external evaluators. The training involved interviewing techniques, focus group discussions and recording information. Simulations and role plays were used in the training processes.

Data Collection

Data collection was divided into two components – secondary and primary data collection. First, secondary data collection involved gathering data from reports and project documents. The reports included monthly field reports, training workshop reports, minutes of meetings and project coordinator’s reports. Data collected included planned and actual targets; community structures established; planned and actual training activities; frequency of meetings; participation of women and children; impacts of CCJP on communities; and financial management information. Secondly, primary data collection was guided by sample frame as detailed in Table 3.2 based on a questionnaire in Appendix 3.

Table 3.2 Sample frame for CCJP evaluation fieldwork

Community	No. of Committee Members	No. of community advisers	No. of community chairpersons	Local leaders (chief, councillor, kraal head)	Ordinary people ⁹
Byo Kraal	-	1	1	-	-
Chinego	-	-	1	-	-
Chitongo	-	-	1	-	-
Kabuba	-	-	1	-	-
Kalungwizi	-	-	1	-	-
Kariangwe	10	1	1	3	10
Lubimbi	-	-	1	-	-
Lubu	-	-	1	-	-
Malaliya	10	1	1	3	10
Manjolo	-	-	1	-	-
Manyanda	-	-	1	-	-
Mulindi	-	-	1	-	-
Mupambe	-	1	1	-	-
Nagangala	-	1	1	-	-
Nsenga	-	-	1	-	-
Nsungwale	-	1	1	-	-
Samende	10	1	1	3	10
Siabuwa	10	1	1	3	10
Siachilaba	10	1	1	3	10
Siadindi	-	-	1	-	-
Siamaleke	10	1	1	3	10
Sianzyundu	-	-	1	-	-
Simatelele	-	1	1	-	-
Simbala	-	-	1	-	-
Tinde	-	-	1	-	-
Tyunga	-	1	1	-	-
Total	60	12	26	18	60

Source: Author

Six of the 26 communities in which the project worked were selected. In other words, each of the three teams visited two communities. The communities were selected by

⁹ Ordinary people are community members without leadership positions

CCJP staff, in order to provide a reasonably representative sample¹⁰, taking into account factors such as geographical location, socio-economic environment, when the committee was established, and its effectiveness to that date. The sample was restricted to six because, given the limited time and resources available, it was considered more important to get an in-depth understanding of a few communities than to make superficial visits to a large number. This decision was based on two factors: firstly, superficial information on all committees already existed (in form of reports/secondary data) and, secondly, it was assumed on the basis of secondary data that the main issues and problems were common to most communities.

The teams spent two days in each community. The first day was spent in discussions with the committee members and community advisers. The second day was spent talking to key informants, including community leaders and ‘ordinary’ residents. A particular effort was made to interview poorer members of the community, women and youths. During the second day, each team also visited either a gender pressure group or a secondary school human rights club in the area. The community visits were undertaken over a two-week period. They were deliberately staggered, in order to enable one of the evaluators to accompany each team to at least the first of its two communities. In actual fact, the evaluator was able to accompany the teams to all but one of the communities.

Information Sharing

Following the completion of data collection, collation and analysis, the evaluators reviewed the information obtained and identified a number of key issues and concerns which, warranted attention. These were discussed at a one-day feedback workshop which was attended by the chairpersons and advisers of all 26 community committees, project staff and representatives from the Catholic Relief Services and the two Parish Priests. The comments and suggestions made by the participants were incorporated into the evaluation report and provided the basis of the recommendations made.

It was generally felt that the participatory approach was very effective in this study. The quantity and quality of the information obtained was up to expectations according to the study design. Efforts and enthusiasm of the research teams and their capacity to grasp both the purpose of the evaluation and the data collection techniques used were impressive. Moreover, it was evident from subsequent discussions that the participants also found the exercise very useful in evaluating the effectiveness of their own work particularly the amount and quality of support they offered to communities. Moreover, it

¹⁰ This does not refer to a random sample but to purposeful sample (Patton, 2002) to obtain in-depth understanding of the effects of CCJP on the target communities.

was agreed in principle that the other communities would be evaluated in the same way and that a similar exercise would be undertaken internally every year.

The success of the exercise in general, and the quality of participation by both staff and community representatives in particular, was an indication that CCJP was achieving its objective of being a democratic, participatory and 'self learning' organisation. Furthermore, because everyone was involved in formulating the recommendations, there was confidence in the results; they were relevant to local needs, practicable within the limits of the resources that were available and, most important of all, 'owned' by those who were responsible for implementing them.

Limitations

There is need for caution when making conclusions based on the CCJP study findings. First, and consistent with Carr and Halvorsen (2001), a sample of six out of 26 committees was small and may not be fully representative of the project experiences. However, it was assumed that the participants were not objects providing numerical data but were viewed as intelligent, purposeful, resourceful and rich in knowledge and experience of their environment. The level of detail from six committees was therefore considered sufficient to gain an understanding of CCJP's contribution to community sustainability and resilience more widely. Understanding the processes that generated outcomes was fundamental rather than generalising findings. The study was consistent with the social research literature that a small sample size with in-depth data is likely to provide rich information from which some conclusions could be drawn (Patton, 2002; Bryman, 2001; May, 1997; Wengraft, 2002; Sarantakos, 1998). In addition, the results of the information sharing workshop were also fed into the fieldwork findings.

Secondly, the presence of project staff during interviews could have had an effect on the participants' freedom of expression in fear of hurting the feelings of the project staff. The third might not be necessarily a limitation. It relates to the positionality of the evaluator (author). With the evaluator originally from the study area, certain biases and prejudices, albeit unconsciously, could have influenced data collection, analysis and reporting. However, the involvement of another external evaluator and CCJP staff could have reduced such biases and prejudices.

3.9.2 Institutional Support Project

Like CCJP, there were three main stages to the evaluation process: orientation; data collection; and information sharing. Three research teams were assembled; each

consisting of at least one project staff member and one DPPA expert. Six ISP project staff and six DDPA experts participated in the evaluation exercise. ISP staff were selected by virtue of their involvement in the project while DPPA staff were chosen by their respective heads of department. At least two experts from each of the two regions participated in the evaluation exercise.

Orientation

The orientation for the research teams for both Amhara and Oromia regions introduced team members to data collection tools and techniques. Two-day orientation workshops were held separately for each of the regions since each region had particular social, political, economic and cultural contexts. The purpose of the evaluation, research questions and data collection tools were discussed. More emphasis was placed on using participatory tools such as focus group discussions, the H-Form, transact walk and mapping. The orientation was in the form of interviewing techniques, focus group discussions, use of the tools and recording data. The strength and limitations of each of the tools were also discussed. As most of the participants were senior government and ISP project staff, they had little difficulties in grasping the use of tools as well as writing down interview notes.

Data Collection

Field data collection was guided by a sample frame in Table 3.3 based on a list of open-ended questions in Appendix 4. Out of 185 study participants, only 40 were females. This might confirm the lower Gender Empowerment Measure stated in section 5.2.1 suggesting gender inequalities are still high in Ethiopia. The teams visited six zones, six action *woredas*, 10 PAs, one higher education institution and two non-governmental organisations. The zones were purposefully selected by the ISP staff in order to provide a reasonably representative sample, taking into account factors such as geographical location and socio-economic environment. Although logistical limitations, particularly the availability of transport played major role in the choice of areas in the sample, it was decided to make the sample as spatially inclusive as possible to capture the differences between each of the targeted areas. For example, there were significant differences between North Shewa *woreda* in Oromia region and Simada *woreda* in Amhara region such as livelihood strategies, language, economy, vegetation type and climate. The number of zones, *woredas* and PAs was restricted, given the limited time and resources that were available. Like in the CCJP study, it was considered more important to get an in-depth understanding of a few communities than to make superficial visits to a large number. This decision was based on two factors: firstly, information in form of reports

on all target zones, *woredas* and *kebeles* in the two regions already existed and, secondly, on the basis of secondary data the main issues and problems were common to most parts of the two regions.

Table 3.3 Participants in ISP study

Region	Location	Participants		
		Male	Female	Total
Amhara region	FDPPA	8	0	8
	South Gondar Deretabor Zone	8	0	8
	South Gondar Simada <i>Woreda</i>	8	0	8
	South Gondar Muja Peasant Association	8	4	12
	South Wello Peasant Association 4	8	0	8
	South Wello Peasant Association 9	8	0	8
	North Wello Delanta <i>Woreda</i>	8	0	8
	North Wello Shenkole Senbet	8	4	12
	Barhir Dar University	2	0	2
	Food for Hungry International	2	0	2
	Care Ethiopia	2	0	2
	Oromia Region	FDPPA Region	8	0
North Shewa Bole Peasant Association		8	4	12
North Shewa Wuchale Jida <i>Woreda</i>		8	0	8
North Shewa Angaw Kalila PA		8	0	8
North Shewa Lolamma <i>Woreda</i>		8	0	8
North Shewa Bebre Birhan		8	4	12
East Shewa Zone		8	0	8
Wast Shewa <i>Woreda</i>		8	0	8
East Harerghe Zone		8	0	8
East Harerghe Jarso <i>Woreda</i>		8	0	8
East Harerghe Wuchiro <i>woreda</i>		8	4	12
East Harerghe Kfan Zik PA		8	4	12
East Harerghe Gale Migra PA		8	4	12
Total		174	28	202

Source: Author

The teams spent at least two days in each community. Although, the interview timetable was flexible, the first day was generally spent in discussions with zone or *woreda* experts. The second day was spent discussing with PAs. Key informant interviews were conducted by the external evaluator. Regional level key informants were either interviewed as individuals or as a group. The zonal, *woreda* and *kebele* visits were undertaken over a two-week period. They were deliberately staggered, in order to enable the evaluator to visit at least two *woredas* and one PA in both regions. The information obtained during these visits was recorded using the format that was agreed at the orientation workshop. After the data was collated in the form of reports, each of the

three teams met and summarized their findings, which were further collated and analysed by the external evaluator.

Information sharing

Information sharing was in the form of an exit meeting with ISP and DPPA staff. A summary of findings was presented by the external evaluator for discussion. The comments from the meeting were later incorporated into the findings. The evaluator was satisfied with the effectiveness of the participatory approach used in the study. The quantity and quality of the information obtained was reasonably up to expectations. Like CCJP case study, the effort and enthusiasm of the research teams and their capacity to grasp both the purpose of the evaluation process and data tools was impressive. In a nutshell, the findings and conclusions of the study were a fair reflection of the participants views.

Limitations

There were two main limitations to the ISP study, which could have had a bearing on the findings. First, the political tensions were high during the fieldwork following the disputed 2005 elections, which affected both the evaluation team and the participants. At least four group and three individual interviews were not carried out as was planned due to political disturbances, which started on 2nd November 2005 in Addis Ababa, spreading to other parts of the country on 3rd November. The evaluation exercise ground to a halt for more than a week; some of the participants and team members were affected directly or indirectly and were not emotionally and psychologically prepared for interviews. However, the use of participatory approaches such as focus group discussions, mapping, H-Form and spider diagram stimulated discussions among the participants.

Consistent with Kirkpatrick (1990), language and cultural issues were other limitations. Because the external evaluator (author) could not communicate in the local languages, he relied on interpreters to translate from Amharic and Oromifa languages to English. Although there was a possibility that the evaluator could have missed some of the 'nitty-gritties' during data collection, the interpreter appeared to be quite competent as he had English language qualifications. In addition, the key informants who comprised either government or NGO officials did not need interpretation as they were conversant in English. Cultural issues related to gender were also apparent during focus group discussions. Women tended to let men dominate the discussions. However, the facilitator managed to increase the women's contribution through smaller focus group discussions and mapping exercises.

3.9.3 East Timor Case Study

Data collection involved use of secondary data, survey questionnaire (in Appendix 5), Key Informant and group interviews. Secondary data was obtained from reports such as the *Suco* Survey of 2002, ARP I Evaluation Report, Community Empowerment Report (CEP) and ARP II Project documents and progress reports. A total of 1,296 people participated in the questionnaire survey. Sixty-two people who participated in group interviews were distributed as follows: 30 from Participatory Development and Natural Resources Management (PD&NRM) groups, 14 from Water Users Association (WUA), 12 from Agriculture Service Centres (ASCs) and six Ministry of Agriculture, Forest and Fisheries (MAFF) staff members.

Questionnaire

Questionnaire design

The questionnaire design involved evaluators, MAFF staff and research assistants. Involving MAFF staff in the study was within the context of MAFF's wider vision for capacity building and quality outputs. The design process was content lead, such that the issues and topics needed to be covered and therefore the questions needed for the survey, informed the sample frame required. The survey tools were thoroughly discussed and an appropriate sample frame established to be able to solicit adequate confidence in the survey outputs. The logistics were also planned to achieve an adequate sample. After a pilot survey in two sub-districts, a final version of the questionnaire used in the implementation of the survey in eight districts of Timor-Leste was produced. It was then translated from English to Tetum.

Sample locations and size

The sample districts were selected from the ARP II targeted districts sufficient to cover areas where all of the project components were represented. It was decided to make the sample as spatially inclusive as possible by sampling all of the targeted districts. This is because whilst there are clearly vast differences between each of the districts, there were also significant differences between the sub-districts in which the project was operating. For example, Dili district is based on a different set of livelihood strategies to Viqueque or Los Palos. Language, the economy, vegetation type and climate were all highly variable between districts.

The district was a key unit for comparison of data sets, with itself over several years of project implementation, and in comparison to other districts. It was decided to establish the number of households needed to make realistic statistical comparisons between these units. The comparisons would be between the parts of districts in which

ARP II was implemented. Approximately 160 household interviews¹¹ were conducted per district (unit area of analysis) in project sites. The choice of 160 household interviews per district was guided by the need to come up with a specific number of household interviews using areas in which ARP II was implemented. This was the number that would enable the study to generate secure, meaningful and significant results. Within the time and cost constraints, combined with common sense, and to some extent relative judgement a table of possible respondents was generated. For example, the time and cost were determined by multiplying the suggested sensible minimum number of interviews per area, by the length of time an interview took, and dividing by the number of people that would be employed on data gathering over a given period of time.

The resultant sample frame is presented in Table 3.4 which details the numbers of households that required per sub-village, *suco*, sub-district, district and region. The survey was conducted in eight districts – two each in Eastern and Western Regions, three in the Central Region and one in Oecussi. Sub-districts were based on purposive sampling of areas but within a condition that all types of ARP II activity areas were included. Similarly, the *Sucos* and four sub-villages per *suco* for each of the sub-districts were identified. In the absence of household data, the selection of households to participate in the survey was based on the non-probability method using quota sampling. Consistent with the literature (Flowerdew and Martin, 1997; Schofield, 1996), interviewers were sent out to find respondents in the selected area whether they were involved in ARP II or not.

¹¹ The average size of household = 5.8 people. With a total population of 565,770 the estimated households in the 8 survey districts was therefore approximately = 97,547. The 1,120 households interviewed were therefore about 1.2 percent of the households in these districts. One percent of population surveys are commonly considered valid for household studies such as for example the UK Government's Household Survey of Britain.

Table 3.4 Sample frame for Agricultural Rehabilitation Project survey

Region	District (pop. 2001)	Sub-district	Suco	Sub-village	Households
I Eastern	Lautém (55,224)	Lautem	Com	4	40
		Tutuala	Mehara	4	40
		Los Palos	Cacavem	4	40
			Muapitine	4	40
	Viqueque (66,049)	Watulari	Matahoi	4	40
			Babulu	4	40
		Viqueque	Caraubalu	4	40
		Lacluta	Uma Tolu	4	40
Subtotal	2	6	8	32	320
II Central	Dili (137,956)	Metinaro	Benunuk	4	40
		Atauro	Biceli	4	40
			Villa	4	40
	Ermera (92,505)	Ermera	Humboe	4	40
	Manufahi (40,727)	Fatuberliu	Fatucahi	4	40
			Clacuc	4	40
		Same	Betano	4	40
		Alas	Dotik	4	40
Subtotal	3	6	8	32	320
III Western	Bobonaro (73,990)	Cailaco	Bilimau	4	40
			Atudara	4	40
		Maliana	Holsa	4	40
		Lolotoe	Guda	4	40
	Cova Lima (52,136)	Maucatar	Ogues	4	40
		Fatululic	Fatululic	4	40
		Tilomar	Salele	4	40
		Zumalai	Beco II	4	40
Subtotal	2	7	8	32	320
IV Oecússi	Oecússi (47,183)	Nitibe	Bene – Ufe	4	40
		Passabe	Malelat	4	40
		Pante Macasar	Taiboco	4	40
			Lifau	4	40
Subtotal	1	3	4	16	160
Total	8 (565,770)	22	28	112	1,120

Source: Author

Tables 3.5 – 3.9 in summarise the demographic characteristics of the study participants. A total of 1,219 people participated in the study with the majority (66 percent) located in the lowland area (Table 3.5). The majority of participants were aged between 21 and 50 with 759 being males. Eighty-nine percent of the participants were male headed household (Tables 3.6 – 3.7).

Table 3.5 Location of ARP II study interviews

	Oecussi	C/Lima	Bobonara	Ermera	Dili	Manufahi	Viqueque	Lautem	All
% interviews considered to be in an upland area	0	37	49	77	34	0	29	52	33
% interviews considered to be in a lowland area	100	63	51	23	66	100	69	45	66
% interviews not clearly defined as upland or lowland	0	0	0	0	0	0	2	3	1
HHs in Sample	139	161	163	87	125	172	181	191	1219

Table 3.6 Age and sex of ARP II interviewees

% Interviewees	Oecussi		C/Lima		Bobonara		Ermera		Dili		Manufahi		Viqueque		Lautem		All		
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Less than 15 years old	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 – 20	6	0	7	0	7	1	3	0	8	3	7	1	5	1	2	1	5	1	
21 – 25	6	7	16	7	10	3	18	8	8	3	20	10	19	10	13	5	14	7	
26 – 30	19	14	31	18	15	8	20	15	18	14	23	14	27	21	24	19	23	15	
31 – 35	8	19	9	10	10	14	18	12	13	16	9	20	11	12	13	20	12	15	
36 – 40	8	18	20	14	17	23	13	10	18	8	21	11	9	6	4	13	13	13	
41 – 45	6	12	7	18	10	15	5	12	8	19	8	8	11	9	14	11	10	13	
46 – 50	17	15	2	13	15	11	3	6	3	6	2	9	6	6	7	9	6	10	
51 – 55	8	8	2	4	7	10	3	8	5	8	0	8	2	4	4	6	4	7	
56 – 60	14	5	4	5	2	7	3	2	5	9	5	3	2	15	4	3	4	6	
More than 60	8	3	2	9	2	7	13	17	13	8	3	14	6	14	13	8	8	10	
Missing data	0	0	0	1	5	2	3	8	2	5	2	3	2	2	3	5	2	3	
Sample size	36	103	45	116	41	122	39	48	62	63	61	111	63	117	112	79	459	759	

Table 3.7 HH status of ARP II interviewees

% Interviews conducted with a;	Oecussi	C/Lima	Bobonara	Ermera	Dili	Manufahi	Viqueque	Lautem	All
Female head of HH	12	5	7	10	15	6	9	23	11
Female non-head of HH	14	23	18	35	34	31	26	36	27
Male head of HH	74	70	69	52	48	60	60	38	59
Male non-head of HH	0	2	6	3	3	3	5	3	3
Number of people interviewed	139	161	163	87	125	172	181	191	1219

Number, composition and distribution of focus group interviews

Focus group interview is a group interview where people who have knowledge on a specific topic are gathered together by the researcher for a relatively informal discussion (Bruseberg and McDough, 2003). In this study, they were used as a means of triangulating responses that were given during the questionnaire interviews. They were carried out as follows: two WUA groups, two PD&NRM groups, one Livestock Workers Association (LWA) and one ASC. The majority of group interviews comprised not more than 12 participants which is consistent with good practice for this activity. Where possible the group were made up of a fair mix of people, and details of who was represented at the group were recorded. Taking into account the cultural context of Timor-Leste, where gender equity is comparably quite low, the participation of at least two women per group was considered acceptable.

Key informant interviews

The sample for key informant interviews was dependent on the number of divisions involved in the project, such that meetings of this type were held with individuals and sometimes groups of people working with WUAs, PD&NRM, LWAs and the Project Advisor.

Survey team and interview procedure

The interviewing team of ten were trained on interview procedures prior to field work. The interviewers were divided into two teams of six and four with equal number of females and males. Interviewers were also a resource in terms of advising on adjustments that needed to be made to the questionnaire, and in terms of providing further information about the areas that had been selected. Representatives amongst the team were from all of the main areas that were surveyed. This was key to the group having sufficient language coverage. The negotiation of entry to *sucos* was arranged by supervisors of each of the team a day prior to the interview. When arriving in a village that is part of the sample sub-district, the first point of call was the *suco* chief's homestead who introduced interviewers to the households in some instances. The *suco* chiefs were briefed on the need to maintain the variety of the choice of households.

Data processing and analysis

The quantitative data was analysed using Statistical Package for Social Science (SPSS). For the qualitative data, summaries in the form of notes of group interviews and meetings were considered more appropriate and feasible in view of time constraints. Some direct quotes were used to emphasise some discussions that followed.

Information sharing

As it was not feasible to produce a draft report before the end of the study, summary data, key findings and proposed recommendations were presented at a workshop alongside project monitoring indicators. The quantitative and the qualitative data from the questionnaire survey and from focus groups and key informants fed into the process of analysis and synthesis of findings. It should be noted that the information sharing had some advocacy messages such as direct quotes from participants directed to government officials. For example, there was a concern from one of the irrigation schemes farmers about the government's failure to provide assistance to protect their paddy fields from flash floods. The preliminary presentation title had a caption "*Our fields will be washed away by flash floods in two or three weeks time ...*" This prompted the government to provide equipment that would be used to divert the river course as a way of protecting the paddy fields that were at risk of being washed away.

Limitations

The study was conducted in 2004, two years after East Timor's second independence and at the peak of the flow of humanitarian assistance. Some of the negative answers from participants, particularly from the survey, could have been given in anticipation of more aid. However, the triangulation of data using participatory approaches such as diagramming and focus group discussions helped to increase confidence in the findings. Secondly, as with ISP, the author relied on an interpreter, as he could not communicate in the local Tetum or Portuguese languages. However, the key informants who comprised government, international staff or NGO officials did not need interpretation, as they were conversant in English. Thirdly, the focus group discussions needed more time to set-up, given the poor communication infrastructure during the time of the study especially in rural isolated communities. To reduce this problem, focus group discussions were set-up a day before at a place and time convenient for the participants in consultation with their local *suco* leaders.

3.10 Analytical framework

The three case studies were analysed using the OECD evaluation criteria. Table 3.8 presents the framework developed by O'Keefe *et al.* (2002) which has been used to assess the case studies. The criteria are grouped into five major categories - efficiency, effectiveness, impact, sustainability and relevance. The '4Cs' - connectedness, coherence, coverage and coordination were considered sub-issues of five major criteria. Table 3.9 summarises the themes and the evaluation criteria for each of the three case studies whose results are summarised in Table 7.1 in Chapter Seven.

Table 3.8 Evaluation criteria

Measuring	What to measure	Whose Perspective	Point of reference	Methodological challenge	Key questions
Relevance (coverage)	Appropriateness in relation to policies, needs and priorities	The society	Mission of donor and implementing partner	Lack of consensus regarding needs and priorities	Are objectives in keeping with needs and priorities? Should activities be continued or terminated?
Impact	Intended and unintended positive and negative impacts	The society	Status of affected parties prior to intervention	Lack of information about affected parties Cause and effect linkages	What are the positive and negative effects/ Do positive effects outweigh negative effects?
Efficiency (Timeliness)	Delivery of aid	The implementers	Similar interventions Best practice standards	What standard to use as reference	To what degree have aid components delivered as agreed? Could it have been done cheaper, more quickly, and with better quality?
Effectiveness (Coherence) (Coordination)	Achievement of objectives	The target group	Agreed objectives	Unclear, multiple, confounding, or changing objectives	To what extent have agreed objectives been reached? Are activities sufficient to realise agreed objectives?
Sustainability (Connectedness)	The likelihood of benefits to continue	The society	Projected future situation	Hypothetical answers	To which extent does the positive impact justify investment? Are the involved parties willing and able to keep design and exit strategy?

Source: O'Keefe et al. (2002)

Table 3.9 Framework of Analysis

Theme	Assessment criteria	Source		
		Zimbabwe case study	Ethiopian case study	East Timor Case study
Context of research location	Literature review	Literature	Literature	Literature
The concept of resilience	Literature review	Literature	Literature	Literature
Integrate disaster and development	relevance, efficiency, effectiveness, impact, sustainability	project documents, Key Informant (KI) interviews and meetings project staff and advisers, committees	project document, Save the Children (Canada) staff, KI interviews and meetings with DPPA staff	Project document KI interviews and meetings with Ministry of Agriculture, Forests and Fisheries staff (MAFF)
community participation	relevance, efficiency, effectiveness, impact, sustainability	project documents, KIs interviews and meetings with: stakeholders (such as BRDC, Catholic Church and Catholic Relief Services); CCJP project staff; group interviews with CCJP committees	project documents, KI interviews and meetings with: stakeholders (such as DPPA, Food for Hungry International and Rural Development and Food Security); Save the Children project staff, Peasant associations (PA)	interviews and meetings with: stakeholders (MAFF, Care International; Water Users Associations); individual and group/ participatory interviews with beneficiaries
Institutional building	relevance, efficiency, effectiveness, impact, sustainability	project documents, KIs from traditional leaders, councillors, project staff, Women and Children's Desk community advisers	project documents, KIs interviews and meetings with project staff, DPPA staff and Peasant Associations	project documents, KIs; Village Livestock Workers; WUA; ASCs; project staff, beneficiaries
Social learning	relevance, efficiency, effectiveness, impact, sustainability	project documents, KIs from government and non-governmental actors, project staff, project beneficiaries; observation	project documents, KIs interviews and meetings with project staff, DPPA staff and Peasant Associations	project documents, interviews and meetings with KIs from government and non-governmental actors; Village Livestock Workers; WUA; Agriculture Service Centres (ASCs); project staff, project beneficiaries

Theme	Assessment criteria	Source		
		Zimbabwe case study	Ethiopian case study	East Timor Case study
Livelihood security	relevance, efficiency, effectiveness, impact, sustainability	project documents, KIs from government and non-governmental actors, project staff, project beneficiaries	project documents, KIs interviews and meetings with project staff, DPPA staff and PAs	project documents, interviews and meetings with KI (government and non-governmental actors); Village Livestock Workers; WUA; Agriculture Service Centres (ASCs); project staff, project beneficiaries
Entry and exit strategies	sustainability, timeliness	project documents, KI from government and non-governmental actors, project staff, project beneficiaries	project documents, KI interviews and meetings with project staff, DPPA staff and Peasant Associations	project documents, interviews and meetings with KI from government and non-governmental actors; Village Livestock Workers; WUA; Agriculture Service Centres (ASCs); project staff, project beneficiaries

3.11 Ethical considerations and positionality

Involving human participants in exploring the extent to which development and humanitarian interventions promote disaster resilience raises some ethical issues such as right to privacy, confidentiality, personal autonomy, respect and dignity. In addition, research should ‘do no harm’ (Anderson and Woodrow, 1989) to participants. It should not inflict pain, whether physically, mentally or otherwise (Peach, 1995; Sapsford and Abbott, 1996; Patton, 2002). The ethics literature on research involving impoverished and vulnerable communities, including disaster-prone communities in the Global south such as those who participated in CCJP, ISP and ARP studies, continues to grow (for example, Nama and Swartz, 2002; Dickens and Cook, 2003; Collogan *et al.*, 2004; Lott, 2005; Rhodes, 2005; Mackenzie *et al.*, 2007; Flicker *et al.*, 2007; Mfutso-Bengo *et al.*, 2008; Jesus and Michael, 2009; McManus, 2009). It should be noted that there is ‘[n]o single theory or approach to ethics is ideally or completely suited to resolving all ethical issues that arise in the course of research’ (Peach, 1995: 14). Although contemporary research ethics theories are based on Western notions (of the Global north), there are several aspects that are universal and which also apply in the Global south including those in CCJP, ISP and ARP study locations.

Two approaches have dominated ethics research – consequentialist and deontological ethics (Peach, 1995). Peach (1995) outlines the differences between these two approaches. Consequentialist, also sometimes referred to as utilitarian or teleological approach, focuses on the results or outcomes of actions. Researchers taking this approach believe in the utility principle, which states that we should strive to create the greatest possible balance of good over evil in the world. Maximising benefits and minimising harm, and promotion of human values such as happiness, health, knowledge, self-realisation, perfection or general welfare are central to the consequentialist approaches. The emphasis on ‘good’ being prior to the ‘right’ means utilitarian approaches are largely founded on moral principles such as truth and honesty. The downside of utilitarianism is that it may result in sacrificing justice in particular situations in the course of maximising good over evil.

Deontological theories offer some ways of minimising the utilitarian approaches problems. Being rule-based, those adopting the deontological approach will do what is ‘right’ in accordance with the laws, prohibitions, prescriptions and norms regardless of whether consequences are of the maximum or minimum good. The downside of rule-based approaches is their totalising, if not homogenising and universalising, assumption that there is one ‘right’ answer for every moral dilemma. Yet, the rules may be bad,

immoral, wrong, unjust, or impoverishing to human life. Besides, rules can be embroiled in overly formalistic and legalistic arguments with narrow applications of norms to real-life consequences. Thus, both the consequentialist and deontological approaches cannot provide a perfect solution to complex moral dilemmas that the researcher may encounter. In this study, both approaches were relevant and applied together. They offered some guidance in resolving some moral and legal ethical issues which would arise in evaluating the extent to which CCJP, ISP and ARP promoted resilience to disasters in their respective communities.

As this study used intrusive data collection methods in the form of interviews and observations, involving personal and interpersonal interactions, they were two major options. A checklist or a consent form or both were considered to ensure ethical issues were observed. Given the high illiteracy rates in the study locations, a consent form where participants would read the contents before appending their signatures to the form was considered inappropriate. It would not only exclude some participants but would, to an extent, embarrass them. Consistent with Patton (2002), a checklist of ethical issues based on appropriate moral and legal principles was used as a guide (see Box 3.7). This was consistent with the Northumbria University Ethics in Research and Consultancy (NUERC) (2007) guidelines. The NUERC guidelines make an emphasis on applying both beneficence and non-maleficence ‘to do good’ and ‘not to do harm’ respectively; respect for the rights of others, justice and fair treatment of others and balancing qualitatively different values. It should be pointed out that, the data for this study was collected as part of the authors’ employment at Northumbria University and subject to approval by the relevant research ethics committee in terms of the NUERC. Furthermore, prior to the commencement of this study, approval was also sought from the relevant research ethics committee as provided for by the NUERC guidelines.

In addition, the case study material was collected at the invitation of organisations that solicited for the service of the author’s consultancy services. Although in all the cases, the participants’ consent was sought by the respective organisations, it was the responsibility of the author to ensure ethical standards were observed. Similarly, the author sought consent from all the three organisations to use the material for the purpose of a doctoral study. A model reply letter was sent to the respective organisations as shown in Appendix 6. The checklist in Box 3.7 was part of the toolkit, which the author and data collection teams referred to during fieldwork. Prior to field work, the research teams were given some orientation on data collection, including ethical issues.

Box 3.7 Ethical guideline checklist

Ethics aspect*	Guidance notes
Purpose of the study	Explaining the purpose and importance of, and reasons for, the studies in simple understandable language, the expected value or benefit of the study to the participants
Risk assessment	Conscious of the psychological stress the interviews or observations might cause particularly returning refugees, internally displaced persons in East Timor and political repercussions for participants in Zimbabwe and, to a certain extent, in Ethiopia.
Promises	Explaining what the study would be able or unable to deliver or attend to some issues raised by participants, which were beyond the scope of the study.
Confidentiality	Emphasis was made that participants' identities would remain confidential and anonymous in the study documents, unless they chose otherwise. This was particularly important in socially and politically polarised Zimbabwean environment at the time of the study.
Informed consent	Prior to and during participation, consent was sought. Additionally participants were informed that they are able to withdraw their consent at any point.
Data access and ownership	Data sets were accessed through permission from respective commissioning agencies.

**Ethics aspects adopted from Patton (2002)*

Another ethical issue, which was also a limitation of this study, was related to the researcher's positionality. While the study aimed at contributing new knowledge to disaster studies through empirical evidence, the fact that the researcher originates in one of the study areas, with almost similar circumstances to other two study areas, some biases could have influenced the research process. The growing literature on positionality and reflexivity, mainly influenced by feminist epistemologies (for example, England, 1994; Rose, 1997; McCorkell and Myers, 2003; Nagar and Ali, 2003; Chacko, 2004; Cont and O'Neil, 2007; Sultana, 2007; Huisman, 2008; Moser, 2008) informed the research process of this study.

Without necessarily delving into the positionality ontology and epistemology, which were not the subject of this study, it might suffice it to highlight the common thread from the literature. The literature emphasises the importance of researchers to acknowledge their partiality, subjectivities and biographies through reflexivity. This helps researchers to fully understand their research process, the researched and the research context, particularly in the context of post-structural and postmodern multiple axes of difference, inequalities and geopolitics, which has an impact on knowledge production. Three aspects, which were related to the researcher's positionality, were considered.

First, as the author originated from the CCJP case study area, it was highly likely, the author's subjectivities in relation to knowledge of the location and some of the participants, could have influenced the study process and outcomes. Similarly, in ISP and ARP study locations, where the researcher was alien, subjectivities such as background, attitudes and ethnicity could also have had a bearing on both the research process and outcomes.

Secondly, that the author was engaged by external agencies, with some higher level of Western education, power relations between the researcher and research participants, could have affected access to participants, the tenor, outcomes and knowledge production (McCorkel and Myers, 2003). For instance, it was relatively difficult to access key informants, particularly government officials in the CCJP case study while it was the opposite in ISP and ARP study areas. Thus, the researcher had less power in his original area in Zimbabwe than in Ethiopia and East Timor. Clearly, the positionality of the researcher could have had an effect on the knowledge production process.

Thirdly, it was relevant to reflect positionality since evaluations tend to be undertaken on behalf of funders. Moreso, the constant exposure to the project documents could have led to what Foucault refers to as 'docility' where the researcher intuitively and uncritically becomes oriented towards satisfying the need and demands of the funder (Allen, 2005).

To deal with issues of positionality, the study adopted a dialogical process where the researcher and research participants in the three case study areas may have influenced and transformed each other through the research input (England, 1994). The researcher was visible and integral part of the research setting. Furthermore, the study observed four notable strategies. First, the study adopted what Patton (2002) terms 'pragmatism' or 'methodological appropriateness' where flexibility and a range of multiple methods were employed. Depending on circumstances, group or individual interview methods were employed, sometimes using participatory tools, meetings, workshops and focus and open discussions. Consistent with Chacko (2004), the participants' lived experience was made explicit and valued to equalise power balances between the researcher and the participants. Interviews were characterised by openness, self-disclosure and making conscious accommodation of participants' work schedule and time constraints, and mutual sharing of information. In some cases, the process went beyond positionality by utilising personality attributes including sharing jokes, and learning some key words in local language, particularly in the case of ISP and ARP. Ethical considerations and positionality are revisited in Chapter 8, section 8.2.3.

3.12 Conclusion

As an integral component of development and humanitarian programmes and projects, evaluations have the potential of being extended and adapted to assessing resilience enhanced by such interventions. This chapter outlined the evaluation framework which was used to identify and highlight lessons from CCJP, ISP and ARP which could inform resilience building. For evaluations to adequately inform resilience, it means attending to conceptual and philosophical challenges including definitional, ontological, epistemological, and methodological concerns. This study adopted a mixed methodology with each of the case studies having an aspect of quantitative and qualitative approaches. Chapter Four presents the findings from the CCJP case study.

CHAPTER FOUR

THE CATHOLIC COMMISSION FOR JUSTICE AND PEACE PROJECT, ZIMBABWE

4.1 Introduction

Binga district, located in northwestern Zimbabwe, has become synonymous with disasters and humanitarian crises. Approximately 90 percent of the population require humanitarian aid every year. Binga is experiencing an increase in disaster risks in both magnitude and frequency. The risks range from chronic food insecurity, frequent waterborne diseases outbreaks, HIV and AIDS to the anticipated and yet largely unknown impacts of climate change. Building the capacity of communities to withstand disaster events has become more urgent than ever before in Binga District. In 1996, the Catholic Church initiated the Catholic Commission for Justice and Peace Project (CCJP) to address root causes of vulnerability to poverty and multiple disasters. People in Binga, like many poverty-stricken communities, are ‘not simply poor, they are *impoverished*’ by ‘structures that create and depend upon poverty itself’ (Murphy, 2001:32).

Using the evaluation framework, this chapter explores the extent to which CCJP attempted to build community resilience to poverty and disasters in Binga. CCJP adopted a rights-based approach to development to enable communities to demand their entitlements from the structures that create vulnerability to poverty and disasters. This was consistent with the literature (as stated in Chapter Two, section 2.5.4) which claims that rights-based approaches are about agency; they attempt to empower communities to (radically) influence change from an existing state to an improved state of security (Cornwall and Nyamu-Musembi, 2004; Mitlin and Patel, 2005) and resilience. The evaluation criteria of relevance, efficiency, effectiveness, impact and sustainability were assessed within the context of governance, community participation, institutional building and livelihoods. As CCJP was implemented at the development phase of the disaster cycle, it also had a potential of providing various insights into the link between DRR and sustainable development. The sections that follow present the background and context of Binga District, the characteristics of CCJP and the findings of the assessment.

4.2 Background and context of Binga district

Before examining the background of Binga District, it might be useful to describe the general overview of the disaster situation in Zimbabwe. Fig. 4.1 shows the location of Zimbabwe and Binga district. Zimbabwe is located in the Southern Africa with an estimated population of 11.6 million (CSO, 2002). It is a landlocked country bordered by South Africa and Botswana to the south, Namibia and Zambia to the northwest and Mozambique to the east.

Fig. 4.1 Location of Binga District



Source: Author

Zimbabwe is one of poorest countries in the world and ranks 151 out of 177 countries in the human development index (UNDP, 2008). In 2006, the life expectancy stood at 35.5 (WHO, 2006) with about half the population surviving on less than US\$1 a day (UNDP, 2006). It is estimated about 1.6 million of the population are living with HIV and AIDS (CSO, 2006). The socio-economic decline experienced for almost a decade, with unemployment rates at more than 70 percent and dwindling support for crucial social services such as health and education has increased the vulnerability of Zimbabwe to disasters of natural and anthropogenic origin.

Zimbabwe traditionally suffers from disasters triggered by weather-related hazards such as droughts, floods and epidemics including cholera and malaria (CRED, 2008; Government of Zimbabwe, 2008). Between 1992 and 2008, 3,471 deaths were related to epidemics, while more than 13.5 million people were affected by drought between 1982 and 2008. Similarly, more than 300,000 people were affected by floods between 1982 and 2008. Between late 2008 and mid-2009, there were 98,591 and 4,288 preventable cholera cases and deaths respectively in Zimbabwe.

Prior to 2000, Zimbabwe had the ability to prepare for, respond to and recover from disasters. In 1992 and 1995, Zimbabwe averted drought induced humanitarian crises in the form of famine through mobilisation of both internal and external resources (Nyoni, 1993; Kinsey, Burger, and Gunning, 1998; Munro, 2002; Munro, 2006). However, Zimbabwe's resilience to disasters has been considerably reduced since 2000. Adverse climatic conditions, coupled with multiple combinations of poverty, economic decline, political polarisation and the high prevalence of HIV and AIDS has resulted in preventable humanitarian crises.

Lack of Zimbabwe's resilience to disasters is mainly blamed on the economic and political decline in Zimbabwe. Nevertheless, this is subject to several interpretations. Those who are inclined towards the neo-colonial interpretation argue that Zimbabwe's economic decline was a result of Western powers' anti-land reform programme which has seen land redistributed from minority white farmers to 'landless' black people (Moyo, Rutherford and Amanor-Wilks; Sachikonye, 2003). Gideon Gono¹² blames the economic decline on the economic and travel sanctions imposed on ZANU (PF) members by western countries, particularly America, European Union, Australia and Canada. He claims the 'illegal economic sanctions are an example of coercive terrorist diplomacy in so far their objective is to induce fear' (Gono, 2009: xv).

Given the colonial history of Zimbabwe, there could be merit in these arguments. However, several commentators do not blame the Zimbabwe's economic decline to natural hazards like drought, but they blame it on the bad governance by the Zimbabwe African National Union (Patriotic Front) (ZANU (PF)) party (Richardson, 2007) which has been ruling Zimbabwe since its independence from Britain in 1980. According to Bratton and Masunungure (2007), as a child of a liberation movement, the ZANU (PF) government of Robert Mugabe has never shied away from violence.

The harsh repression of political dissent in Matabeleland in the early 1980s is only the most blatant example. A quarter century later, ZANU (PF) has exhausted its

¹² Gideon Gono has been Reserve Bank of Zimbabwe Governor since 2003 and is blamed mainly by the MDC party as being responsible for the economic decline.

capacity for good governance. It is now able to extend its tenure only through a series of increasingly disputed elections marred by intimidation, vote buying, and ballot fraud. For abusing its political opponents, the Mugabe government has been driven into international isolation, mainly by the Western powers but also from selected members of the African Union. And, by embarking on an ill-considered and chaotically implemented programme of land seizures, it has turned the country from an agricultural exporter to a needy recipient of foreign food aid. By 2005, as a result of gross economic mismanagement, the government was essentially bankrupt and desperate to gain access to dwindling supplies of foreign exchange.

Bratton and Masunungure (2007:21-22)

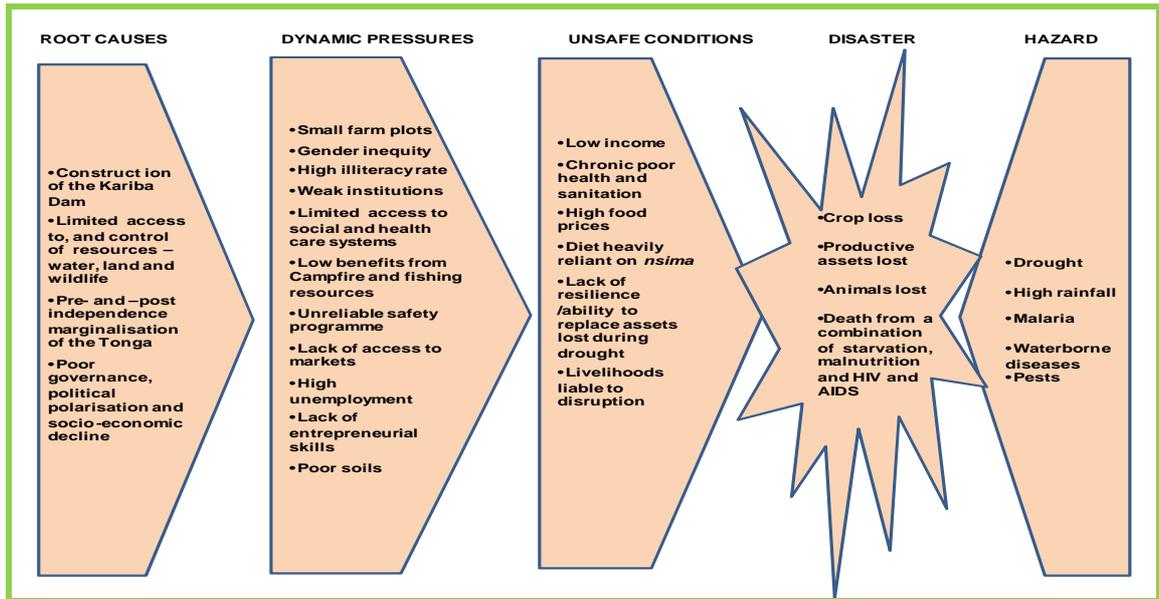
In May 2005, a massive urban campaign, Operation Murambatsvina or ‘clean up the filth’ was launched in the aftermath of parliamentary elections that confirmed that ZANU (PF) had lost political control of Zimbabwe’s urban areas. The operation was a human-made disaster; it was not only a gross violation of human rights but also undermined the livelihoods of large numbers of people (Bratton and Masunugure, 2007 Holland, 2009). Recent disasters in Zimbabwe are, therefore, a political creation rather than being rooted in natural phenomena.

As stated in sections 4.2.2-4.2.4, disasters in Binga are not new – they span across the colonial and post-colonial eras. They are a result of deliberate neglect and negligence by both colonial and post-colonial governments. Consequently, the CCJP project was instituted to address root causes of development problems in Binga. It would be appropriate to note from the onset that CCJP did not necessarily use the resilience terminology, although its activities in effect fitted the DRR agenda nonetheless. Thus, it has been found appropriate to use the PAR model (Fig. 4.2) to examine the progression of vulnerability from root causes to unsafe conditions which intersect with hazards to produce disasters in Binga.

4.2.1 Vulnerability and location, demographics and land use

Problems that are addressed by development and humanitarian programmes in Binga are partly rooted in its geographical location, demographics and resource endowments. Binga District is located in the Zambezi Valley basin in the northwestern part of Zimbabwe (see Fig. 4.1). It has an area of about 13 000 km² and a population of 118,824 (Central Statistical Office, 2002). It is bordered by Nyaminyami (Kariba), Gokwe, Lupane and Hwange districts. It also shares a border with Zambia, demarcated along Lake Kariba. The Tonga ethnic group dominates the population, with about three percent being Shona and Ndebele.

Fig. 4.2 Pressures that result in chronic disasters in Binga



Source: Adapted from Wisner et al. (2004)

The district is relatively isolated, being over 400 kilometres from Bulawayo, the nearest major urban centre. There is only one tarred road (100 kilometres in length), which connects Binga with the main Bulawayo-Victoria Falls road and was constructed in 1990. There was no electricity supply until 1990 and even today only a few centres on or near the tarred road have access to electricity.

More than half of the lake’s shoreline is within Binga district. About 63 percent of the district is communal land while the remaining 37 percent consists of protected areas (including national parks, safari areas and forest reserves), in which human settlement is prohibited. Three percent of state land is designated for urban and tourist activities (Mbetu and Conyers, 1994; Muir, 1993). The proportion of land designated for national parks, safari and forest areas is much higher in Binga than the national average of 13 percent (Mbetu and Conyers, 1994).

4.2.2 Lake Kariba legacy, vulnerability and resilience

Assessing disaster resilience in Binga cannot be complete without paying attention to the legacy of the Kariba Dam. The decision to build Lake Kariba in the 1950s ‘disrupted’ the living conditions for more than 57,000 people on both the Zimbabwean and Zambian side of the river. The area was affected by the inundation of the rising water level (Colson, 1971; Scudder, 1971) to give way to one of the largest man-made lakes in the world, which was meant to provide hydro-electric power for the Federal Government of

Rhodesia and Nyasaland. The customers of the hydropower were the companies that were owned by British, American and South African enterprises (Colson, 1971; Scudder, 1971). The Tonga people were ‘forcibly’ relocated to higher grounds; they were “bundled into lorries” (WCD, 2000) to remove them from the land of their ancestors. The resettlement period was a “rough time” and some elderly people could have “died of sorrow” (WCD, 2000). People who tried to resist the resettlement were shot dead - with eight men dead and at least 32 wounded (WCD, 2000). Twenty-two chiefdoms were moved to give way for the dam. This was a disaster as the situation overwhelmed people’s capacity to recover. External humanitarian assistance came in the form of meagre food handouts for two years. There was no rehabilitation programme focusing on such things as livelihoods reconstruction as well as psychosocial support. They had to adapt to a new way of living as some chiefdoms were relocated to areas far¹³ from the river, where there was inadequate water.

Meanwhile, the creation of Lake Kariba and the adjacent national parks and safari areas resulted in the growth of new economic activities (notably tourism and commercial fishing), which, although providing limited employment opportunities for local people, ‘are dominated by outsiders’ (CCJP, 2000). Doris Lessing, on her travels in 1989, described the lives of the Tonga as follows:

It is true the river Tonga are as poor as any other people I saw in Zimbabwe. They are thin and some are stunted. Their villages are shabby. The lives of the Tonga since they were taken from their land, their shrines, and the graves of their ancestors, have been hard, have been painful, a struggle year in, year out, and from season to season... The great dam which deprived the Tonga of their homes has not benefited them. The lake does not irrigate the land along its show line: Kariba is a vast lake, like a sea. I can recommend visitors to visit Kariba, for there is nothing like it anywhere in the world. But do not visit the river Tonga, for they will break your heart.

Lessing (1993:380-381)

The contemporary literature on the predicament of the Tonga has begun to shift blame towards the inability of the post-colonial government and civil society institutions to effectively deliver development programmes (Conyers and Cumanzala, 2004). The district’s valuable resources - Lake Kariba (water and fishing), wildlife and the forest reserves, are managed by central government agencies (or, in the case of wildlife in communal areas, subject to central government policy), and used to serve national rather than local interests (CCJP, 2000). For example, by 2009, there was no irrigation scheme

¹³ Some communities were settled more than 120 km from the dam with the most of them being about 50 km (WCD, 2000)

in Binga fed by the Kariba water. Yet, WCD (2000) estimates that Binga has a potential of about 5,000 hectares for irrigation development using Kariba water in Simatelele, Siachilaba and Manjolo areas. This lack of control of, and limited access to, resources affects the resilience of communities to tackle chronic food insecurity.

4.2.3 Institutions and vulnerability in Binga

To improve the socio-economic conditions, local people through their own agency have, since the last decade, focused on institutional development. An indigenous organisation, Binga Development Association (BIDA), was created in 1990 by the young people not only to ‘catch up for 100 years of neglect’ (McGregor, 2009). Along the lines of *Paulo Freire’s* participatory development, BIDA grew rapidly with more than 5,000 members by 1992¹⁴. BIDA’s development plan was ambitious and ‘holistic’; it addressed socio-economic as well as cultural issues. However, by 1994, BIDA was politicized, became corrupt and ‘died’ in 1997. By 1999, ZANU (PF) had taken over the BIDA offices, which became the ‘War Veterans Headquarters’. Today, the BIDA office complex remains a ‘white elephant’ save for being used as a pub and ‘brothel’.

Following the ‘death’ of BIDA and the weaknesses of central and local government, the CCJP project, formed in 1995, became the new voice of the people of Binga. CCJP began to facilitate discussion at community level around the district, encouraging people to conceptualize their problems as human rights issues. A range of developmental and advocacy initiatives, from water and community development projects to advocacy campaigns were set up (WCD, 2000). By 2003, CCJP was closed down by the ZANU (PF) War Veterans for being an enemy of the people. Immediately after the closure of CCJP, Basilwizi Trust emerged as a new voice of the Tonga people and continues to exist today.

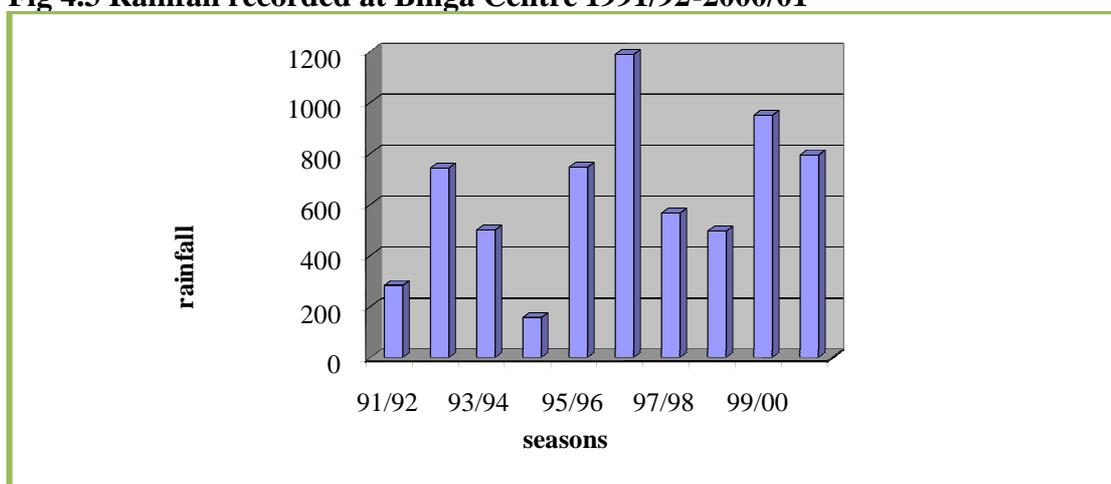
4.2.4 Natural hazards and food insecurity

Natural hazards play a pivotal role in the food security equation in Binga District. The district is semi-arid and experiences a tropical dry savannah climate, mainly covered by mopane woodlands. Fig 4.4 shows the fluctuations in the rainfall distribution. Between 1991 and 2000 the rainfall range was 905mm, with a mean of 642 mm and standard deviation of 307, thus confirming how uneven and severe the rainfall distribution is in

¹⁴ JoAnn McGregor does give more details on BIDA and its connections to the wider national politics in her 2009 book, *Crossing the Zambezi: The Politics of Landscapes on a Central African Frontier*.

Binga (Manyena, 2002). Mid-season dry spells occur in January each year ranging from four to six weeks. The mean annual temperature is about 25⁰C. The soils found are regosols (sandy and more or less useless), lithosols (shallow stony, highly erodable, and unusable for agriculture) and sodic soils, which are poor for cultivation. As the district is agro-based, mainly at subsistence level (Dahl, 1994), frequent droughts, wild animals (elephants, baboons and wild pigs); quelea birds and pests lead to assets and food stocks depletion which have an impact on the coping capacity and resilience of affected communities (Manyena, Fordham and Collins, 2008). Thus, the climatic conditions of low rainfall and high temperatures coupled with poor soils, cropping becomes a risk venture (Chiduzha, 1988).

Fig 4.3 Rainfall recorded at Binga Centre 1991/92-2000/01



Source: Manyena (2002:7)

The district is rich in wild animals such as elephants, rhinoceros, buffaloes, leopards, lions, baboons, crocodiles and hippopotamus. The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) was introduced in 1990 by the Government of Zimbabwe (GoZ), to increase control and use of wildlife resources by adjacent communities. The philosophy of the CAMPFIRE claims to ensure community ownership of natural resources as one of the poverty alleviation strategies. The manner in which CAMPFIRE can bring positive conservation and development outcomes has become a common comment from the conservation community. They claim it has marked a shift from the fortress conservation model to community conservation (Jones, 2006). Contrary to the conservation community view, and consistent with the literature on CAMPFIRE (Logan and Moseley, 2002; Alexander and McGregor, 2000; Campbell *et al.*, 1999; Vupenyu, 2003; Balint and Mashinya, 2006; Jones, 2006), there is a very strong view that CAMPFIRE brought with it some conflicts between communities and animals. Meanwhile, the animals, especially elephants, continue to wreak havoc on the

crops while the returns from CAMPFIRE do not seem to outweigh the damage caused by animals. For example, between 2000 and 2002 community dividends from CAMPFIRE proceeds were not even enough to build a classroom block.

Thus, building disaster resilience in Binga remains a challenge. CCJP provides valuable insights into how it responded in tackling the underlying causes of disasters, which intersect with hazards such as drought, HIV and AIDS and waterborne diseases to cause humanitarian crises.

4.3 The Catholic Commission for Justice and Peace Project (CCJP)

CCJP was a Catholic Church Project to address root causes of vulnerability to disaster risks in Binga. According to CCJP, Binga's poverty and vulnerability resulted from social and economic injustices: they were removed from their homes by the colonial government when the Kariba Dam was constructed in 1950s; they neither received the compensation nor the infrastructure they were promised during the resettlement (Tremmel, 1994; WCD, 2000); they lacked control and had limited access to local resources; and the district was lagging behind most parts of the country in terms of basic social and economic services such as education, health, transport and agriculture services. Therefore, the goal of CCJP was to enhance the capacity of local communities to meet their basic needs and gain control over their own lives and livelihoods by addressing underlying causes of vulnerability to multiple disasters through increased awareness and understanding of developmental rights and entitlements. More specifically CCJP aimed at enabling communities to:

- Strengthen community capacity to articulate their needs, demand access to local and external resources and organise themselves by increasing their awareness and understanding of their developmental rights as well as roles and responsibilities of decentralised government structures.
- Facilitate the establishment of CCJP community based committees, to act as a links with decentralised structures at village, ward and district levels, including the strengthening Women's and Children's Desk.
- Empower communities with skills that would enable them to articulate developmental rights and entitlements, identify and prioritise their needs, formulate intervention strategies and negotiate with authorities more effectively.
- Empower communities to participate in civic activities and enable them to put in place more people-centred leadership.

However, pressure was mounting from communities to have rights linked to material tangible benefits that would improve their socio-economic status. Two years later (1998), a sister project, the Binga Community Development Project (BCDP), was initiated to respond to the emerging practical needs of communities through community development projects. CCJP was funded by Catholic Relief Services (CRS); while BCDP was funded by the Catholic Fund for Overseas Development (CAFOD).

4.4 Relevance

The CCJP was consistent with the needs of people of Binga. It attempted to empower communities to tackle the root causes of vulnerability to food insecurity and in the process, enhance their disaster resilience. Moreso, CCJP responded to the GoZ's decentralisation programme of involving local communities in the development planning. Decentralisation is the transfer of power, authority, decision-making or management of public functions from higher to lower levels (Conyers and Kaul, 1990). Decentralisation has been on the GoZ's agenda since 1980s (Mutizwa-Mangiza, 1990; Conyers, 2003). Table 4.1 summarises the sub-national and sectoral structures that were created to ensure the local participation in the planning and policy decisions. Table 4.1 reveals that the sub-national structures that were created at provincial, district, ward and village levels comprised both elected and appointed officials. The objective of decentralisation was to *kupa manguzu kubantu* or 'give power to the people' to improve planning and implementation of *lusumpuko* (development) activities. In other words, communities would become development agencies, with the ability to tackle identified problems, including those related to DRR.

Key to the decentralisation were the new democratic Rural District Councils (RDCs), which replaced the pre-independence traditional chieftaincy structures. Viewed as being sympathetic to the colonial regime, the chiefs lost most of their powers in theory including judicial and land allocation powers, which were transferred to RDCs (Mutizwa-Mangiza, 1990; McGregor, 2002). However, in practice chiefs had remained with their powers. They maintained the essential elements of their traditional institutions. As custodians of culture, they continued to perform traditional ceremonies, such as rain ceremonies to appease the ancestral spirits. They also presided over judicial cases and had power in land-allocation based on their customary law. By 1999, chiefs had gained back their powers mainly for political reasons. Chiefs' structures were politicised (McGregor, 2002); they became instruments for sprucing up ZANU (PF)'s support which had dwindled over the years mainly due to economic decline and unfulfilled land reform

promises. CCJP recognised the important role chiefs played in the development process to build on local knowledge, which may be essential in the resilience building equation.

Table 4.1 Institutions to which powers decentralised in Binga

Level	Institutions	Membership	Authority
Province	Provincial Council	Elected and appointed leaders	Provincial Councils Act
	Provincial Development Committee	Appointed leaders and officials	Provincial Councils Act
District	Rural District Council (RDC)	Elected leaders	RDC Act
	Rural District Development Committee	Elected and appointed leaders	Rural District Councils Act
	District Chief's Council	Traditional Chiefs	Traditional Leaders Act
Ward	Ward Assembly	Traditional leaders, appointed officials and elected leaders	Traditional Leaders Act
	Ward Development Committee	Elected and traditional leaders, appointed officials	Traditional Leaders Act and RDC Act
	Ward CAMPFIRE Committee	Elected representatives	Appropriate Authority
Village	Village assembly	Traditional leaders, appointed officials and elected leaders	Traditional Leaders Act
	Village Development Committee	Elected and traditional leaders, appointed officials	Traditional Leaders Act
	School Development Committee/ Association	Elected users/ officials	Education Act
	Water Point Committee (WPC)	Elected users	Water Committee Guidelines

Adapted from Conyers (2003:119)

The exemplar in Box 4.1 illustrates that the Village Development Committee (VIDCO) and Ward Development Committee (WADCO) were key elements of the RDC's planning process. As sub-committees of the RDC, VIDCOs and WADCOs were primary decision-making structures in the decentralised planning process. Yet, communities in Binga were accustomed to the top-down planning system imposed by the colonial rule. In the absence of a capacity building package to accompany the decentralisation programme, particularly at the local level, there was little effective participation of local communities in planning and policy processes (Conyers, 2003).

Box 4.1 Development Planning in Siachilaba Ward

Siachilaba is one of the 21 wards of Binga District, located along Lake Kariba, about 50 kilometers from Binga centre, along Binga-Kamativi road. It has a population of 5,264, of which 59 percent are females (CSO, 2002). Fifty years ago, Siachilaba chiefdom was resettlement to give way to the construction of Kariba Dam. Siachilaba Ward is divided into five villages with about 1,200 households. A village is made up of homesteads (*myuunzi*) and can comprise from one family to several families and kinsmen. This can range from a man with one wife to those with several wives and can include nieces, nephews and grandchildren, including orphans. The population of a homestead can range up to 10 households, and up to 50 or more people. The homestead in Tonga culture is constructed around the matrilineal kinship, a structure known as *mukowa* or *luzubo*. The bond of kinship is between the mother and her children rather than between the father and the children, yet the man still remains in control over marital affairs.

They live in pole and dagga grass-thatched huts with the most notable infrastructure being two primary schools, the fish market stalls, four shops and the tarred road. The telephone and electricity networks are exclusively accessible to the business people owning the four shops but these are no longer functioning. The population is generally poor and subsists on crop farming, fishing, and to a small extent, selling crafts for their livelihoods. The staple food is *nsima* (thick porridge) with fish, meat and vegetables used as relish. The feeding arrangements are structured according to sex; males congregate at a central place, known as *chipala* or *gobelo* while women have similar, separate arrangements. The meals prepared by several 'huts hearth' or *masuwa* are brought together to these central places. This can range from one meal to several meals depending on the size of the homestead. The advantage of this is that the 'hut' that does not have enough food can still have access to food. *Nsima* is mainly made from millet, maize and sorghum that withstand drought spells in January and improves household food security.

Before independence from Britain in 1980, when the then government did not provide any humanitarian assistance, the Siachilaba community had some mechanisms of dealing with multiple disasters which range from (near-famine) starvation to preventable water-borne diseases such as malaria, cholera and dysentery. In relation to food insecurity, they grew a drought-resistant millet variety. Being aware of the risk of millet harvest failures, millet was intercropped with drought-resistant vegetables and sorghum and maize (*kiile*) varieties as a way of increasing the chances of having a reasonable harvest even in a bad year. Today, the community has become largely dependent on the 'treated' crop seed varieties, which tend to fail to withstand long drought spells. Coping mechanisms included dry season migration to towns, particularly Kamativi and Hwange, to sell firewood and wood charcoal to mine workers. Today, the Siachilaba community has abandoned their traditional coping mechanisms, as the majority, if not all, the residents are targeted to receive food aid since they do not have enough food throughout the year, even in a normal year.

In Siachilaba, the Village Development Committee (VIDCO) is the lowest planning unit responsible for development planning to solve development problems, including disaster risk reduction. Villages are led by village heads who are appointed by chief Siachilaba in terms of the Traditional Leaders Act, 1999. At least two VIDCO representatives from five villages, together with members from other structures such as CAMPFIRE Committee, School Development Committees (SDCs), government extension officers, heads of schools and NGO representatives, form the Ward Development Committee (WADCO). The councilor is the leader of the WADCO with the chief being an ex-officio member. Theoretically, the WADCO consolidates annual village plans into a Ward Development Plan, which is then transmitted to Binga RDC to become part of the Binga RDC District Development Plan. However, Siachilaba VIDCOs and WADCO as well as SDCs, WADCOs and CAMPFIRE Committees had limited awareness of their development planning functions due to lack of training. Most of the projects that were implemented in Siachilaba were decided by the ward councilor or council employees rather than by the WADCO because of lack of capacity in decentralised planning.

Source: Author

CCJP responded to the needs, such as those expressed in Box 4.1, through workshop-based training to raise awareness, on ‘participatory’ development, and the functions of sectoral and political structures representatives. Cross-cutting issues - gender, children and environment - were embedded in the training activities. CCJP targeted the ward and village level structures (see Table 4.1), particularly the CAMPFIRE Committees, WADCO and School Development Committees (SDC), which were key in the development planning process. Key district level stakeholders such as chiefs, councillors, BRDC employees were involved in CCJP capacity building activities. As a result, CCJP reports show that roles and functions of Members of Parliament, Councillors, Village Heads, SDCs, WPC and CAMPFIRE Committees dominated debates. The impact of these activities is revisited in section 4.7.

Three notable aspects can be discerned from Box 4.1, which are related to resilience. Firstly, in relation to reducing the impact of drought, communities planted traditional seed crop varieties which were drought-resistant such as millet (*Pennisetum americanum*), sorghum (*Sorghum bicolor*) and maize. To improve the chances of harvesting at least some grain, communities practised intercropping where crops and vegetables such as okra (*Abelmoschus esculentus*) and beans were planted together. Thus, communities had developed some form of resilience to ‘bounce forward’ following drought hazards, confirming Tobin’s (2005) claim that resilience is conceptually *new* while the practice is *old*.

Secondly, sharing the little they had, particularly food, the Tonga people practised a communal system, where social capital was an essential element and embedded in their everyday lives. This acted as the ‘shield’, ‘shock absorber’ or ‘buffer capacity (Holling, 1995)’, which moderated the impact of natural hazards, such as drought, into benign or low negative consequences – a characteristic of a resilient community.

Thirdly, as stated in Chapter One (section 1.5, p.7-8) and Chapter Two (section 2.2.4, p.27), disasters are social constructions (Hewitt, 1993; Blaikie *et al.*, 1994; Middleton and O’Keefe, 1998; Wisner, 2004; Collins, 2009) resilience building should contend with *governance* and *political* issues. The role of traditional chiefs in village and ward level planning provided CCJP with an opportunity to tap into the intergenerational wisdom and resilience carried by the traditional systems. Being custodians of their culture and *ex-officio* members of WADCOs, they were available to offer advice to these CCJP structures based on their traditional norms, values and customs of how to go about development planning that would contribute to poverty and vulnerability reduction. However, the politicisation of the traditional chiefs’ institution (McGregor, 2002;

McGregor, 2009) could have led to some loss of the intergenerational resilience since the chiefs' way of operating was dictated by the ZANU (PF) politics rather than by the traditional wisdom. Similarly, the paternalistic approach, albeit unconsciously, by post-independence Zimbabwean government where relief handouts became a norm, meant that community paid little attention to traditional coping mechanisms of protecting and creating livelihood assets, including seasonal migration to towns to sell fuel wood products. Consequently, communities could have lost their short-term resilience as they became increasingly dependent on the government and NGOs' relief handouts as less attention was being paid to traditional coping mechanisms.

4.5 Efficiency of CCJP systems

This section examines the efficiency of CCJP in the delivery of project outputs. It focuses on cost-benefit analysis and the non-interventionist strategy.

Project benefits versus costs

Determining the cost-benefit analysis for CCJP was problematic since many of the benefits of CCJP were of an intangible and long-term nature. Accurate quantification was difficult if not impossible. Such an analysis would involve quantitative cost-benefit analysis, and would have been difficult to perform and the outcome would have been of little meaning or value. This is not new in project management especially in socio-economic projects. The limitations of cost benefit analysis in socio-economic projects, with its overwhelming emphasis on the steady state, are well known (Dasgupta and Pearce 1972; Gittinger, 1982; Hanley and Spash, 1993; Mustafa, 1994). However, a qualitative analysis shows that the project was efficient as both tangible and intangible benefits of the project outweighed costs.

The total expenditure CCJP was approximately Z\$12 million, which was equivalent to about Z\$460,000 or US\$7,700 for each of the 26 communities. This sum was relatively small when compared with other many forms of development expenditure. For example, at the time of the assessment of CCJP, the cost of a dam, for example Nzovunde Dam, was Z\$14.5 million (US\$241,700), while the food relief programme, to provide supplementary food handouts to about 50,000 people, cost approximately Z\$58 million (US\$970,000). Although the actual and potential intangible benefits of CCJP were difficult to measure and quantify, they were enormous. For example, at the end of CCJP local communities would have the capacity to identify and plan their own development projects, which would increase their access to funds for projects such as dams and reducing their need for emergency food relief programmes. Moreso, the

combined cost of the Malaliya access road and the Simatelele Rural Health Centre (clinic), which were attributed to CCJP community *agency*, already amounted to at least Z\$12 million (US200,690). The less tangible benefits, although difficult to measure and quantify, were even greater. For example, as a result of CCJP, communities, through *agency*, were able to influence the quality of both local and national governments, by electing leaders of their choice and demanded delivery of services they were entitled to. This suggests that investing in resilience building, particularly where the focus is on building *agency*, might be a more cost-effective way of promoting community *agency* than providing relief handouts. Perhaps the best way of summarising one of the lessons, which has an implication on resilience building, is to adapt a popular development maxim:

If you give a community food, people will have enough to eat for a few weeks or months; if you give a community a dam, people will be able to grow more food every year; and if you increase a community's awareness and help it to organise itself, people will understand why they have a food security problem and have sufficient knowledge, organisational capacity and courage to try to solve the problem themselves.

Thus, projects such as CCJP, which adopted a rights-based to development to promote community *agency*, were potentially among the most effective ways of using development assistance funds in building resilience in disaster prone areas like Binga.

Efficiency of CCJP approach

As Catholic Church based project, CCJP operated under and within the structures of Binga and Kariangwe parishes. Binga Parish focuses on the northern part of Binga covering eight wards while Kariangwe Parish covers the remainder of the 21 wards of Binga District. In each of the 21 wards, the Catholic Church has at least one church centre, run by the local church community. Catholic Church centre members normally met at least once a week, usually Sundays at a school, or a church structure. While six communities had met in standard brick church halls, the rest of the communities met at schools or at pole-and-dagga structures. A Catholic Church centre membership had an average of 30 members who mainly resided within a walking distance to the church centre. The majority of members were women and children, with about 20 percent being male. As CCJP membership was voluntary, about 10 percent of Catholic Church centre members chose to join CCJP with the rest being non-Catholic members. As a result, CCJP committees drew membership from the wider community including traditional leaders, political leaders, SDCs, CAMPFIRE committees and other faiths. The CCJP

membership ranged between 10 and 30 members, who elected five committee members comprising chairperson, vice chairperson, secretary, vice secretary and treasurer. Thus, CCJP members were not elected or appointed by Catholic Church members at their respective centres or by any other structure outside the Catholic Church.

Each CCJP committee was supported by a community adviser, a volunteer, who in most cases supported at least two Church Centres. In most cases, community advisers were Catholic Church leaders who also commanded respect within their communities. Their roles in the social organisation of the community, particularly at ward and SDC meetings as well as at funerals, were recognised. In all but two wards, the CCJP used the existing church structures to establish 'CCJP Committees'. Those not covered were Sinansengwe and Sinamagonde wards whose Catholic Church centres were still considered to be weak.

There are three notable advantages of using the church structures, which may provide lessons to resilience building. Firstly, the approach was non-interventionist; it used existing institutional church structures, which were already known in the community, as vehicles for the CCJP operations. The CCJP structure did not disrupt the everyday life of communities but rather fitted into what the communities were already *doing*. Secondly, the CCJP project built on the existing community capacity and local knowledge in terms of social organisation and leadership. Thus, the project tapped on the local wisdom, culture and religion to identify root causes of development problems such as food insecurity and diseases and suggested possible solutions to those problems to build their resilience. Thirdly, establishing new structures would have been expensive to set up since CCJP had limited financial and material resources. Use of volunteers in the CCJP structures was a cost-effective ways of building a community-based institution, which contributed to the sustainability of benefits.

However, problems were experienced by creating CCJP structures outside government structures, which may provide lessons for resilience building. The CCJP structures were perceived as being parallel to those of government and therefore were in competition rather than being complimentary of government efforts. Group interviews with the six sample communities revealed that the government was suspicious of CCJP activities. As soon as the Binga community, once considered to be docile, started questioning the government, the attention was turned on CCJP - it was blamed for being anti-government. The fundamental cause of the distrust between government and CCJP was not by coincidence – there was a temporal dimension to it. The focus on civic education and advocacy activities coincided with adverse political situation that prevailed

in Zimbabwe. As a result, CCJP committees' operations were deemed political and anti-ZANU (PF) government. During the first half of 2000, meeting and workshop schedules were disrupted by political meetings. Throughout that period, some people were reluctant to attend CCJP activities because of fear of political intimidation, owing to CCJP's alleged association with the opposition Movement for Democratic Change (MDC) party. This suggests that activities that are oriented towards building the capacity of vulnerable communities, particularly those that tend to adopt a rights-based approach to development or DRR, are likely to be interpreted as political. Thus, interventions which aim at promoting community agency, including resilience-building programmes, risk being in conflict with government policy and its institutions, which may in the short-term harm rather than protect the disaster prone communities.

4.6 Effectiveness of CCJP

As stated in Chapter Three, section 3.3 (Box 3.2), the effectiveness of CCJP was measured by the extent to which it achieved its purpose or objectives. By 2001, the CCJP had achieved its planned activities. CCJP established 26 community committees in all but two of the 21 wards of Binga District. In addition, a Binga Child Welfare Forum, was established which was facilitated jointly by CCJP and the Department of Social Welfare. It included representatives of government and non-government agencies involved in work related to children in the Binga district. The Child Welfare Forum's main activity was the mobilisation of chiefs to assist in identifying orphans and vulnerable children which was part of a nationwide programme designed to identify and assist such children. In addition, human rights clubs were established on a pilot basis at three primary and three secondary schools in the district, located at Kariangwe, Siamaleke (Pashu) and Siabuwa. The objective of the clubs was to develop and promote awareness of human rights among children and young people. Finally, to promote gender equity in development, a concerted effort was made to tackle issues related to women's rights in these areas. Each CCJP community committee appointed a 'women's desk' representative to promote and defend the interests and rights of women in their communities. Together they constituted 'The District Women's Desk Committee', which met periodically at Binga Town. Gender and children's issues were supported by Women and Children's Desk officer who provided administrative support to income generating projects, and organised training and conferences. The next section examines the way CCJP organised the training for the established the structures, how issues identified by these committees were implemented, the coordination of activities, organisation of CCJP committees, and the related weaknesses, in relation resilience to building.

Effectiveness of training

The CCJP training approach was informed by the social learning theory (Bandura, 1999), particularly the Freirian pedagogy of transformative change. As stated in Chapter Two, section 2.5.5 (p.26), transformative change or liberation education is rooted in practical action to change the world (Freire, 1993; Higgins, 2000; Ledwith, 2001). CCJP's training component targeted the project staff, women and children's desk and 26 CCJP committees who would in turn train communities at the ward and village levels. Table 4.2 shows CCJP training included Human Rights Awareness, Skills Development, Gender Awareness and Children's Awareness. Thirty-three people (two project staff, 21 community advisers and ten committee members) attended *Learning for Transformation* courses organised by the Zimbabwe Council of Churches (ZCC) in Harare. All project staff and all but three of the 26 community advisers attended the basic foundation course for CCJP's work. Five community advisers attended a five-day *Training of Trainers* course organised by ZCC in 2001. Two exchange visits took place, both in 1999. One was a visit by two staff members and four community advisers to the Chiyubunuzuyo Project in the Simuchembu area of Gokwe North District, which was a somewhat similar but much smaller scale rights-based development project, also among Tonga people. The other was a visit by the Women and Children's Desk Department to the Batsiranai Children's Care Programme in Buhera District.

All this training provided the CCJP staff, community advisers and community chairpersons with basic skills in rights-based approaches to development. These included an introduction to the Universal Declaration of Human Rights of 1948 and associated international human rights conventions, particularly the 1981 African Charter of Human and People's Rights, the 1989 UN Convention on the Rights of Children, and 1979 UN Convention on the Elimination of All Forms of Discrimination against Women. They also gained skills in problem analysis, lobby and advocacy, development planning and decentralisation in Zimbabwe, civic education and communication. Table 4.2 also shows a distribution of various social learning activities that were conducted at the ward and village levels by CCJP to strengthen the capacity of communities. All committees were trained in Human Rights Awareness to provide them with basic human rights issues such as right to life, freedom, education, health care, development, participation, free trial, safety from violence, and basic standard of living.

Table 4.2 Community Based Workshops

Community	Workshop/Year held						
	Human Rights Awareness	Social Analysis	Development Skills	Civic Education	Legal Education	Gender Awareness	Children's Rights
Bulawayo Kraal	1999	1999	-	-	2000	-	-
Chinego	1999	1999	2001	-	-	-	-
Chitongo	1999	2000	2001	2000	-	-	-
Kabuba	1998	1999	2001	2000	-	-	-
Kalungwizi	1996	1997	-	-	2000	-	-
Kariangwe	1996	1997	-	-	2000	1999	1999
Lubu	1999	1999	2000	2000	2000	-	-
Lubimbi	1999	1999	2000	2000	2000	-	2001
Malaliya	1999	1999	2000	-	2000	-	-
Makunku	1999	1999	2000	2000	-	1999	-
Manjolo	1996	1997	2000	-	2001	-	-
Manyanda	1996	1997	-	-	-	-	-
Mulindi	1999	1999	2000	2000	2001	-	-
Mupambe	1999	1999	-	2000	2001	-	1999/01
Sinakoma	1996	1997	2000	2000	2000	2000	-
Nsungwale	1999	1999	2001	2000	-	-	-
Samende	1996	1997	2000	-	1999	-	-
Siabuwa	1998	1998	-	-	-	1999	1999
Siachilaba	1998	1999	2000	2000	1999	1999	-
Siadindi	1999	1999	2000	2000	2001	-	-
Siamaleke	1996	1997	2001	2000	-	-	1999
Sianzyundu	1999	1999	-	2000	1999	-	-
Simatelele	1996	1997	2000	2000	1999	-	-
Simbala	1996/9	1999	2000	2000	1999	-	-
Tinde	1996	1997	2000	2000	1999	1999	-
Tyunga	1999	1999	-	2000	1999	2001	-

Similarly, all communities were trained in social and problem analysis. This included problem identification, nature of the problem, number of people affected, people benefiting from the problem, possible solutions to the problems including key stakeholders who might assist in the solution of the problem and those who might prevent the solution of the problem. Negotiation skills and type of media to disseminate information were also part of the training. At each of the social analysis workshops, each CCJP committee identified a problem in their respective areas, action researched the problem and took practical steps to have the problem solved.

At the time of gathering data for this study, eight committees were still to be trained in Development Skills. Those committees that had already been trained had gained skills in project planning and management, participatory development and roles of decentralised structures such as VIDCO, WADCOs, SDCs and CAMPFIRE. Likewise, seventeen out of 26 and eight out of 26 committees had received training in civic education and legal education respectively. Civic education entailed awareness of roles of councillors, Members of Parliament, basic electoral law and power of exercising ‘your vote’ in Zimbabwe while legal education focused on entitlement issues such as birth certificates and inheritance laws. Gender and children rights were targeted at the women’s desk and children’s desk respectively although these were integrated in human rights law, civic and legal education. The outcomes of community agency enhanced by CCJP’s social learning activities, which had an impact on livelihood assets creation, such as social capital, physical capital and human capital, included the Tonga Language Campaign, construction of Manyanda-Malaliya road, Simatelele Clinic, Nzovunde Dam, Siachilaba Fish Market and Pashu Primary School classroom block.

Tonga Language Campaign

The launch of a campaign to amend the Education Act to enable the teaching of Tonga and other minority languages in Zimbabwe’s education system, was a brainchild of the CCJP’s Social Analysis Workshops. The campaign was a product of action research and 16 civic education community meetings that were held in January 2000, where communities, with the assistance of community advisers, School Development Committees and Ministry of Education collected information on the state of the education system in the district. This resulted in the production of a report, highlighting the main issues and concerns, which were presented at a seminar attended by national and local stakeholders in October 2000. Box 4.2 describes the Tonga Language Campaign and the extent to which it achieved the desired results.

Box 4.2 Tonga Language Campaign

The 'struggle' for the recognition of Tonga language as a medium of instruction in the education system in the Zambezi valley dates back to the colonial era through to the present times. Prior to UDI, Tonga was taught from Sub-A to Standard Six. Since the present day Zimbabwe and Zambia were one country during the Federation of Rhodesia and Nyasaland, Tonga teachers and teaching materials were obtained from Zambia since the Zimbabwean Tonga and Zambian Tonga were the same. However, following the sanctions that were imposed on Rhodesia's UDI in 1965, it was difficult to have the free flow of both human and material resources for the teaching of Tonga. Tonga was gradually phased out and replaced by Shona and Ndebele in Binga and other parts of the Zambezi valley. At independence, the Tongas were hopeful that their language would be re-introduced in the education system. To the contrary, independence was the beginning of new struggles. The Tonga Language Committee set up by Binga RDC in 1981 was unsuccessful in having Tonga introduced in the education system beyond Grade 3. In 1998, Tonga Language and Cultural Organisation (TOLACO) was formed to have Tonga introduced in the education system beyond Grade 3. With logistical and technical support from CCJP and Silveira House, TOLACO facilitated the formation of the Zimbabwe Indigenous Language Peoples' Association (ZILPA) in 2000 whose members were drawn from Tonga, Kalanga, Sotho, Nambya, Shangani and Venda *minority* language groups. Through lobby and advocacy, ZILPA successfully negotiated with the government of Zimbabwe to have minority language taught in schools. Today, through the efforts of ZILPA, the *minority* languages can be taught up to university level in Zimbabwe including teachers' colleges. By 2009, with support of government, Basilwizi Trust, Silveira House, Zimbabwe Publishing House (ZPH) and ZILPA, TOLACO had successfully facilitated the production and supply of Grade 1-7 Tonga text books in the Zambezi valley, and the creation and employment of a Tonga language coordinators by the Ministry of Education.

Source: Author

While Box 4.2 does not directly address disaster resilience communities, there are some aspects which need highlighting. First, recognition of Tonga into the education system in Zimbabwe is not only a right for children to learn their mother tongue; it would also enable the Tonga people to redefine their identity and dignity as well as express their development and DRR needs in their own language. Secondly, the Tonga Language Campaign also illustrates the importance of social capital in enhancing community resilience. The success of the campaign depended on the support from groups with similar problems, such as the Nambya, Sotho, Kalanga, Venda and Shangani which formed the ZILPA.

Identification of demand-driven projects

Like the Tonga Language Campaign, solution of the problems that were being faced by Sinakoma Rural Health Centre Project, for example, emerged from the CCJP training activities linked to social analysis, communication, project planning and problem solving. Box 4.3 outlines the main problem that was identified by Sinakoma community and how the action researched around it to find a solution.

Box 4.3 Construction of Sinakoma Rural Health Centre

Sinakoma Ward is about 35 kilometres from Binga Centre. The Sinakoma community was affected by the 1958 forced resettlement to give way to the construction of the Kariba Dam. It is situated at the foot of Chizarira National Park; it is rich in wildlife and receives dividends from the CAMPFIRE project. However, it was ranked by Binga RDC in 1999 as one of the most disadvantaged ward in Binga. Since Zimbabwe's independence from Britain in 1980, the Sinakoma community has been requesting the government and the Binga RDC to provide them with a rural health centre (clinic) in addition to improving the access road and their local Nsenga Primary School. Lack of a health facility in the ward meant that communities, only a few people, including pregnant mothers and terminally ill HIV and AIDS patients, managed to walk to Binga District Hospital to access treatment. In 1995, Binga RDC responded to the needs of the Sinakoma community by encouraging communities to contribute to the construction of their clinic through CAMPFIRE funds. However, the funds were inadequate to complete the treatment room, the admission ward, two nurses' houses and the borehole. By 1997, the project suffered from neglect and communities had lost hope as the structures were still at slab level. With the awareness created by CCJP, Sinakoma community was made aware of funding streams that were available at Binga RDC, which included the District Development Grants (DDGs) under the RDCs Capacity Building Programme, and the Rural Development Fund (RDF). They also learnt that Binga RDC had allocated Sinakoma ward was allocated an equivalent of US\$15,000 to build three Bus Shelters to protect travelers from rain, wind and wild animals while they waited for the buses.

The CCJP committee, supported by the local leadership (councilor and chief), approached Binga RDC and the District Administrator questioning the logic of the plan to build three Bus Shelters when the clinic project was their major priority. They asked the RDC staff to explain where the plan to build the Bus Shelters had come from. They had no answers apart from saying they needed to speed up the project proposal process so they would not lose the funding opportunity. The Sinakoma CCJP Committee successfully rejected the construction of the three Bus Shelters and managed to have the funds re-allocated to the completion of Sinakoma Rural Health Centre which continues to function today.

Box 4.3 illustrates problems encountered in development and DRR programmes which may have relevance to resilience building. It illustrates how priorities differed between planning authorities and benefiting communities. In this example, Binga RDC literally wanted to supply the Sinakoma communities with Bus Shelters so they would be protected from rains and wild animals. Yet, the clinic was the community's priority. With the community's improved capacity through CCJP training, communities mobilised themselves to confront authorities to reverse the decision to construct Bus Shelters. Thus, the success of the Sinakoma community to influence Binga RDC to reverse its decision on Bus Shelter did not only depend on the skills (developed by CCJP) to negotiate with authorities but also on the support provided by the local traditional leadership.

Effectiveness of Coordination of CCJP activities

Coordination mechanisms adopted by CCJP highlight some of the institutional relationships with its stakeholders, particularly the GoZ and NGOs, which can help inform resilience building in disaster prone areas. Coordination of CCJP activities with its stakeholders was mainly defined by the communication system with government

structures at district, ward and village levels. At the district level, CCJP was member of the Rural District Development Committee (RDDC), where elected leaders and technocrats held regular meetings to report on development progress in their respective sectors. CCJP used RDDC meetings to report on progress and challenges it faced. Interviews with BRDC revealed that CCJP regularly attended RDDC meetings and members took its contribution seriously.

One way of establishing the effectiveness of CCJP was to examine its role and relationship with institutions in the community. At ward and village levels, CCJP committees worked with councillors and chiefs, and attended VIDCO and WADCO meetings. Table 4.3 illustrates the relationship between local leaders in six sample committees.

Table 4.3 Relationship with Community Leaders

Committee	Chief			Councillor			Village Heads		
	Good	Fair	None	Good	Fair	None	Good	Fair	None
Kariangwe		X			X		x		
Malaliya			X	X			x		
Samende			X		X		x		
Siabuwa			X			X		X	
Siachilaba	X					X	x		
Siamaleke	X			X			x		
Total	2	1	3	2	2	2	5	1	0

Table 4.3 reveals that in Siamaleke, the relationship between CCJP committee and the chief, councillor or village heads was good while the opposite was true in Siabuwa. In Siachilaba, the CCJP committee had good working relationship with the chief and village heads while the councillor was ‘hostile’ to CCJP activities. However, apart from Siabuwa, the relationship between CCJP and village heads was good. Two main conclusions emerge from Table 4.3. First, there was a considerable variation of relationship from one community to another between CCJP committees and local leadership. This variation can be explained by a variety of factors. For example, in Siamaleke the committee had a good relationship with the councillor because his wife was the CCJP chairperson, while in Malaliya the lack of contact with the chief appeared to be the long distance of approximately 15 km between his homestead and the CCJP committee. Secondly, in general, the best relationship seemed to have been with village heads, followed by the chief and lastly the councillor. The relatively poor relationship with councillors, and to a lesser extent chiefs, appeared to be due primarily to the political situation. Village heads commanded lesser influence than the chiefs or councillors, thus they were not a political threat. Three of the six sample committees

(Kariangwe, Siabuwa and Siachilaba) and six of the 23 community advisers interviewed said that they had some difficulties in operating because, as CCJP members, they were regarded as supporting the opposition MDC, especially towards the parliamentary and presidential elections in 2000 and 2002 respectively. However, comments by some committee members suggest that, in some cases, CCJP committees simply lacked confidence to approach these and other leaders. There were two fundamental reasons for traditional leaders and councillors to disassociate themselves from CCJP activities. They feared losing the benefits they were receiving from the ZANU (PF) government, particularly their monthly allowances. They also feared *jambanja*¹⁵ or victimisation from state agents, especially by War Veterans¹⁶ and the Green Bombers¹⁷, the paramilitary groups that terrorised those suspected to be sympathisers to the opposition MDC through abductions, torture, rape and killing. Building resilient communities to disasters is fundamentally *political*; it is about confronting political structures that create vulnerability in the first place. As a result of CCJP's involvement in civic education, it was labelled by the ZANU (PF) government as *bawuzyi*, 'sell outs'.

The extent of ordinary residents' awareness of CCJP committees' activities in the community (such as meetings of ward and village development committees and CAMPFIRE committees) can highlight the effectiveness of CCJP in building community capacity. Table 4.4 shows the level of awareness among a sample of ordinary residents. The level of awareness was based on responses to a number of questions regarding CCJP and was expressed in the form of a percentage score; possible scores ranged from nil (negative answer to all the questions, which meant no knowledge of CCJP) to 100 percent (positive answer to all the questions, which indicated good knowledge of CCJP).

Table 4.4 Awareness of CCJP among Ordinary Residents

Community	Level of Awareness (percent)			
	Men (N=31)	Women (N=43)	Youth (N=33)	Poor (N=44)
Kariangwe	63	39	29	10
Malaliya	69	48	71	81
Samende	41	10	27	40
Siabuwa	10	29	36	17
Siachilaba	74	56	19	58
Siamaleke	71	46	36	43
Average	58	38	46	46

¹⁵ *Jambanja* is a Shona word meaning to turn everything upside, causing violent confusion.

¹⁶ These were freedom fighters during the war for Zimbabwe's independence.

¹⁷ These were the government youth militia formed in 2001 when the government initiated the National Youth Service (NYS). The term 'Green Bomber' was a term used to describe the University of Zimbabwe security who had frequently had confrontations with students during demonstrations.

Table 4.4 shows a considerable variation on the level of awareness from one community to another; for example, the level of awareness was much higher in Malaliya than elsewhere. The level of awareness among ordinary people was considerably low; in fact, a substantial proportion of the people interviewed had not even heard of CCJP. However, the level of awareness was higher among men than women, with youths and 'poor' people in an intermediate position. Although the level of awareness among poor people (including both men and women) was relatively high; this should be treated with extreme caution, since no attempt was made to define what was meant by a 'poor' person apart from being directed by the local CCJP committee or community adviser.

Similarly, the data in Table 4.4 should also be treated with caution, since the number of people interviewed was very small and they were selected simply by driving to relatively remote parts of the community and interviewing people who happened to be available. However, it gives some indication of the level of knowledge of CCJP. The main findings which emerge from this data shows that the perception of CCJP among ordinary people was found to depend very much on the activities in which CCJP was involved in a particular area. For example, in Siachilaba, Siamaleke and Malaliya, where BCDP projects were completed or were underway, people associated CCJP with those projects, rather than with CCJP activities. However, the data reveals that CCJP was popular amongst the ordinary citizens, including the vulnerable groups. This suggests that projects that are oriented towards the promotion of community empowerment of communities like CCJP, risk being rejected by the status quo especially in politically polarised situations. But the alienation of CCJP by the community leadership was a measure of its success in promoting the marginalised communities to *kulyaambiwiida* or 'speak for themselves' on issues which were a major concern to them. While this data might not seem to have relevance to DRR, it is important to reiterate that disaster causation, preparedness, response and reconstruction processes, as argued by Wisner *et al.* (2004) in the PAR model, partly depends on the social relations between various institutions. Where there are stronger institutional relationships, communities are likely to manage disasters better than were such relationships are non-existent.

Effectiveness of CCJP Committees

The community committees constituted the core of the CCJP project and its success depended on the way those committees operated. If they were active, well organised and composed of committed people who represented the interests of the community, the foundations for success were laid; if they were not, the project's impact was likely to be

limited. CCJP committees were particularly important in terms of the long-term impact of capacity building, since the ultimate objective was the ability of communities to defend their own human rights, address underlying development problems, without external financial and technical assistance. In order to assess the effectiveness of the committees, three indicators of performance were examined: frequency of meetings, quality of meetings, and number of issues addressed. Table 4.5 shows the number of meetings planned during the year 2000 and the proportion of these which were held successfully for all 26 committees.

Table 4.5 suggests that all the committees attempted to hold meetings once a month (which was the recommended frequency), but that the majority failed to do so.

Table 4.5 Frequency of Meetings (All Committees)

Committee	No. meetings planned 2000	Meetings held 2000	
		No	Percent
Bulawayo Kraal	12	6	50
Chinego	12	11	92
Chitongo	12	9	75
Kabuba	12	5	42
Kalungwizi	24	17	71
Kariangwe	12	10	83
Lubimbi	12	8	67
Lubu	12	10	83
Makunku	12	8	67
Malaliya*	(12)	(12)	(100)
Manjolo	12	7	58
Manyanda	12	9	75
Mulindi	12	7	58
Mupambe	12	10	83
Nsenga	5	3	60
Nsungwale*	(12)	(2)	20
Samende	12	9	75
Siabuwa	12	7	58
Siachilaba	12	8	67
Siadindi	12	10	83
Siamaleke	12	8	67
Sianzyundu	12	8	67
Simbala	12	11	92
Simatelele	(12)	7	60
Tinde	(12)	5	40
Tyunga	12	8	67
Average	12.2	8.0	65

* Extrapolated from data for first five months only

Source: Minutes of Annual Monitoring and Review Meeting, 27 February 2001; data for those with asterisk (*) from Minutes of Coordination Meeting, 22 May 2000.

The success rate during 2000 varied from 20 percent to 100 percent, with an average of 66 percent. Information obtained from the six sample committees suggests that the

quality of the meetings also varied considerably. In five out of the six, minutes were not well kept and all the committees said that the organisation of their meetings could have been improved. However, five out of the six felt that the meetings were useful. Thus, there is evidence that all 26 committees were active; meetings were being held and efforts were being made to address issues of concern in their communities. That was in itself a considerable achievement, since there were other community-based committees in the district where this was not the case. Many ward and village development committees, for example, existed in name only. However, it is also evident that, as one would expect, there was considerable variation in the level and quality of activity and that most committees could operate more efficiently than they did. Therefore, it is evident that CCJP attempted to strengthen community organisation, which is considered to be one of the characteristic of resilient communities. However, weaknesses were also observed in the way CCJP organised its activities.

Causes of Weaknesses

The committees' weaknesses observed can provide lessons to resilience building projects. Box 4.4 provides an exemplar of the problems CCJP committees faced.

Box 4.4 Weaknesses of relying on volunteers in impoverished communities

Siabuwa CCJP committee covers 12 villages ranging from Kalonga to Kalungwizi a distance of more than 30 kilometres. It had 15 members of which 10 of them are male. Meetings were held at Siabuwa Secondary every last Thursday of the month. Some committee members find the meetings not fruitful as they arrive at the meetings already exhausted, particularly the committee members from Kumbu village who have to travel up to 10 km. Member from 12 village complain about lack of visits the community adviser. The adviser tells the group that transport was probably the major problem. The bicycles they were provided was unusable because the roads were very rough and there was been no provision for repairs and maintenance. The adviser also tells members that he had other family commitments to ensure his children had enough to eat since CCJP was a voluntary job with no direct material reward for doing the job. He also tells them he also had to attend SDC meetings where he was the secretary.

Box 4.4 and subsequent discussions with project staff, community advisers and the six sample committees suggest that the reasons for the weaknesses observed were of three main types: structural problems, inadequate support and external factors. In relation to structural problems, some committees covered too large an area to operate effectively. Committee members had to travel long distances to attend meetings. The adviser could not visit all parts of the area regularly, and there was a lack of social cohesion since the committee in effect covered several different 'communities'. One of the sample communities, Siabuwa, which covered 12 villages, was an example.

Inadequate logistical support was one of the major problems CCJP committees faced. Transport was probably the major problem, especially for those advisers who covered large areas. Although advisers were provided with bicycles, most of these were unusable because the roads were very rough and there was no provision for repairs and maintenance. Moreover, some committee members did not devote sufficient time and energy to CCJP activities, either because they did not get any direct material reward for doing so or because they held several other leadership positions in the community. The lack of material rewards was a particular problem and one of the main reasons for the relatively high turnover among members. Many advisers felt that the subsistence allowances they received were little compared with the work they did, meaning they had little time to attend to their own personal affairs or other commitments in the community. As a result, some had to leave to take up paid employment.

In addition, both committee members and advisers were selected on the basis of their personal qualities and their willingness to devote their time and energy was necessary. Since, in most communities, there were relatively few people who met these requirements, it was not always possible to ensure that all areas and interest groups were represented on committees. Thus, the participation of communities in resilience building projects such as CCJP (as stated in section 3.11) should be founded on basic ethical principles such as fairness and dignity. It was apparent that CCJP committees and advisers' time commitment was not adequately compensated for, and as a result, incurred time losses which could have been devoted to other livelihood opportunities. This raises questions about the extent to which communities, especially in poor communities such as Binga district, should 'donate' their time to community projects which do not necessarily contribute to tangible, practical benefits such as income generation to their households.

4.7 Impact of CCJP

Four types of impact were examined: civic awareness, community development and general awareness of CCJP.

Civic Awareness

The raising of civic awareness was a long, slow process, since one cannot expect people's understanding and attitudes to change overnight. Furthermore, it was difficult to assess the level of civic awareness without a detailed household survey, which could not be done due to resource and time constraints and the adverse political situation. Moreover, as already mentioned in section 3.6.1, it was even more difficult to attribute

any increases in civic awareness which was observed to a particular project or activity. For example, political activities and economic decline could have contributed to civic awareness. Nevertheless, there was considerable evidence to suggest that there was an increase in civic awareness in the communities in which CCJP was working and it was appropriate for the project to claim some credit for that. Box 4.5 makes a summary of the impact of CCJP on civic participation.

Box 4.5 Impact of CCJP on voting pattern

In the 2002 presidential elections, out of 32,000 ballots, the opposition presidential candidate, Morgan Tsvangirai, won 27,000 ballots in Binga, accounting for the largest opposition votes in any rural constituency in Zimbabwe. Similarly, in 2008, parliamentary elections MDC won 16,335 (85 percent) against ZANU (PF)'s 2,946 (15 percent) in Binga North constituency, accounting for the largest opposition votes in any rural constituency in Zimbabwe. Binga North constituency had the third highest voter turnout of 62.3 percent while Chiredzi North was the highest with 69.8 percent turnout. In the senatorial elections, MDC won 8,355 (85 percent) against ZANU (PF)'s 4,840 in Binga constituency¹⁸. That was particularly noteworthy given the relatively low level of education and general development in the district. Binga is one of the examples of a rural constituency that was politically aware.

The voter turnout in Binga in the constitutional referendum and, in particular, the parliamentary elections since 2000 has been relatively high. Two civic activists contacted to comment on the impact of CCJP had this to say:

There is high level of awareness on human rights [in Binga] notably, through the high turnout in civic participation like elections¹⁹.

CCJP enabled local people to be active citizens with rights, expectations and responsibilities; this has to a certain extent been vindicated in the voting pattern in Binga District among other indicators²⁰.

The fact that Binga voters were not afraid either to reject the draft constitution or to express their support for the opposition MDC indicated a level of political maturity, which was lacking in many rural areas in Zimbabwe. Several informants, including parish priests, reported that, they had observed that people had a better understanding of government and were more aware of their rights, particularly their right to vote freely, and in some cases that was attributed directly to CCJP workshops or other activities. Thus, CCJP enhanced the political capital of the people of Binga, one of the fundamentals towards building community resilience. This has enabled the Binga community to gradually move from the margins to the centre of Zimbabwean politics.

¹⁸ Source: <http://www.sokwanele.com/election2008> [online] accessed on 24th April, 2009.

¹⁹ Email correspondence from one of the civic activist dated 15th March, 2009.

²⁰ Email correspondence received on 23rd March 2009 by one of Binga residents in response to the questions on the impact of CCJP.

For the first time in history, Joel Gabbuza, one of the MPs from Binga was appointed as a Cabinet Minister in the Inclusive Government formed in February 2009²¹. In summary, CCJP's impact can be discerned from the following:

- That CCJP was branded as an 'enemy of the state' was, as some informants pointed out, an indication that it had an impact on civic awareness. If it were generally regarded as being ineffective, it would not have been feared or threatened.
- A spokesperson for BRDC reported that in many areas CCJP committees were keeping councillors 'on their toes', which he acknowledged to be positive.
- There was much talk in the communities about the need to elect better councillors in local government elections, including election of women.
- Following the workshops for SDCs, a number of communities had put pressure on head teachers to recruit local people as temporary teachers, which was one of the main issues discussed at the workshops.

These various pieces of evidence all demonstrate both the important role which civic education can play in resilience development and the inevitability that it would generate an element of opposition or conflict, particularly in a political environment that prevailed in Zimbabwe for a decade since 1999. This suggests that resilience building, which has a focus on promoting community agency, is 'conflictual', with a high possibility of facing state resistance, particularly in politically polarised situations like Zimbabwe.

Livelihoods security

Although CCJP did not use the DRR jargon, its activities took the form of sustainable livelihoods promotion, which had an impact on resilience building. It was evident from secondary data and from the fieldwork that Binga communities lacked resilience; they faced major social-economic vulnerabilities. To enhance the resilience of communities, the most urgent community needs appeared to be, in approximate order of priority:

- improved domestic water supply;
- greater food security;
- more employment or other income generating opportunities;
- more health facilities;
- better educational facilities; and
- improved roads and/or public transport services.

²¹ Source: Transitional Government of Zimbabwe (2008) Prime Minister's Website, Morgan Tsvangirai <http://www.zimbabweprememinister.org/transitional-cabinet/transitional-cabinet.html> [online] accessed on 24th April, 2009.

There was evidence that all CCJP committees had made efforts to enhance the livelihood resilience to a wide range of natural and anthropogenic hazards by addressing particular problems communities faced. It appears, both from the fieldwork and from project reports, there were a number of successes. For example, four of the six sample communities were wholly or partially successful in addressing a range of livelihood problems they identified in their *Social Analysis* workshop, and some had resolved other problems too. Examples of community initiatives as a result of CCJP activities included:

- The Malaliya community lobbied BRDC about the problem of road access to the area and, as a result, the road was constructed.
- The Kariangwe community succeeded in getting a bus service to the area, though the quality of the service continued to be poor due to the poor roads.
- Simatelele community (not one of the sample communities) lobbied the BRDC and the Ministry of Health about the need for a clinic in the area and, due in large part to their efforts, a clinic was constructed and currently operational.

However, these achievements were small in relation to the enormous livelihoods challenges and needs which existed. Furthermore, community organisation, although necessary, was not sufficient on its own to solve most of the problems. In most cases, financial resources and technical expertise were also required and these were in short supply in Binga. As in other parts of the country, the situation was exacerbated by the political and economic environment that prevailed in the country. The capacity of government agencies to provide services had declined dramatically and most of the limited project funding which was available a couple of years ago (for example, the District Development Grants, Community Action Project funds) no longer existed because donor agencies had withdrawn their support. Meanwhile, the same macro-level problems were resulting in increasing levels of poverty and deprivation. The BCDP was, as already indicated, established by CCJP to address this problem.

Participation of vulnerable groups in CCJP activities

This study assumes that ‘genuine’ participation of vulnerable groups, particularly women is *sine qua non* to resilience building. It has become an acceptable view that women (and children) are disproportionately affected by disasters compared with other groups. In the case of CCJP, women were relatively well represented in CCJP activities. The proportion of women on CCJP committees in the six sample communities varied from 25 percent in Samende to 73 percent in Kariangwe, with an average of 51 percent. The proportion of women among CCJP workers was somewhat lower, but nevertheless significant. Nine of

the 26 community advisers and five of the twelve full-time staff (including administrative staff) were women. The data in Table 4.6 suggests women were well represented at community-based training workshops in 2000. Although this study did not establish the impact of CCJP on women involvement, interviews and observations in Siachilaba revealed that the operation of the fish market, including the erection of the building structure, was dominated by women. Thus, we can see how the women, if given the appropriate support, can enhance their livelihoods portfolios to withstand periods of food insecurity in disaster prone areas like Binga.

Table 4.6 Participation of Women in Training Activities

Type of Training	Number of trainees	Women participants (%)
Civic Education meetings	40	61
Skills Development Workshops	40	41
Legal Education Workshops	40	56

4.8 Sustainability of the CCJP benefits

The sustainability of CCJP, which may provide lessons to resilience development, can be considered from two perspectives: the sustainability of *project impacts* and the sustainability of *project activities*. These two perspectives are examined in turn.

The ultimate goal of CCJP was to increase the capacity of communities to reduce vulnerability to chronic food insecurity disasters through a rights-based approach to development. However, this was a long-term goal. The creation of awareness and development of organisational capacity at community level can be a long, slow process. In discussions with some of the sample CCJP committees, members suggested that, if they received adequate support from CCJP over the period five years, they would be able ‘to stand on our own feet thereafter’. However, this was probably an optimistic assumption. During discussions at a CCJP staff retreat in December 2000 (CCJP, 2001), the Programme Coordinator suggested that it would be at least ten years before CCJP could think of withdrawing its support. The important point was to ensure that project strategies were fostering a gradual increase in self-reliance at the community level, rather than creating increased dependency. The sustainability of the project activities and impacts would principally depend on two issues.

Firstly, it appears CCJP successfully ‘action researched’ a model of community empowerment to enhance meaningful participation of spatially distributed village units in Binga. Thus, it tested the government’s commitment to decentralisation of authority to local units. However, the political environment was not conducive to introducing a

rights-based development model since the ZANU (PF) government was facing threats of losing power to the opposition forces. Capacity building, especially in relation to rights-based approaches, seems to be complex and conflictual. CCJP was a political threat since it was meant to empower people to take control of their own development process. The risk of conflict with the government remained high, thus making it difficult to sustain its activities as well as the impacts of the projects. Secondly, the project adopted a low cost model by using volunteers and community advisers. These only received travel and subsistence allowances rather than salaries which would demand huge sums of funding. The major and most persistent areas of concern with regard to CCJP were attributed, directly or indirectly, to two interrelated conceptual conflicts, or dilemmas, namely:

- The need to focus on increasing awareness and organisational capacity at community level, since this was the greatest long-term benefits and it was the area in which CCJP's strengths lied, *versus* the need to provide tangible, material benefits in order to reduce poverty, build resilience and encourage community morale in the short run;
- The need for the community based structures to be as financially self-reliant as possible, in order to ensure their sustainability when project funding was withdrawn, *versus* the need to provide some incentives to the individuals involved because their material resources were so limited.

These two dilemmas all stem from the fact that the project was operating in a very deprived area. The majority of the Binga people were living below the poverty line and lacked access to basic infrastructure and services. The deprivation resulting from their historical exploitation and neglect was exacerbated by the macroeconomic and political problems, which continue to pose a challenge to Zimbabweans as a whole. This raises questions about 'sustainability' (which has become a 'mantra') in relation to resilience building in deprived and vulnerable areas such as Binga, where communities continue to suffer the 'ratchet effect' (Chambers, 1996) from shocks and stresses.

4.9 Conclusion

This chapter has explored CCJP, a development project, which sought to address the root causes of development problems using a rights-based approach. Although CCJP did not use the resilience jargon, its activities were in effect tailored towards building community capacity to withstand shocks and stresses. As a result, the lessons from CCJP can help inform resilience-oriented interventions in disaster prone areas like Binga. In relation to the study objectives, it provides some useful insights. The study confirms Tobin's (2005) assertion that the resilience approach is conceptually *new* while the practice is *old*. Two

observations can be made from this case study. Firstly, before Zimbabwe's independence in 1980, Siachilaba communities practiced some ways of withstanding disasters using traditional approaches, particularly using drought-resistant millet, sorghum and maize crop seed varieties. Today, these varieties have been replaced by 'treated' seeds which fail to withstand long drought spells in January and February. Secondly, CCJP enhanced the resilience of communities, without necessarily using the term resilience. The action of enabling communities to exercise their political capital to demand their entitlements from authorities in effect strengthened their human, physical, natural, social and financial livelihood assets.

Consistent with the PAR and access models (Blaikie *et al.*, 1994; Wisner *et al.*, 2004), these results also suggest that resilience building is about *governance*: it is primarily and fundamentally *political*, with its success hinging on citizen power, participation and self-mobilisation (Arnstein, 1969; Cornwall, 2008) for communities to *(re)create and (re)define* their own institutions without fear of victimisation from authorities. Similarly, vulnerability or lack of resilience to disasters partly lies in history. In the case of Binga, vulnerability to disasters cannot be blamed on ZANU (PF)'s political, ethnic or tribal relations alone; it can also be blamed on the colonial government's culture of the way it *did* development. For example, the forced resettlement of the Tonga in 1958 to give way to the construction of the Kariba Dam did not pay due regard to the negative social consequences of the resettlement (Colson, 1971) which continues to affect their livelihoods today. Indeed understanding disaster causation means understanding socio-economic and ecological relations (Hewitt, 1993; Blaikie *et al.*, 1994; Wisner *et al.*, 2004; Middleton and O'Keefe, 1998). Focusing on hazards is being myopic and can distract from the fundamental solutions to building resilient communities.

In addition to political challenges, CCJP also highlights issues around sustainability of project impacts and activities which go beyond the entry and exit strategies. Although sustainability issues are further discussed in Chapter 7, section 7.3.2, there are two contestations emerging from this case study, which need highlighting. The first one regards the extent to which impoverished communities should engage in projects that focus on the intangible strategic development needs rather than the ones that attend to the tangible practical material needs of their households such as food, water and healthcare. Secondly, the ability of poor communities such those in Binga to pay in cash or in kind so that the community based structures can be as financially self-reliant as possible, in order to ensure their sustainability when project funding is withdrawn. However,

providing incentives to communities participating in the CCJP project so they could meet their tangible needs was seen as a disincentive, and risked entrenching dependency. These dilemmas cannot be solved on the basis of Western philosophical and ethical reasoning alone (see section 3.11 which briefly discusses ethics). Detailed contextual analyses of existing resilience, which takes into account both the strategic and practical needs of the target population, complement philosophical and ethical reasoning. Chapter Five assesses ISP to establish further the extent to which development and humanitarian interventions can contribute to disaster resilience.

CHAPTER FIVE

THE INSTITUTIONAL SUPPORT PROJECT, ETHIOPIA

5.1 Introduction

Saint and Delanta, why they are not ploughed?

Meket and Gidan, why they are not ploughed?

I came from there to here without seeing an ox

(I came from there to here over dead bodies)

Tadele (2004)

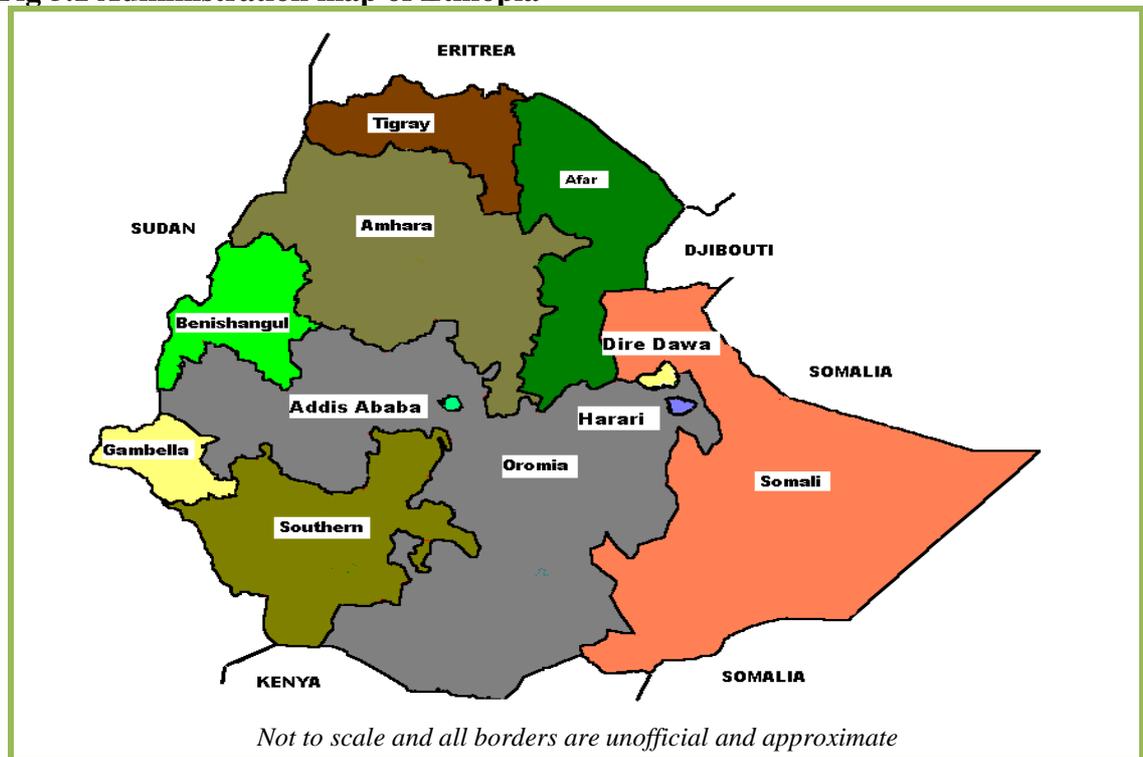
The scar of disasters has been ingrained into the social and economic lives of the Ethiopian people. Old poems have been revived to express the devastation caused by disasters on lives and livelihoods. Recurrent disasters, mainly triggered by drought, have remained the leading cause of human suffering in Ethiopia. The Centre for Research on the Epidemiology of Disasters (CRED, 2008) estimates that drought affected more than 43 million Ethiopians and claimed more than 400,000 lives between 1900 and 2008. More than 300,000 deaths occurred during the 1983 drought. In 2003, 13 million people required international assistance, against an annual average of five million and about 1.85 million metric tonnes of grain were provided for relief at a cost of US\$800 million. The probability of a drought occurring in Ethiopia increased from one in 10 years (in 1970s and 1980s) to one in three years in 2000s (Middlebrook, 2003). Being one of the 168 countries that have ratified the Hyogo Framework of Action 2005 – 2015 (HFA), building disaster resilience in Ethiopia has become more urgent than ever before. The Government of Ethiopia (GoE) urgently needs a holistic approach to building disaster resilience.

This chapter explores the extent to which the Institutional Support Project (ISP) promoted the integration of disaster and development, community participation, social learning and livelihood security, to build disaster resilience in Ethiopia. Like CCJP, ISP might not have directly quoted ‘disaster resilience’ but engaged in activities that were synonymous with building the capacity of communities to withstand catastrophic events. In assessing ISP’s contribution to resilience building in Ethiopia, this chapter presents the context of Ethiopia, the characteristics of ISP and the findings using five evaluation criteria of relevance, efficiency, effectiveness, impact and sustainability.

5.2 The disaster context of Ethiopia

Ethiopia is located in the Horn of Africa. It has an area of 1.13 million km² and a population of 79 million (UNDP, 2008). Fig 5.1 shows the location of Ethiopia in relation to its neighbours - Eritrea, Sudan, Kenya, Somalia and Djibouti. Over 75 percent of the population depend on agriculture for their living, and over three-quarters of Ethiopia's export earnings come from agriculture and livestock.

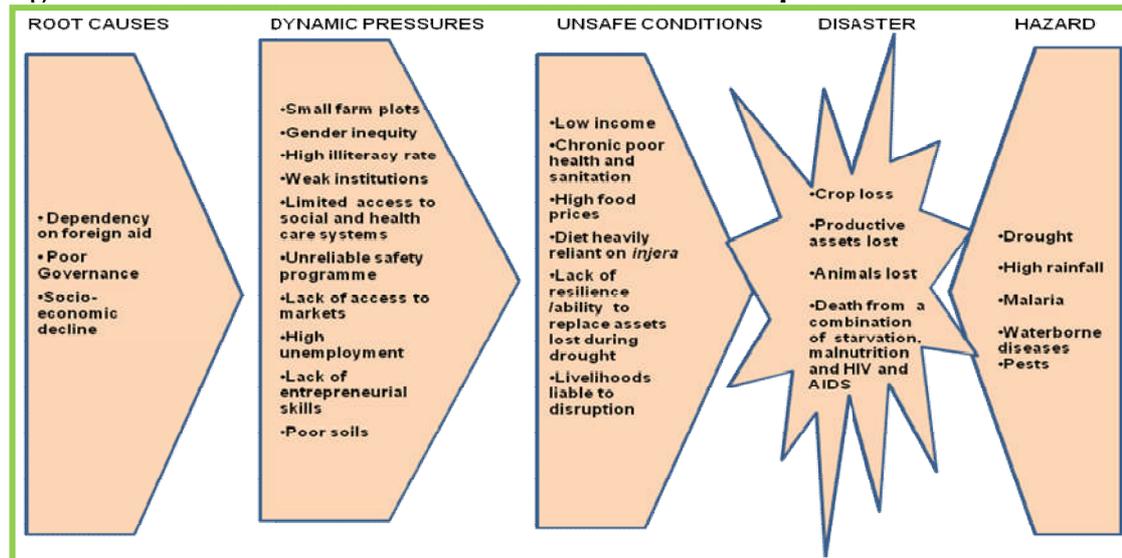
Fig 5.1 Administration map of Ethiopia



Source: Author

To trace the vulnerability of Ethiopia to disasters, the pressure and release model (PAR) has been used. Fig. 5.2 illustrates how vulnerability progresses from root causes to unsafe conditions to intersect in space with a hazard to produce disasters in Ethiopia. These are further explored in sections 5.2.1 and 5.2.2.

Fig 5.2 Pressures that result in chronic disasters in Ethiopia



Adapted from Wisner et al. (2004)

5.2.1 Socio-economic conditions, hazards and disasters in Ethiopia

Lack of resilience to disasters is blamed on both physical and poor socio-economic conditions in Ethiopia. Box 5.1 describes how the physical conditions are reinforced by the socio-economic conditions to cause disasters in Amhara National Regional State (ANRS). Five aspects can be discerned from Box 5.1, which also augment the chain of explanation of disaster causation in Ethiopia in Fig. 5.2. These are socio-economic conditions, population pressure, unfavourable climatic conditions, land degradation and political conditions.

As one of the poorest developing countries in the world, Ethiopia is ranked 169th in the Human Development Index (HDI) out of 177 countries and 105th out of the 108 countries on the Human Poverty Index (UNDP, 2008). About 78 percent of the population survive on less than USD2 a day while 23 percent survive on less than USD1 a day. Ethiopia has a life expectancy of 51.8 and ranks 13th in the world in under-five mortality rate. It had the highest number (78 percent) of people without access to clean drinking water in 2004 and only 13 percent were using improved sanitation facilities. Forty-six percent of the population is under-nourished with under-five mortality rate for the poorest 20 percent being 130 per 1000 live births. About 1.5 million people live with HIV and AIDS, one of the largest HIV and AIDS population in the world (UNAIDS, 2006). On the inequality between men and women, Ethiopia ranks 72 out of 177 countries on the Gender Empowerment Measure. Sixty-four percent of the adult population is illiterate.

Box 5.1 The vulnerability context of Amhara National Regional State (ANRS)

The ANRS has a population of over 17 million (2003) of which 89 percent are made up of rural farmers and 11 percent are urban dwellers. It shares borders with Tigray to the north, the Afar in the east, Oromia in the south, Benshangul Gemuz in the southwest and Sudan in the northwest. The region covers 170,752 km and is subdivided into eleven administrative zones and 105 woredas. It has five agro-ecological Zones with an altitudinal variation ranging between 700-4000 metres.

The ANRS receives most of its rainfall from June to September when the Inter-Tropical Convergence Zone (ITCZ) is in the north of the country. Mean annual rainfall varies from 300 mm in the eastern parts (for example, Kobo and Habo woredas) to well over 2000 mm in the west (for example, Awi zone). Length of crop growing period decreases in a general west to east direction, from 270 days in Awi zone dropping to 120 days in Wag Himra zone. In the south and south eastern parts, the length of crop growing period varies between 45 to 90 days and 60 to 120 days respectively. Rainfall variability is greatest in the eastern parts of the region and this is part of the region which experiences frequent droughts.

The rate of soil erosion in ANRS is alarming and accounts for 55 percent of the soil lost due to erosion Ethiopia. Soil erosion is greatest on arable land where an annual reduction in soil depth of about 4mm occurs. Pressure on land has forced the cultivation of steeper slopes, thus causing further land degradation. Despite this alarming fact, efforts to reduce land degradation are minimal. As a result of these factors, only about three percent of ANRS population is able to meet their food requirements for more than a year. About 31 percent are able to satisfy their food needs between 10-12 months, while the remaining 66 percent can only satisfy between zero to nine months.

Ethiopia's chronic food insecurity has been on the agenda in the recent Group Eight meeting. The Group Eight has vowed to exert much effort to solve Ethiopia's food insecurity problem. It is good news. But behind this gesture is a strong message to all Ethiopians. Ethiopia is being told that it has not been doing enough to solve its food problems. It is paradoxical that despite huge endowments of natural resources and hardworking population, Ethiopia continues to blame natural factors for its food problems. It is paradoxical, unlike probably any other country in the world, to find many Ethiopian farmers unable to afford even the technology of their ancestors. Studies of ANRS show that 31.8 percent of farmers have no ox.

Recent attitudes ANRS government towards civil society organisations (CSOs) is showing improvements for the better. The CSOs particularly NGOs have been accorded some recognition as partners in the effort to develop the region. Nevertheless, the government needs to do a lot in fostering fundamental policy changes that will enable CSOs to attain their rightful role in the economic development of the region.

Source: Desta (2004)

As is the case in ANRS, Ethiopia's economy is dependent on subsistence agriculture. During the period 1996-2005 agriculture accounted for more than half of the gross domestic product (GDP), generating 90 percent of exports and 93 percent of employment (UNDP, 2008). It has also increasingly become a donor-dependent country with Official Development Assistance (ODA) accounting for 17.3 percent of GDP in 2005 as compared with 8.4 percent in 1990.

Box 5.1 identifies drought as the major hazard in ANRS, which makes cropping a risk venture, particularly in the southern part of ANRS where rains are unreliable and variable. Table 5.1 confirms that drought hazard had the highest frequency in Ethiopia between 1965 and 2006, followed by epidemics and, lastly by floods. In addition to drought, epidemics and floods, other common hazards which trigger disasters are

landslides, earthquakes (CRED, 2007) and civil war (Middlebrook, 2003). However, despite the effects of HIV and AIDS, it is not considered by UNISDR a disaster epidemic. Disasters triggered by drought accounted for most people killed and affected by disasters.

Table 5.1 Top 10 Disaster triggers in Ethiopia 1965 -2006

Disaster	Date	Killed	Affected
Drought	1965	2000	1,500,000
Drought	1969		1,700,000
Drought	1973	100000	3,000,000
Drought	1983	300000	7,750,000
Drought	1987	367	7,000,000
Drought	1989		6,500,000
Drought	1997		986200
Drought	2003		12,600,000
Drought	2005		2,600,000
Epidemic	1970	500	
Epidemic	1982	990	
Epidemic	1985	1101	
Epidemic	1988	7385	
Flood	2006	862	361,600

Blank spaces indicate 'no data'

Source: CRED (2008)

According to Table 5.1, there were nine recorded drought-triggered disasters between 1965 and 2006. This means there was drought every four and half years in some parts of Ethiopia. Middlebrook (2003) pessimistic by stating that the frequency of nationwide droughts that trigger food shortages increased from once in 10 years (in 1970s and 1980s) to once in about three years in 2000s. Table 5.1 also reveals that between 1965 and 2005, droughts and the resultant food shortage have affected millions and killed a significant number of people in Ethiopia. The 1983 - 85 famine, for example, is estimated to have claimed more than 300,000 lives, and will go down in history as one of the greatest disasters on the African continent in the last century (Smith and Davies, 1995).

Box 5.1 also illustrates how land degradation contributes to disaster causation in Ethiopia. Rapid increase of human and livestock population pressures on exhausted land, deforestation, overgrazing, mountain slope cultivation and limited off-farm employment opportunities have reduced Ethiopia's resilience to disasters (Steering Committee for the Evaluation Report, 2004).

Similarly, Box 5.1 confirms the rejection of environmental determinism as an inadequate explanation of disaster causation (O’Keefe, *et al.*, 1976; Hewitt, 1993; Blaikie, *et al.*, 1994; Middleton and O’Keefe, 1998). Regional and internal conflicts have also contributed to Ethiopia’s weak resilience and vulnerability to disasters. The 1998-1999 Ethiopia-Eritrean war, its involvement in the Somalian conflict and ‘periodic eruption of violence’ (Kaluski *et al.*, 2004:374) have resulted in proportionally high expenditure and population displacement. Although the post-1991 GoE embraced democratization, the political culture of authoritarianism remains a dominant feature. According to Abbink (2006:1), the ‘controversial and flawed’ 2005 elections, ‘post-election manoeuvring’ and ‘the 2005 violent crisis’ are illustrative of a political system that has stagnated and slid back into authoritarianism’. The Ethiopian political system has reconstituted ‘neo-patrimonial governance reverting to old modes and techniques of control and an ideology of power as a commodity possessed by a new elite at the centre’ (Abbink, 2006:193).

With the third round of elections held in May 2005 since the end of the military junta’s rule in 1991, democratisation in Ethiopia has become a meaningful point of debate among scholars. Many will agree that participatory democratisation has the potential of enhancing resilience to disasters as communities become more empowered to make decisions on issues that affect them. On the contrary, Smith (2007:573) views the Ethiopian democratisation as ‘a grave mistake’ and ‘a controversial experiment with decentralisation and federalism explicitly organised along ethnic lines’ with the implications of its success or failure likely to reach across the entire African continent. In reviewing the 2005 parliamentary elections, Abbink (2006: 2) argues that ‘the elections, although controversial and flawed, showed significant gains for the opposition but led to a crisis of the entire democratization process’. Moreover, Ethiopia has moved from ‘not free’ to ‘partly free’ in 2007 in Freedom House’s categorisation levels of freedom, evidence of the new regime’s transition to a fully democracy (Freedom House, 2007).

Drought has, in most cases, combined with anthropogenic hazards, mainly land degradation and civil conflicts, to trigger famines (Hancock, 1985; Clay and Holcomb; 1986 and Smith and Davies; 1995). The intersection of hazards and vulnerability factors has contributed to a ‘series of crop failures, with exploitation of the land leading to the erosion of traditional coping mechanisms’ (Kaluski *et al.*, 2004). Drought, war, poverty, weak infrastructure and institutions, and a constraining rather than enabling policy environment has reduced the resilience of communities to disaster shocks (Devereux,

2000). This suggests that disasters in Ethiopia, particularly famine ‘should be seen as less as a consequence of a single natural disaster and more a result of deep-rooted structural problems’ (Kaluski *et al.*, 2004). Thus, the history of Ethiopia shows that the locus of disaster causation is mainly *political* and deeply rooted into issues around *governance*.

5.2 Ethiopia’s DRR policy framework

Unlike much of the rest of Africa, Ethiopia has a long recorded history of disasters. Disasters in Ethiopia have a long history dating back to as far as 250 BC, especially those triggered by droughts (DPPA, 2005). Before the 1970s when international humanitarian support was sought for the first time, there were many national and localised disasters, which were managed by communities themselves, with little, if any external assistance. Thus, communities had developed some form of resilience to survive disasters by mobilising local resource, suggesting that the notion of resilience is conceptually *new* while the practice is *old*.

However, it was not until 1974 that the Relief and Rehabilitation Commission (RRC) was formed to manage the effects of drought. The RRC’s ‘mandate was to act as the primary authority for the coordination and implementation of relief activities country-wide’ (Villumstad and Hendrie, 1993:122-123). Holt (1983:190) states that the RRC’s responsibility was wider and not limited to drought relief. It included direct food distribution to both people internally and externally displaced by conflict and those enlisted in resettlement programmes. It was also responsible for the local re-establishment of people displaced within the country by conflict, refugees that were returning to Ethiopia from neighbouring countries (chiefly Somalia and Djibouti), and people from areas of particularly high population pressure on land (especially Wollo Region in the northeast) onto land in other regions considered to have been agriculturally underexploited.

Whilst the RRC had a number of successes such as handling the 1984/85 famine; Villumstad and Hendrie (1993) state the challenges that were faced by RRC which had an implication on community resilience to disasters. Chief amongst them was the high centralisation of RRC, to the extent that decisions on aid distribution, even at the local level, were all routed through the central office in Addis Ababa, the capital of Ethiopia. This excluded communities in the decision-making processes. In addition, the western donors were hesitant to support the RRC due to the government’s communist political system. Villumstad and Hendrie (1993) further state that problems that faced RRC led to the creation of parallel relief structures such as the Christian Relief and Development

Association (CRDA) in 1974 and Joint Relief Operations which handled food aid during the 1984/85 famine. In the north, where Tigray People's Liberation Front (TPLF) had total control, an indigenous Relief Society of Tigray (REST) was formed in 1978. REST operated a decentralised relief management system that involved local people's committees or *baitos*. Although the REST concept was initiated during civil unrest, involving affected people in decision-making on relief operations had the potential of increasing the resilience of communities to manage disaster response at the local level.

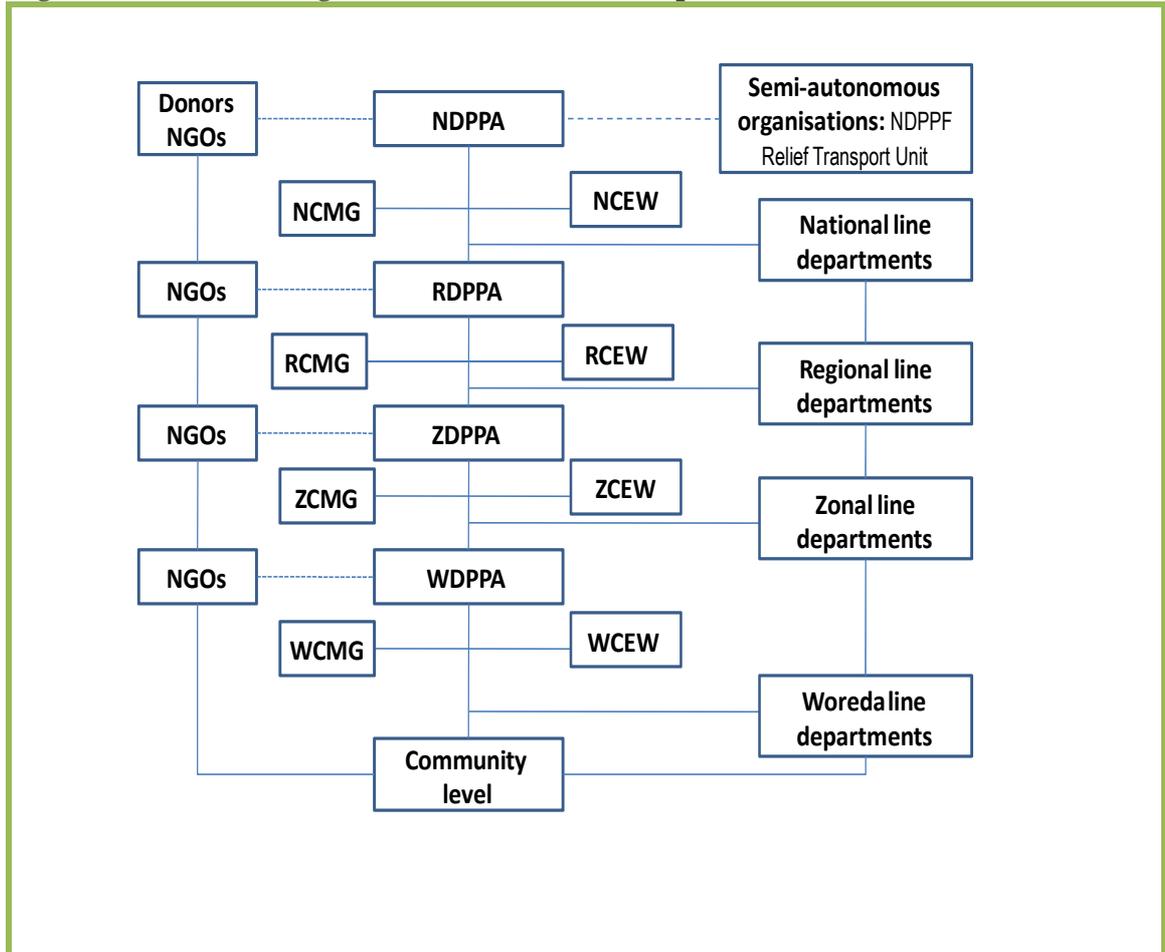
When the Transitional Government of Ethiopia (TGE) came into power in 1991, after ousting Mengistu Haile Mariam²², a new approach to disaster management was introduced based on the experiences of REST. The RRC's structure was re-organised to reduce the bureaucracy and ensure greater accountability, efficiency and involvement of local communities. A national disaster preparedness and response framework 'National Disaster Prevention and Preparedness Strategy (NDPPS) was established which laid the foundation to the National Policy on Disaster Prevention and Management (NPDPM) framework in 1993. The NPDPM deals with all disaster phases²³.

The NPDPM led to the transformation of RRC into the Disaster Prevention and Preparedness Commission (DPPC) (under Proclamation No.10/1995) then to the DPPA in 2006 (DPPA, 2008). DPPA's organisational structure is presented in Fig. 5.3. At the apex of the DPPA structure sits the National Disaster Prevention and Preparedness Committee (NDPPC) chaired by the Prime Minister, consisting of ministries such as Finance, Ministers of Agriculture, Finance, Health, Defence, Planning and Economic Development, Economic Development and Coordination. The DPPA is the secretariat of the National Committee with a mandate to co-ordinate the day-to-day activities pertaining to disaster prevention and preparedness. Its efforts are supported by different committees, such as the National Early Warning Committee and a Crisis Management Group, which meet during major emergencies. NGOs provide technical support to DPPA. Similar arrangements are made at regional, zonal and *woreda* levels.

²² Mengistu Haile Mariam ruled Ethiopia from 1974 to 1991 and fled to Zimbabwe following a rebellion in 1991.

²³ DPPA aims at tackling disasters and ensuring that famine situations are addressed in ways that reduce people's vulnerability to disasters ... relief resources should contribute towards addressing the root causes of vulnerability to famine and food shortages by linking relief with development. Such a linkage serves the prevention of human suffering through the availability of relief resources while at the same time promoting development works. The latter includes environmental protection, infrastructural development, water harvesting and building up of community assets with drought-proofing content. In line with the Government's federal structure, a bottom up approach in both the planning and implementation of disaster prevention and preparedness programmes is a key element of the policy. In this regard, the empowerment of regions and sub-regions in disaster management is an important aspect (DPPA, 2008).

Fig. 5.3 Disaster Management Structure in Ethiopia



Adapted from DPPA (2005)

The institutional arrangements for the DRR in Fig. 5.4 shows a deliberate decentralisation of power from higher to lower levels which has the potential of enhancing systems resilience. Decentralisation of power to sub-national level structures and functions were created at regional, zonal, *woreda* and PA levels as required by NPDPM. These structures comprise both elected and appointed officials. For example, the Crisis Management Groups throughout the structure comprise both elected and appointed officials while the Early Warning Committees comprise technocrats from line departments and NGOs. In the light of Ethiopia’s political realities, ISP highlights some of the challenges that were faced in attempting to strengthen DPPA decentralised structures in disaster management, early warning and LRRD through human resource development, physical capacity enhancement, operational systems enhancement and action research.

The main roles and responsibilities of the DPPA was the coordination of the implementation of NPDPM. This includes overseeing LRRD activities, contingency planning, relief and food delivery, mobilisation of resources and logistics support to DRR

agencies. DPPA discharges its responsibilities through the Crisis Management Groups, sectoral task forces and Early Warning Working Group (EWWG) (DPPA, 2005; DPPA, 2008).

5.3 The Institutional Support Project (ISP)

Lack of DPPA’s capacity to reduce the impact of disasters remains a major pre-occupation for the GoE. In 1996, the DPPA through its annual appeals for assistance, requested donor support in the areas of capacity building for implementation of NPDPM. The Canadian International Development Agency (CIDA) responded to the appeal, which led to the inception of the ISP. The goal of ISP was to assist the government and people of Ethiopia to prepare for and prevent disasters. This would be achieved by strengthening the capacity of DPPA and related agencies to prepare for, detect and respond to disasters in a timely and appropriate manner ultimately to contribute to reducing the vulnerability of people in areas considered at high risk of disasters. Put differently, ISP was to enhance Ethiopia’s resilience to disasters. Save the Children Canada and UK facilitated the management and implementation of the project. The ISP was a three-phase programme: ISP I was from January 1997 to March 1998; ISP II began in April 1998 to March 2002; and ISP III began in July 2002 to March 2006. Table 5.2 summarises the coverage of ISP.

Table 5.2 ISP zones, *woredas* and Kebele /Peasant Associations²⁴ (PAs)

ISP Phases	No. of zones	No. of <i>woredas</i>	No. of Pas
Phase I	2	2	6
Phase II	4	14	254
Phase III	11	12	24
Total	17	28	284

Source: Save the Children UK/Canada (2004)

The coverage of ISP was at two levels – physical and institutional levels. At the physical level, ISP operated in Amhara and Oromia region with some policy familiarization activities in Tigray and Southern Nations, Nationalities and Peoples region (SNNPR). Because the NPDPM emphasised the multi-sectoral rather single agency approach, the ISP partners were drawn from a variety of government, non-government agencies and Peasant Associations (PAs). A total of 17 zones, 28 *woredas*²⁵ and 284 PAs participated in ISP. Government agencies included line ministry departments (LDs) such as

²⁴ PA and *Kebele* are used interchangeably in this study. They mean the lowest administrative unit in Ethiopia.

²⁵ A *woreda* is equivalent to a district.

Agriculture and Rural Development, Planning and Economic Development, Health and Food Security Coordination Bureau. Food for Hungry International (FHI) and Care International were among the NGOs that participated in ISP. These agencies comprised DPPA committees at the regional, zonal and woreda levels.

ISP had three components with four strategies, which became to be known as the ‘four-in-one strategy’, as outlined in Table 5.3. There were physical; technical or managerial; action research; and human resource based with an overall integrated effect of improving the preparedness, detection and response to disasters in a timely and appropriate manner to reduce the vulnerability of people in high-risk areas. DRR management and policy awareness, effective early warning systems and linking relief, rehabilitation and development (LRRD) through Employment Generation Scheme (EGS) formed the nucleus of the ISP capacity building process. Cross-cutting elements were also embedded into the programme strategy to address vulnerability and enhancement of disaster resilience from a holistic rather than from a sectoral vantage point.

Table 5.3 The Institutional Support Project Components

Component	Strategy			
	Human resource Development	Physical Capacity	Operational Systems and communication for sustainability	Action Research, Advocacy and lesson sharing
Disaster Management	Human resource capacity training Institutionalisation of DRR	Provision of office equipment	<ul style="list-style-type: none"> • Activation of DPPA structures • Coordination, accountability and institutionalisation • Integration of DRR into development 	Dissemination, documentation and publication
Early warning System (EWS)	Improved EWS capacity through knowledge and skills development	Provision of physical inputs	<ul style="list-style-type: none"> • Activation of EW structures • Improved organisation, processing, documentation and dissemination EW information 	Dissemination, documentation and publication of lessons sharing on the effective implementation of EEWS
Employment generation scheme (EGS) / LRRD	Improved EGS /LRRD capacity through learning by doing, knowledge and skills development	Provision of physical inputs including construction of Relief Food Outlets	Improved targeting, participation of women, coordination, accountability and institutionalisation of EGS / LRRD	Dissemination, documentation and publication of EGS / LRRD lessons

Source: ISP Project Document (2003)

Disaster Management Component

The Disaster Management component focused on enhancing capacities for the overall management of disasters (prevention, preparedness, mitigation) with government and

non-government agencies. Improved understanding of operational systems and communication for effective implementation of the NPDPM at all levels is fundamental. Building on ISP's first phase, an enhanced understanding of the nature and dynamics of institutional arrangements, operational systems and procedures including communication, would help bring about improved inter-sectoral and interagency cooperation and coordination at regional, zonal and woreda levels in the implementation of NPDPM policy. However, improved understanding of NPDPM policy was not an end in itself but also as a means of sustaining the capacity building initiatives for effective implementation of NPDPM. For sustainability of project *activities* as well as its *impact*, institutionalization of DM from regional to woreda levels as well as in academic institutions was regarded as one of the key project milestones.

The Early Warning Component

The EW component focused on enhancing the capacity of Ethiopian Early Warning System (EEWS) to collect, process, analyze and disseminate early warning information in an effective and coordinated manner was a priority of this component. The EEWS is a cornerstone of the NPDPM and early warning information is a form of disaster response in its own right (World Disaster Report, 2005) provided it is accurate, timely and acceptable by high levels of the GoE and donors. The EEWS has been in place since 1976 and various approaches have been attempted to build its capacity. Yet, disasters, triggered by a complex combination of stresses and shocks, with drought being the easier one to discern, have continued to wreak havoc and suffering on the Ethiopian society. The strategy was to enhance the capacity of GoE, from community to federal levels, to collect, process, analyze and disseminate EW information in an effective and coordinated manner by ensuring that the communication infrastructure including the Wide Area Network (WAN) worked effectively. Emphasis would be put on compiling baseline information from existing livelihoods and vulnerability studies supplementing it with additional data collection such as Household Economy Analysis (HEA)²⁶. The targeted communities, woredas, zones and regions would demonstrate a strengthened data collection system as well as communication of EW information in a timely and consistent manner. Towards that end, skill and physical capacity of specific communities, woredas, zones and regions would be enhanced by the project through training and provision of equipment.

²⁶ See ISP III Project Agreement p.14

The Employment Generation Scheme or LRRD Component

Since the launch of NPDP in 1993, EGS and its variant, the Productive Safety Net Programme (PSNP) (Devereux, 2006), have become a policy strategy for building resilience to food insecurity risks in Ethiopia. The primary function of EGS is to act as a protective mechanism during the pre-crisis period, enabling a timely transfer of resources to prevent vulnerable groups from liquidating their assets to purchase food. Responses to recurrent food crises and famine have conventionally been dominated by emergency food-based interventions (RHVP, 2007) in Ethiopia. Lessons from Bangladesh, India, China and Guatemala suggest that public works programmes such as the employment guarantee scheme in India has some relevance to the African context. EGS can contribute towards famine prevention (Moore and Jadhav, 2006) while enhancing community resilience at the same time.

The Ethiopian EGS is a mutation of the Indian Maharashtra ‘most famous’ (Ravallion, Datt and Chaudhuri, 1993), ‘massive, long term’ and ‘deeply institutionalised’ (Moore and Jadhav, 2006) EGS scheme that was introduced in the early 1970s (Imai, 2007; Gaiha and Imai, 2002; Gaiha, 1996; Ravallion, Datt and Chaudhuri, 1993). EGS are labour intensive public works aimed at addressing unemployment and underemployment problems facing the rural and urban poor by providing cash-for-work or food-for-work (Devereux, 2006). Cash-for-work, where the targeted poorest or the most food insecure members of the community received cash wages after working on community projects, was preferred to food-for-work. It was argued that cash wages would help people to meet their basic needs for both food and non-food items while at the same time assisting them protect and create their livelihoods²⁷.

The way the Ethiopian EGS is structured may highlight aspects that can inform disaster and humanitarian intervention processes. In the Indian context for example, EGS works are funded by government and employment in the public works programmes is guaranteed. Individuals seeking employment and prepared to work at wages lower than the market labour wage rate are engaged. It is also self-targeting; beneficiaries can decide whether or not to participate in public works (Moore and Jadhav, 2006). There is no organized body (government or otherwise) setting criteria to select individuals. Jobs and wages on offer are advertised at the job centre where prospective employees decide to register or look for better alternatives. The Ethiopian EGS differs from that of India: it is financed by relief food; designed to generate short employment; and implemented during

²⁷ See for example Panteleo C. and Jaspars, S. (2006), Peppiatt, D, Mitchell, J. and Holzmann, P. (2001) and Mattinen, H. and Ogden, K, who explore the rationale, design and implementation of cash-based transfers.

disaster times. It is organized by government (Middlebrook, 2003) and targets the most vulnerable populations. Such an approach has a potential of strengthening vulnerable communities' capacity to withstand future disasters.

EGS was piloted in *woredas* that were considered by DPPA to be at high disaster risk. Participating *woredas* from Amhara and Oromia regions included south and north Wollo, West and East Hararghe, North and South Gondar, Wag Himra, North and East Showa, and Oromia special zone.

5.4 Relevance of ISP

The relevance of four-in-one strategy adopted by ISP already been extensively discussed in section 5.3. Key informant and group interviews data across the sample locations confirmed the relevance of ISP in institutional building. A discussion on the relevance of ISP, a group of government officials from Agriculture and Development, Food Security, Education, Health and DPPA department in South Wollo zone, for example, listed their experiences using a graffiti wall, which are summarised in Box 5.2.

Box 5.2 Relevance of ISP

- a. Improved decision-making and coordination of DRR activities in line with NPDPM including early warning systems and linking relief to development at each level of the federal government was necessary
- b. Targeting – piloting EGS helped to identify the most vulnerable groups
- c. Solution of problems – assisted officials and communities to identify and analyse root causes of problems related to poverty and vulnerability and acted upon them
- d. Protection of assets – through EGS
- e. Relief Food Outlets – reduced distances travelled by vulnerable groups to access relief food
- f. Integration of gender, environmental rehabilitation and HIV and AIDS into DRR
- g. Health and education incorporated into DRR to address children's health and education needs including Orphans and Vulnerable Children (OVCs)

Box 5.2 underscores the relevance of ISP, particularly in enhancing democratisation, DRR coordination, early warning system, poverty and vulnerability reduction, sustainable livelihoods and integration of environmental degradation, gender inequity, and HIV and AIDS. These issues are explored throughout this chapter. However, it might be useful to highlight the relevance of community participation and sustainable livelihoods, which appeared to be prominent in this study.

Participatory community targeting through EGS/LRRD

Much emphasis was placed on the role of EGS as it provided practical ways in dealing with problems communities encountered in their everyday lives. The most vulnerable groups were targeted to help them protect and create assets. Box 5.3 summarises the

focus group discussion on targeting in the Angawa Katila PA, Lalommamma woreda, North Shewa zone.

Box 5.3 Beneficiary targeting in Angawa Katila Peasant Association (PA)

In Angawa Katila PA, able-bodied men and women have participated in EGS work based on targeting criteria. Prior to the commencement of EGS, there were some problems where, in some cases, less vulnerable households were given priority ahead of the most vulnerable households. Some households sold assets such as livestock to be considered for relief food assistance. This led to further depletion of assets. However, since the inception of EGS, the community has categorised itself into three wealth rankings – a) well-to-do families, b) poor families, and c) poorest of the poor families. It is based on this category that families are selected transparently at a community general meeting.

Angawa Katila PA is one of the chronically food-insecure PAs in Lalommamma Woreda. Two aspects from Box 5.3 need highlighting, notably targeting and reduction in asset depletion. Firstly, household targeting underpins the involvement of communities and PA administrative bodies, namely the PA/*Kebele* Council, PA/*Kebele* Food Security Task Force (KFSTF) and Community Food Security Task Force (CFST). The Community Food Security Task Force's role was to identify the names of prospective EGS participants as well as the less-able bodied people who needed direct support according to the targeting guidelines. The final list of prospective EGS participants was displayed at a convenient place such as shops for at least a week to give the public the chance to comment on the names before they were endorsed at the community general meeting. The role of the PA/*Kebele* Council was to receive the list of prospective EGS participants from CFST and handle complaints from *kebele* residents and take corrective measures where appropriate, such organising a public meeting before the list was passed on to the KFSTF whose role was to pass it on to the woreda level. Similarly, the selection of EGS projects enlisted the direct participation of residents as well as the respective administrative bodies. Thus, ISP attempted to promote the participation of local communities, including the chronically food insecure communities, within the context of Ethiopia's democratisation principles. The major problem of ISP approach to community participation was not only the bureaucracy involved but also its narrow focus on tangible incentives. Enabling communities to take control of their lives, as agents of change, through emancipatory approaches rather than being at the mercy of the 'task forces', would have been an important ingredient towards building resilient communities. Yet, section 5.2.1 reminds us that the root causes of food insecurity in Ethiopia were fundamentally political and related to governance. Without creating (social) political capital for communities to engage in (re)creating structures that caused food insecurity is

the first place suggests that resilience to disasters was likely to remain a pipe-dream for Ethiopia.

Sustainable livelihoods through LRRD

EGS was largely relevant, particularly in as far as it enabled vulnerable households to meet their basic needs as well as protect and create livelihood assets. Common comments included the following:

I wasn't food secure before the introduction of EGS by ISP but now I can produce food by myself, I can produce fruits and vegetables from the land that was rehabilitated through EGS. I've also bought two cows as a result of EGS

(Male community member, Bole Bacho PA)

Group interviews with EGS participants, for example in Angawa Katila and Bole Bacho PAs, North Shewa Woreda, revealed that communities were involved in soil conservation, hillside terracing, water harvesting, and soil and stone bund construction and afforestation activities. On some of the rehabilitated lands, although there were no statistics, observations through transect walks indicated that a handful of farmers had started harvesting fruits, vegetables and forest products. The responses from *woreda* experts show that there has been a small increase in crop production, incomes and cultivated land. In Adami Tulu *woreda*, EGS operated in four PAs where small environmental rehabilitation projects including nurseries for seedlings, were being implemented. Interviews with community members revealed that people were more aware of the importance of trees as cash crops and for domestic uses such as construction and source of energy. Similarly, through EGS wages, some vulnerable households were able to buy livestock such as cattle and goats, which would go a long way in increasing livelihood options for communities at the local level. This suggests that ISP made attempts to enhance the resilience of communities by helping them to protect and create assets. Thus, ISP did not only respond relevantly and appropriately to the needs of the Ethiopia people, but it also shows that vulnerable communities have the ability to address and improve their own condition provided they are 'given' the space, resources and institutional support to improve their livelihood portfolios and resilience.

5.7 Efficiency of ISP

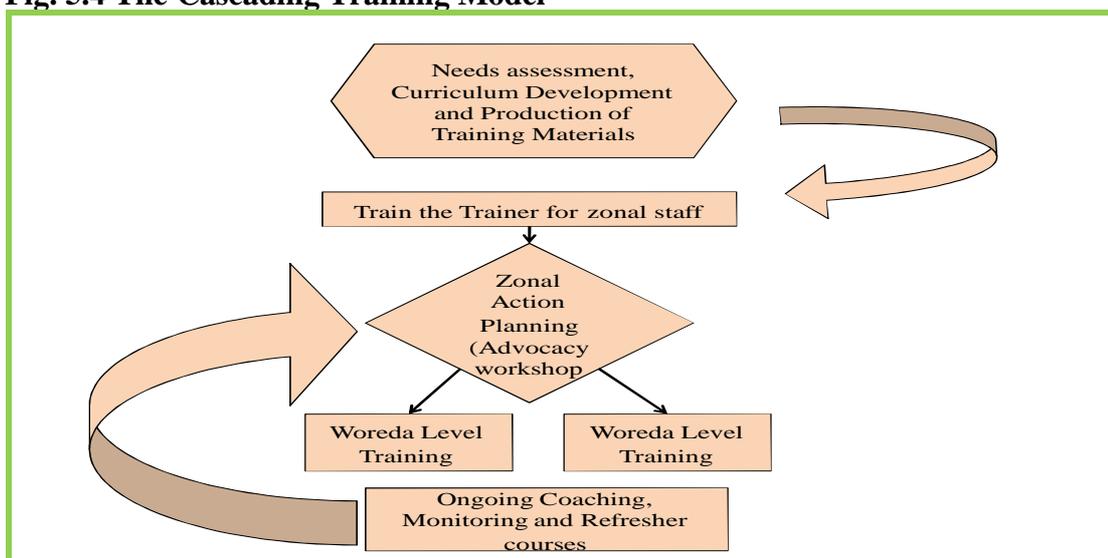
As noted in Table 3.5 (Chapter Three, p 100), the efficiency of the ISP was measured by its cost-effectiveness in delivery of goods and services to achieve its objectives. There

are two notable features of ISP, which are related to the efficiency criteria in relation to building long-term disaster resilience – the cascading training and non-interventionist strategies.

Cascading Training Approach

The cascading model was the major ingredient (see Fig 5.4) for strengthening human capital and enhancing institutional resilience.

Fig. 5.4 The Cascading Training Model



ISP Training Report (2005)

Fig. 5.4 shows five logical elements of the cascade model:

- *Needs assessment, curriculum development and production of training materials* – Participants needs were assessed and integrated into the content and training processes, including visual aids. These were also translated into local languages.
- *Trainer of the trainer (ToT) element* – ToT was the cornerstone of the cascade model. This involved creating awareness on NPDPM and equipping zonal staff (from line departments) with training skills and techniques.
- *Zonal action planning workshops* – Zonal ‘advocacy’ workshops were held in the target zones, which brought together senior zonal representatives from line departments to build their commitment for NPDPM implementation and also support their junior staff to attend *woreda* level training.
- *Woreda level workshops* – The five-day workshops brought together about 30 *woreda* participants. Zonal staff trained at the ToT level delivered the training. The major thrust was to familiarise participants on NPDPM and training skills to enable them deliver at the PA level.

- *Ongoing monitoring, coaching and refresher programme* – ISP staff provided ongoing support for the zonal teams in the form of coaching, mentoring and refresher courses.

The cascade model enabled the ideas stemming from federal and ISP experts to be adapted to the regional, zonal, *woreda* and PA contexts. Thus, it enabled participants to adapt ISP training to their local needs. Consistent with the social learning strategy (see Chapter Two section 2.5.5), action research was one of the features of ISP that tested the appropriateness and practicality of the NPDPM. An action research approach was to provide forums for sharing field experience. Stakeholder seminars or review meetings were held at least once every six months at regional, zonal or *woreda* level. Training manuals and other materials were developed and field-tested in a participatory manner and continued to serve as resources and references for trainees. The cascade model was a cost-effective model in that it helped ISP reach, and train a vast number of people involved in DRR. The effectiveness of ISP training is revisited later in section 5.8.

Non-interventionist strategy and institutional building

ISP adopted a non-interventionist strategy by operating within the DPPA structure from federal to PA level. The major advantage of using the DPPA structures, which may provide lessons to resilience building, was that ISP did not disrupt the everyday functioning of DPPA as well as the PAs, but rather fitted into what the government was already *doing*. Given the delicate political situation then, as stated in Chapter Five, section 5.2.1, establishing parallel structures to those of government would most likely have been problematic especially if ISP implemented the ‘action research and advocacy’ (ISP, 2003:2) strategy as stated in the project document (ISP, 2003). Even then, in ‘coping with change’, ISP continuously monitored its relations with DPPA structures particularly at the federal level. At monitoring and evaluation workshop that was held on 23-24 December 2002, much emphasis was put on ‘keep relations with DPPA at federal level’, ‘create strong relationships with Rural Development office at *woreda* level’, ‘strengthen relations with *woreda* DPPAs’, and ‘assess the change carefully and adapt to it gradually’ (ISP, 2002:10). Thus, working within the existing structure was a cost reduction measure for ISP. However, this meant that ISP’s degree of freedom to radically engage with DPPA throughout the structure was limited.

5.8 Effectiveness of ISP

Effectiveness of institutional building through training

ISP's training strategy, which adopted the cascading model, was introduced in section 5.7. Training took the form of short-term, on-the-job and professional training both locally and overseas. The training curriculum in Table 5.4 covered all the three components.

Table 5.4 ISP Training curriculum

Disaster Management	Early warning system	Employment generation scheme
<ul style="list-style-type: none"> • Trainer of trainers on NPDPM • NPDPM zonal action planning • <i>Woreda</i> Policy familiarisation and facilitators training • Community policy familiarization • Trainer of trainers disaster project managers 	<ul style="list-style-type: none"> • EW basic concepts • EW Data analysis and techniques • IT skills • Radio communication and management • Wide Area Network (operation, server administration and database management) • Geographical information system (GIS) 	<ul style="list-style-type: none"> • EGS familiarization and action planning • Skills training on PRA/LLPA • Targeting and Labour organisation • EGS review and action planning • Management training for Team leaders • EGS off the shelf project planning and management • Advocacy and action planning • Community project cycle management

Source: ISP Training Report (2005)

Table 5.4 illustrates that Disaster Management and EGS training was conducted from federal to PA levels. In other words, policy makers, the executive (technical staff) and communities accessed disaster management and EGS training. However, because of the technical bias of the EWS curriculum, training at PA level was limited as compared with the attention that was given to DPPA, line ministry departments and NGOs. While radio communication, GIS and database management skills, for example, tended to be highly technical and required certain levels of education, by limiting PAs' participation, ISP could have missed an opportunity to incorporate local knowledge, values and traditions into the 'modern' Ethiopian EWS.

Nevertheless, ISP adopted an effective training approach that was based on principles of adult education, which had a potential of enhancing resilience capacity. It was practical and participatory, drawing on the experiences and capacities of the participants. Participants were trained in participatory learning methods – basics of adult education, lesson planning, two way communication and instructional techniques – in order to take their own new skills and knowledge and train others. Refresher courses were held to assist trainees with the application of their knowledge in real world situations. In the case of the EGS training, coaching and mentoring was used as an

additional intervention. Project staff posted to piloting areas worked closely with those trained in workshops to coach them in implementing the EGS guidelines and solve the day-to-day problems they encountered. Over the life of the project, the following were trained:

- 221 (15% women) were trained who further trained 3,818 other people including 12% women at *woreda* level
- 934 DPPA staff were trained in early warning basic concepts, technical analysis and computer skills of which 11 percent were women.
- 1,049 *woreda* staff were trained in EGS (5 percent women) and 100,908 community members (5 percent women) were in turn trained as team leaders, forepersons and skilled farmers who can now demonstrate soil and water conservation techniques to others.

Box 5.4 captures some of the comments from beneficiaries on the effectiveness of the ISP training.

Box 5.4 Effectiveness of ISP Training

It was a good approach in building capacity for DPPA. It enabled us to design, organize and deliver training by ourselves up to community level.

Kersa Woreda DDPA member (Male)

I've trained the zonal DPPA Committee, woreda DPPA Committee, woreda Line Departments experts and community representatives. The cascading approach is very important that the government and other training agencies should adopt.

North Shewa Zonal DDPA member (Male)

I've been trained by ISP in DM, EGS, and EW and found the courses quite useful. As I attended a ToT course, I also oriented my staff in DM, EW and EGS. We're also using ISP materials such as the farmer's handbook and are in the process of adapting them to our requirements

Food for Hungry International NGO (Male)

We were provided with manuals and still refer to them and are helping us prepare for training.

Amhara Regional DDPA member (Male)

I've applied ISP training in my regular work especially in HIV and AIDS awareness, disability, small-scale enterprise development, gender and development. I've also conducted training for organisations on women abuse for World Vision, Association for the Blind, Street Children Project, Women's Affairs Department and Works and Security Office.

Zonal DDPA member (Male)

EGS training was very useful as it helped us to carry out water harvesting other environmental projects.

Shekole Senbet PA community member (Female)

Box 5.4 illustrates that ISP graduates were applying what they had learnt. For example, using skills obtained from ISP training, graduates were able to design, organise and deliver training by themselves. Some ISP graduates, including those from NGOs, were able to transfer and adapt skills to other sectors such as HIV and AIDS awareness, gender and small-scale enterprise development. Similarly, EGS training enhanced community skills in project planning and management. Box 5.5 summarises how one of EGS training graduates benefited from the training.

Box 5.5 Benefits from EGS training

The EGS training was very good. Following the training, we constructed seventeen water harvesting ponds measuring 6m by 3m each. This involved 204 community members from our PA. Three of these ponds were made of plastic sheets while the rest were earth (bare) ponds. The plastic ponds are very good. They hold water for the whole year while the earth ones hold water for a maximum of three months. Sixteen households are using the water for their livestock and horticultural products. For example, last year (2004) I produced shallots, potatoes and cabbage in my garden using the water from the ponds. In addition to my family consumption, I sold some of the vegetables, which earned me ETB400.

ISP training was effective in the sense that it contributed to food security to some of the graduates, with a potential of the skills being employed in the post-ISP period, thus contributing to both short-term and long-term community resilience. Other examples of the effectiveness of training were in early warning systems such as data collection, analysis and reporting.

However, there were two notable weaknesses – poor documentation; and limited dissemination of lessons learned from training particularly action research. Firstly, there was some inconsistency in documenting and sharing lessons learned from seminars and meetings. Although lessons learned at regional seminars or meetings were fairly documented and fed them back to participants, it was not the same with those conducted at *woreda* level. Most *woreda* seminars or meetings were ‘talk-shops’ as proceedings were not documented. Secondly, it appears ISP did not adequately disseminate lessons learned from those seminars or meetings to community PAs. Because the lessons learned included constraints and possible solutions that were identified during the seminars or meetings, some senior line department officials were not keen to have such documents circulated – as that would be associated with poor performance. It was alleged by junior DPPA officials that attempts to foster change in the structure were not feasible due to lack of openness amongst DPPA senior officials. This study notes that enhancing systems and structural resilience was very much a long-term effort that demanded commitment, sensitivity and organizational expertise on the part of all partners. The implication here is that for social learning in development and humanitarian work to

contribute to disaster resilience, efforts should be made to consistently document and disseminate lessons learned using information, education and communication materials.

Effectiveness of physical capacity inputs

ISP's capacity-building exercise would have been incomplete without strengthening the DPPA's physical capacity. The way ISP strengthened physical capacity of DPPA sheds some light on challenges faced by development and humanitarian interventions. Indeed, human resource skills and knowledge were essential elements of the ISP capacity building initiative. But these could not be very useful on their own without tools to mediate action. Disaster management professionals needed appropriate physical resources to do their work: transport; warehouses for food stocks; computers for analyzing early warning data; equipment for designing EGS works; and radios for efficient communication. Although the scale of ISP could not satisfy the huge demand for physical resources, there were attempts to integrate human resource and physical capacity building in targeted areas, particularly where EGS was being pilot-tested. Table 5.5 summarises the physical resources that were acquired for each of the components. The training equipment, according to interviewees, was appropriate, delivered on time and was of high quality. For example, under the policy familiarization, books on disaster management were delivered to Bahir Dar University in 2005 for its disaster management programme. Some of the training materials developed by ISP for each of the components were transferred, and in some cases adapted, to other programmes implemented by UN organisations such as UNICEF and international NGOs like Care International and Food for Hungry International. Under the EWS, the equipment supplied included motorbikes, computers, radios and installation of the Wide Area Network (WAN) for efficient collection, processing, analysis and dissemination of early warning information.

The EW tools and equipment delivered by ISP to participating regions were said to be appropriate and useful by the interviewees. The data recording, analysis and reporting had improved as a result of the equipment. Box 5.6 summarises some of the effectiveness of the physical capacity of EWS.

Table 5.5 Physical capacity building resources

Component	Description	ANRS	ONRS	Federal
Disaster Management / Policy Familiarisation	TOT & facilitators manuals	100		
	Flip chart stand	10	10	
	Booklets and cloth flip charts	100	212	
	Software for Bahir Dar university	1		
	Computers with printers	6	3	
	Books on DM for higher institutions	Various		
	Typewriter (Manual)		1	
	LCD projector		1	
Early Warning System	Worlds-space radio	1		
	flip chart stands	1		
	Radio maintenance tool-kit	10	2	
	GIS mapping soft-ware	2	1	
	Photocopier	2	3	
	Spare parts (kit)	2		
	Computers with printers	6	6	
	Codan Radios	8	2	
	Fax Machine	2	3	
	Motor Bikes	16	6	
	WAN system	1		
	Motor Vehicle	1		
	Scanner	1		
	Digital camera	1	1	
	EW WAN system (federal level)			1
	LCD Projector	1	1	
Linking relief with development / Employment Generation Scheme	Medical kits for Pas	11	13	
	Plastic sheet	11	10	
	Design equipment (set)	4	2	
	Water harvest and horticulture materials	8	3	
	Hand tools (set)	46	20	
	Relief Food Outlets	10	5	
	Desktop computers with printers	4	1	6
	Laptop Computer			1
	LCD Projector	1		
	Photocopier and duplicating machine	8	4	

Box 5.6 Effectiveness of ISP on EWS

Weekly EW data and other emergency information are transmitted using radio. Radio communication has highly improved the information flow from remote Woredas such as Mayu Muluke, which was not possible before ISP's intervention. It has provided quick information exchange ... The photocopier has reduced the burden of our work as we can easily make copies of documents we want such as the EW data forms. The flipchart stand has helped delivery of training at community level.

Zonal DPPA member (Male)

In most cases, disaster affected areas are in remote and inaccessible rural areas. The vehicles have helped us reach these areas and gather data within a short time. The office equipment including computers have improved our data storage, improve the quality of preparation and delivery of EW training

Regional DPPA member (Male)

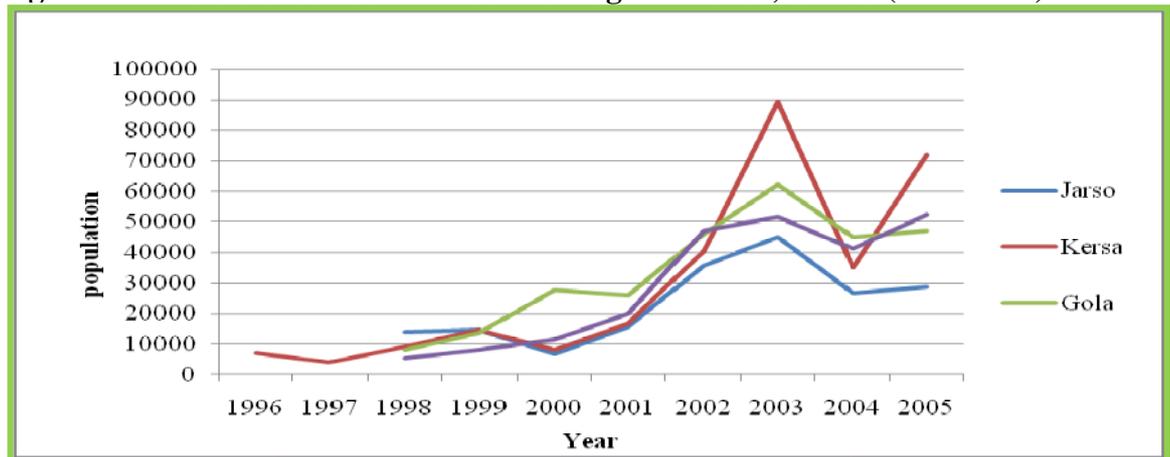
Another notable effectiveness was related to data collection, collation and analysis. The provision of communication equipment and vehicles made remote and difficult areas accessible. The office equipment (which included photocopiers, desktop computers, laptops and duplicating machines) had improved data recording, analysis, retrieval and reporting. Similarly, training in EW concepts, data collection, analysis and reporting, price and market monitoring, crop and livestock monitoring, local and national food security monitoring and radio operation led to the improvement in EEW operation system.

There was little doubt about the effectiveness of modern technological inputs, provided by ISP, on preparedness and response systems. Slow-onset disasters like those triggered by drought and environmental degradation in Ethiopia provide better opportunities for consultation and discussion with affected communities to incorporate local knowledge. But that is important for another reason too – such an approach would enable the vulnerable communities to understand the root causes of their vulnerability and opportunities that exist for them to enhance their resilience²⁸. There was need to integrate the EWS with ‘soft’ systems: local knowledge, values and traditions built over centuries where existing resilience was hidden. Tales, legends, case histories and common sense, *inter alia*, could have been useful sources of information. Cost-effective EW information sharing mechanisms such as ‘people-to-people’ could have been integrated into the formal DPPA system.

The other notable effectiveness of ISP relates to the databases that were created for both ANRS and Oromia regions. Databases containing details of households which required humanitarian aid were compiled covering periods 1994 to 2005 for Oromia and Amhara regions. The data for the graphs in Figs 5.5 and 5.6 were extracted from each of the regional databases. In Fig. 5.6 for example, in 2003 Simada had the highest number of people (160,000) needing food aid while Wlida had the lowest number (20,000). This suggests that Simada was the most food insecure woreda in 2003 South Gonda zone and therefore was targeted for intervention.

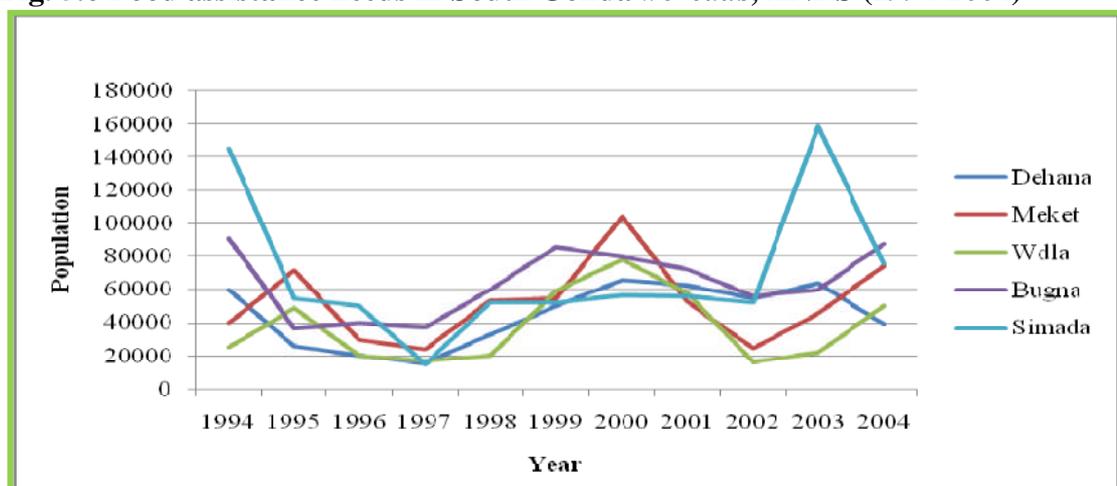
²⁸ Tadesse Lachu (2004) also makes an emphasis on this point in a research paper on ‘Emergency Response and Disaster Preparedness through LRD/EGS and Early Warning System at Food Insecure Kebeles in Wuchale-Jida Woreda, North Shewa Zone, Oromia Region.

Fig. 5.5 Food assistance needs in East Harraghe woredas, ONRS (1996-2004)



Source: Author

Fig. 5.6 Food assistance needs in South Gonda woredas, ANRS (1994-2004)



Source: Author

In this way, ISP demonstrated how development and humanitarian interventions could enhance systems capacity and resilience to proactively respond and avert a crisis. Each of the databases covered a period of 10 years and had become important decision tools by policy makers to prioritize disaster risk (and development) interventions. Interviews with DPPA field staff, NGOs and UN agencies revealed that EW information had increasingly become the basis for initiating new interventions. Food for Hungry International (FHI), Care Ethiopia, ORDA and WFP for example, were some of the organisations who were accessing the EW information for planning interventions at the local level. Most participants attributed the EEWS's significant improvement in its operations was a result of ISP's physical capacity building and training efforts.

Under the EGS component, construction of Relief Food Outlets (RFOs) or relief food warehouses was one of the most outstanding features of ISP, which can provide lessons on how development and humanitarian interventions can promote disaster resilience. A total of 25 RFOs were built for the two regions to increase physical access

of relief food by beneficiaries, particularly by the most vulnerable groups: the elderly; pregnant women; and lactating mothers. Location of RFOs was done in consultation with *woreda* administration and communities based on EGS criteria. It was observed during fieldwork for this study that the RFOs were of high standard and in accordance with government building regulations. They were handed over to DPPA who had assumed responsibility for their repairs and maintenance. In some instances, NGOs like Food for Hungry International (FHI) and Organization for Rehabilitation and Development in Amhara (ORDA) had maintenance budgets for RFOs.

Similarly, hand tools, design equipment, water harvest and horticulture materials were also notable under the EGS component. These were delivered to each of the participating PAs. Interviews in Simada *woreda*, established that participants were satisfied with the quality of the EGS physical inputs. Further, participants indicated that, of all the tools, hand tools had greater impact on the communities than other tools in the accomplishment of EGS task as they were appropriate and user-friendly. A female participant in Simada had this to say

The workmanship and output improved as a result of tools. For example, before the supply of hand tools, one person would complete three terraces but now one person completes about six terraces... This has not only served our time but also motivated us as the tools are quite user-friendly.

PA representative (Female)

Similarly, using the H-Form in Box 5.8, participants in Shekole Senbet PA, Delanta Dawnt *woreda*, had more positive than negative aspects regarding their experiences related to physical inputs. Like participants in Simada *woreda*, Box 5.7 indicates that physical inputs, particularly hand tools, had a positive impact on the workmanship and efficient completion of EGS tasks.

Although most participants were satisfied with the timely delivery of tools, some complained that tools were inadequate and lack of the maintenance of tools. The equipment supplied by ISP became government property; it was entered into the government asset registers in both Oromia and Amhara regions. Although annual inventories were conducted, shortcomings were noted in the management of the tools including repairs, maintenance and replacement. Interviews with federal level DPPA staff revealed that the government had an inadequate, if any repairs and maintenance budget, even for its old equipment. In addition, the government used the pool system where resources were managed by a particular department. The major problem

“associated with the pool system were lack of effective coordination and utilization systems, poor maintenance of equipment and insufficient responsibilities for the resources.”²⁹ This suggests it would be difficult to keep the equipment supplied by ISP in a good state of repair and maintenance, which would affect the sustainability of ISP benefits including the resilience enhanced. Thus, lack of budgetary commitment for the maintenance of physical equipment governance and accountability issue. It shows the government had different priorities from those that were urgent to local communities, particularly the poorest of the poor.

Box 5.7 Positive and negative aspects of physical inputs

Physical inputs		
Negative aspects	Possible solutions	Positive aspects
<ul style="list-style-type: none"> • Problems related to maintenance of tools • Sometimes delays in delivery were experienced (1-3 months) • Lack of budget in first aid training • Tools are not enough 	<ul style="list-style-type: none"> • The community should develop mechanisms to own tools • Training support in first aid should be given • Government should allocate maintenance budget • Materials should be delivered according to plan 	<ul style="list-style-type: none"> • It created some capacity at woreda level • The material support enabled us to implement pilot activities • It helped us achieve quality EGS outputs • The workmanship and output improved as a result of tools • Helped us to overcome serious hand tools shortage in the woreda to implement EGS • The provision of sufficient and complete hand tools package to participating PAs helped to analyse the impact of EGS

5.9 Impact of ISP

The impacts of ISP have been summarised in Box 5.8 In the absence of project records such as a baseline study or detailed interim evaluation reports, change over time was described by interviewees’ experiences before and after the ISP. The impacts of ISP in Box 5.8 have already been discussed under relevance, efficiency and effectiveness. Notable impacts warranting discussion are: human resources development, DRR

²⁹ Interview with federal DPPA staff member on 29th November, 2005.

coordination, community organisation, livelihood security and replication of ISP activities.

Box 5.8 Summary of ISP impacts

Positive	Negative
<ul style="list-style-type: none"> • Institutionalisation of DRR in DPPA, Line departments and external institutions • Improved DRR coordination including EWS • Contribution to livelihood security • Replication of EGS by non-participating zones, woredas, PAs and other organisations • Productive Safety Net Programme is based on the lessons from EGS • Improved community organisation 	<ul style="list-style-type: none"> • Encouraged dependency on donors and government • High staff turnover threatened sustainability of activities and impacts of ISP • Some government officials took the weaknesses identified during training as criticism

Impact human resources development on institutional building

The human resources capacity-building component was one of the core activities of ISP which highlights modalities of enhancing resilience to disasters. The major thrust of ISP was to change the attitudes and behaviour of DPPA and line departments staff involved in DRR through knowledge and skills development (of experts from federal to local level). This was achieved through on-the-job, short-term and professional training which were conducted from 2002 to 2005. There was considerable consensus among interviewees that there has been some degree of change in DRR knowledge, attitudes, behaviour and practice for the DPPA staff from federal to PA level.

The study established that the human resources capacity had improved as a result of training. There was evidence training was cascaded to community level and adopted a ‘demand-driven’ approach, giving more attention to specific needs of different target groups. Participants were, however, aware that attitude and behaviour change was a long and slow process. Furthermore, it was difficult to assess the level of acquisition of knowledge and skills without a detailed assessment, which could not be done due to resource and time constraints. Like in CCJP (Chapter Five, section 4.7) and ARP (Chapter Six, section 6.6) case studies, it was also problematic to attribute any increases in knowledge and skills to a particular project or activity in a situation where there were multiple actors in the same or related activities. However, the sustainability of the activities and impacts of ISP depended on how high staff turnover was handled by the government. This issue is later revisited in section 5.10.

Nonetheless, human resources capacity development had observable impacts on DPPA’s operational system which provide some lessons to similar interventions towards

resilience building. Coordination of DRR activities was one of the indicators of the impact of ISP. Participants from South Wollo Zone compared the level of DRR coordination before and after ISP support as summarised in Box 5.9.

Box 5.9 Coordination of DRR before and after ISP

Before ISP	After ISP
<ul style="list-style-type: none"> • Single agency approach to DRR • Low awareness of disaster management all levels (region, zone, woreda and PA) • Limited capacity to familiarize and test NPDPM • Unclear coordination among line departments • No clear roles and responsibilities • No linking between relief /disaster and development • Blanket humanitarian aid distribution • No clear targeting guidelines to select disaster affected people • Reactive / crisis intervention and relief focused 	<ul style="list-style-type: none"> • Multi-agency approach to DRR • NPDPM policy awareness at all levels • Improved monitoring of vulnerable areas through pre-and post-harvest assessments • Bottom-up with more involvement of decentralised structures including local community involvement • Proactive / timely intervention and focused on all disaster phases • Decentralised system including early warning system • Targeted humanitarian aid distribution

A consensus among study participants was that multi-agency DRR, institutional structures of DPPA and EW were activated or established at regional, zonal and *woreda* levels, and to a small extent, at the community level in targeted areas. Both ISP periodic reports and in-depth interviews, showed an improved understanding of disaster management as a multi-sectoral rather than a single agency task. This was evidenced by sharing of responsibility by LDs as well as assigning DRR focal persons in each LD. Multi-sectoral teams conducted pre-and post-harvest crop assessments at regional, zonal and *woreda* levels ahead of the national level assessment which was not the case before the initiation of ISP interventions.

It was further claimed by at least four key informants that the EEWS helped to avert the 2002/3 humanitarian crises following the 2002 *Belg* (secondary rains) and *Meher* (main rains) failures. The 2002/3 humanitarian crisis that was on a scale of 1974 and 1984/5, was averted due to, among others, effective coordination and transparency by DPPA structures at all levels. EEWS accurately predicted the effects of the drought on pastoral and farming communities and triggered local and international responses.³⁰ This was attributed to an increase in the frequency of DPPA and EW meetings, improved follow-up by DPPA and improved coordination and cooperation by line departments and

³⁰ ‘Evaluation of the response to the 2002-03 emergency in Ethiopia’ (October, 2004) by the Steering Committee for the Evaluation of the joint Government and Humanitarian Partners Response to the 2002-03 Emergency in Ethiopia; Overseas Development Institute (ODI)(2005) A Review of Emergency Food Security Assessment Practice in Ethiopia, World Food Programme.

NGOs. Improved coordination of DRR activities were also confirmed by North Wollo zone participants whose views were captured using an H-Form, as summarised in Box 5.10. Nonetheless, they also listed some problems which were still apparent in DRR coordination which are revisited in section 5.10 under sustainability.

Box 5.10 Positive and negative aspects in DRR coordination

DRR Coordination		
Negative aspects	Possible solutions	Positive aspects
<ul style="list-style-type: none"> • Irregular committee meetings • Delegation of different staff members to attend meeting which affected continuity of planned activities • New staff members lack awareness of the linkage between DRR and development • DRR issues considered as duties for agriculture and rural development departments • Lack of regular reporting • Work overload on committees • Staff turnover affected technical skills 	<ul style="list-style-type: none"> • Limiting the number of committee members to key sectors • Incorporation of DRR in sectoral plans • Meetings should be regular and held as planned • DPPA should be strong in discharging its responsibilities 	<ul style="list-style-type: none"> • Relief resources allocated on the bases of EW information • Joint seasonal crop assessments • Timely response to urgent disaster needs • Schedule of meetings fixed (although not religiously followed) • Improved food aid management • Monthly EW reports produced • Improved understanding of roles and responsibilities • Use of EW data as a basis for intervention • Improved understanding of LRRD • Better prioritisation of activities • Good relationship between DPP and EW Committee and among organisations involved. • Improved reporting system and information exchange between committees

Impact of EGS on Community Organisation

There was also a notable increase in community involvement in the generation of local development plans, which had a high likelihood of engendering a sense of ownership of EGS projects. Fig.5.8 shows an example of community planning and mapping skills developed by ISP. The activities marked 1 (one) had the highest priority while those marked 4 (four) had the lowest priority. This community demonstrated how they identified, prioritised problems and suggested solutions. Thus, ISP to a certain extent contributed to resilience development of this community from which similar development and humanitarian interventions may draw lessons.

The impact of EGS on livelihood security has been documented elsewhere in this chapter (for example in section 5.4). It might suffice it to mention that the human capital enhanced through ISP training helped communities to improve their natural capital. Environmental rehabilitation to combat soil erosion helped farmers increase their land for cultivation. The physical capital, particularly roads, helped some farmers, albeit a few, to improve their financial capital through improvements in mobility to access markets to sell their produce. In addition, the majority of participants across the participating zones, woredas and PAs generally indicated that people were able to satisfy their needs better than three years before the inception of ISP third phase. However, even if communities satisfied their needs better than previous years, the majority of communities did not sell any surplus and food was still unavailable throughout the year, mainly between May and October. In some PAs, for example Kufan Ziq, (Box 5.11), the food security situation had not improved by 2005, three years since ISP III's intervention. Although ISP had enhanced some level of resilience, it appears resilience building is a lengthy process, which should integrate both strategic and practical livelihood needs of the vulnerable groups rather than concentrating on structural issues alone.

5.10 Sustainability of activities and impact of ISP

The extent to which development and humanitarian interventions promote resilience can be ascertained by, *inter alia*, the sustainability strategy. That sustainability and resilience are intimately connected has been argued by Perrings (1998). He argues that the sustainability of a social system depends on the resilience of that system. In this connection, ISP's final phase focused on sustainability to ensure the benefits continued to accrue after the end of the project. Institutionalization of DRR, commitment and mobilization of resources to support DPPA's human resources and physical capacity were central to the sustainability of ISP activities.

Sustainability of training

Although ISP did not have a specific target of the number of people that were to be trained, ISP staff who participated in the study indicated that the project achieved more than expected. More than 100,000 people underwent a variety of training programmes from federal through to local level involving both state and non-state actors. The training included familiarization, early warning systems and EGS. Some DPPA professionals received formal training in disaster related fields from local and international academic institutions in countries such as South Africa, UK and Uganda. The common issues

around sustainability of human resources trained by ISP were summarised using an H-Form by zonal staff in North Showa (see Box 5.12)

Box 5.12 Sustainability of human resources capacity enhanced by ISP

Negative aspects		Positive aspects
<ul style="list-style-type: none"> • High turnover of staff trained by ISP due to the government restructuring programme • No responsible body for making an inventory of trained DPPA, line departments and NGO staff • No handover and takeover established through ISP • No budget commitment from government • Human resources development plans very limited and sometimes without budget 	<p style="text-align: center;">Possible solutions</p> <ul style="list-style-type: none"> • Establish an inventory of trained staff who can still be located • Establish handover and takeover systems • Organise refresher training for staff who can still be located 	<ul style="list-style-type: none"> • More people trained in disaster management, EW and EGS are likely to be accessed • Introduction of DRR programme at Bahir Dar university

There were two notable problems that would have an impact on the sustainability of the benefits of ISP raised in Box 5.12, which could provide lessons to similar development and humanitarian interventions.

First, high staff turnover was problematic. As a result of GoE’s restructuring policy, staff members were transferred to other line departments without taking into account the skills obtained while on the job including those acquired through ISP. There were no handover/takeover or induction systems in place for new employees.

During staff turnover following the restructuring process no handover of resources from previous officials to the newly assigned is undertaken ... the new DPPA staff do not get any written document or information left by the previous staff regarding what resources have been provided by ISP to their department ... the whereabouts of all other materials including the different training manuals is not known to the DPPA.

ISP staff member

There was a high likelihood of institutional memory loss, which would threaten the sustainability of the impact as well as activities of the project. Although the study could not establish how many employees were affected, some participants indicated that there were a handful of employees who were frustrated by the government’s restructuring

programme and had since left the government for the NGO sector. There was also need to find ways for maintaining commitment as well as retention of staff trained by ISP.

Secondly, ISP and DPPA were expected to have created an inventory of people trained by the project so that they would be accessible by DPPA when required to provide training. However, at the time the study was conducted, there was no inventory of trained experts and it was not known where they were located and the kind of training they had received. In such a scenario, it was highly unlikely that the experts trained by ISP would be accessed by DPPA when required to provide training. Thus, the institutional systems resilience enhanced by ISP suffered a major setback due to government policy changes and it was highly unlikely that project benefits would be sustained. This confirms that resilience building is about politics – it is about *governance* and *institutions* in which it is rooted.

Institutionalisation of DRR for sustainability

On the institutionalization of DRR as multi-agency rather than a single agency undertaking, the responses from participants were positive. However, there was no convincing evidence that DRR was institutionalized horizontally in line departments apart from DPPA. DRR activities were still viewed as secondary or seasonal activities rather than primary jobs by line departments. Attendance to DRR committee meetings was inconsistent. In most cases, a different set of people, sometimes with little or no experience at all, attended each meeting thereby affecting the quality of outputs. Most committees rarely had a calendar of all activities including meetings as well as assigned roles and responsibilities for members. For example, EW Committee meetings were not regularly held and tended to be reactive rather than being proactive - they were held on an *ad hoc* basis. Causes for this included huge workloads, low staff establishment and lack of orientation for relevant line departments' heads to the NPDPM framework and directive. But this also stemmed from the fact that respective line department mandates did not have DRR as one of their core activities. This called for a review of the NPDPM policy and introduction of a regulatory framework to ensure compliance, accountability and responsibility of relevant line departments. Because of lack of legal enforcement of NPDPM, its implementation was dependent on 'moral' and personal willingness and commitment rather than system commitment and compliance of those who were charged with its implementation. Thus, the sustainability of ISP activities was highly unlikely.

The introduction of disaster curricula at Bahir Dar and Gondar Universities and at Woreta College of Agriculture was viewed as a sustainable way of knowledge

development, behaviour and attitude change in DRR. At Bahir Dar University, the Bachelor of Science Degree programme in Disaster Management and Sustainable Development³¹ commenced in 2006/7 academic year. Bahir Dar University's programme has grown from strength to strength. By December 2007, Bahir Dar University had secured funding from USAID to support the disaster management programme because 'USAID strongly believes that institutionalizing disaster risk management skills and capacity will, in the end, save millions of Ethiopian lives'³². The sentiments of a senior official at Bahir Dar University were captured in Box 5.13.

Box 5.13 Inception of DRR studies at Bahir Dar University

We're very excited to house this programme. We've so far submitted two project proposals to donors to support us to engage overseas professionals to come and teach this interesting subject area. We've also prepared a budget to meet recurrent and capital expenditure to build the capacity of the programme. Our networking and collaboration with other universities such as Makerere in Uganda is likely to help publicize our programme and encourage research and scholarship in this interesting area.

Thus, ISP's benefits would continue to accrue beyond its gestation period. Continued production of graduates from higher education institutions would contribute towards DRR research and scholarship in Ethiopia. However, a large number of participants expressed the need for disaster education to be introduced from primary schools through to institutions of higher learning. It was argued that building disaster resilient communities should start with children as future adults. Children are believed to be more receptive to new ideas than adults, and it is also believed that they influence their peers and parents. Although, disaster research suggests that improved DRR awareness among students does not lead to changes in disaster preparedness at home, it seems that risks/hazards education leads to more accurate perceptions of risk and better understanding of protective measures (Twigg, 2004:182). But a project along this route should be carefully considered especially availability of resources for outreach programmes, involvement of civil society organizations, calibre of staff and the scope of curriculum.

³¹ The author assisted the university with the support of ISP to design the curriculum of the degree programme in 2005.

³² USAID Director, Glenn Anders, launching the agreement between USAID and Bahir Dar University, 13th December 2007.

Sustainability of EGS benefits

EGS was the most successful component in demonstrating the linkage between DRR and sustainable development. Disasters indeed create a window of opportunity for development if the relief activities bring about the sustainable socio-economic changes to the lives of the beneficiaries. Assets, such as rehabilitated land, water ponds and livestock, created by EGS were highly likely to continue to delivering benefits. Box 5.14 summarises the experience of one of the PAs which may be related to sustainability of ISP benefits.

Box 5.14 Sustainability of EGS benefits

In Shekole Senbet PA, Delanta Dawnt *Woreda* in North Wollo, three ponds were constructed under EGS. One of the ponds of 1000 – 1500 m³ was constructed by 120 beneficiaries. Eighteen of the farmers had produced eucalyptus seedlings for hillside rehabilitation. The second pond, constructed by 164 beneficiaries, was serving 250 people to water their livestock and domestic consumption. The third pond was constructed by 188 beneficiaries with 120 families using water for domestic consumption, horticultural production and watering livestock. Benefiting household had started 10 Ethiopian Birr (ETB) each for fencing the ponds. A handful of farmers reported significant improvements in their crop yields as a result of using terracing, stone bunds construction and compost manure.

The important point to note from Box 5.14 is that the assets developed by EGS would continue to be used by communities in improving their food security portfolios.

Similarly, farmers who bought livestock such as cattle, goats and sheep using the cash payouts from EGS were likely to continue realising the benefits. The sustainability of livestock lies in their potential to multiply and provision of draught power. Livestock is an important aspect in the Ethiopian food security equation. However, long-term sustainability of these assets was dependent on agricultural conditions. Drought, with the increasing concern of climate change impacts, would lead to both crop failure and livestock depletion, unless robust measures were put in place.

Exit strategy and sustainability of benefits

The study established that ISP made some attempts to implement an exit strategy through discussions and annual planning meetings that aimed at budgetary cost sharing and DPPA's gradual assumption of responsibilities. Without mobilisation of resources by DPPA as part of the exit strategy, the sustainability of physical and human resources capacity was in doubt. The government did not have explicit systems, plans, and commitment to mobilize and allocate resources for human resource development and repairs, maintenance and replacement of physical inputs. For example, there was inadequate, if any human resources development budget that would enable DPPA to

continue with training activities. Instead, more reliance was being put on external support, notably from UN agencies and NGOs. This raises a question on the sustainability of ISP activities as well as its impact. With declining development assistance and donor fatigue in recent years, donor funding was no longer a reliable source.

But the major problem was related to the *timing* of the exit strategy. The exit strategy was left to ISP's final phase. This was problematic and too late for effective implementation. The ISP staff indicated that time was too little for implementation given the government bureaucracy to have the budgetary allocation for DRR issues. Thus, the sustainability of the disaster resilience enhanced by development and humanitarian interventions also hinged on the project entry and exit strategies. The final phase of the project concentrated on meeting the unaccomplished targets of previous phases. Minimal attention was given to dialoguing and influencing government in committing resources to sustain ISP activities.

5.11 Conclusion

The ISP provision highlights the extent to which it attempted to enhance disaster resilience in Ethiopia through piloting the implementation of NPDPM. It brought the debate to the fore around the conceptual, operational and procedural modalities of how institutional systems including their underlying values, rules, norms of behaviour and traditions can provide lessons for resilience building. ISP demonstrates that DRR capacity building interventions are about integrated social learning, cascaded to all institutional levels with the objective of strengthening both the bureaucracy and communities. Being fundamentally driven by a combination of the basic needs approach, the hazard-focus and the deficit vulnerability model (IFRC, 2004), training at the community level was narrow and served the purpose of improving workmanship and outputs on the small projects. The motivation for communities to participate was linked to material benefits. Food handouts or cash transfers were the major attraction for community involvement. Consistent with limitations of the basic needs approach (Uvin, 2007; Gready, 2008), hazard model (O'Keefe *et al.*, 1976; Blaikie *et al.*, 1994; Cutter, 1996; Wisner *et al.*, 2004; Collins, 2009) and vulnerability model (IFRC, 2004), ISP neither made local communities agents of change (individually or collectively) nor enhanced their social capital to levels where they would (re)create institutional structures that would serve their needs. ISP was oriented towards the deficit vulnerability model to assist communities to cope with hazards rather than assist them to 'bounce forward'

following a disaster. The ultimate goal of ISP was to assist vulnerable communities to satisfy their practical needs (basic physiological rather than high order needs espoused by Abraham Maslow)³³ and improve human security within the same structures that caused disaster in the first place.

Yet, the history of Ethiopia shows that the locus of disaster causation is fundamentally *political* (Villumstad and Hendrie, 1993; Kaluski *et al.*, 2002). Moreover, there was evidence that *governance* had a major effect on the sustainability of the impacts and activities of ISP, for example, through lack of budgetary commitment for the maintenance of physical equipment. The GoE's reorganization of the civil service, which induced high turnover of staff trained by ISP and lack of broad-based community involvement, had a considerable effect on the sustainability of project benefits.

At the same time, the ISP process shows that vulnerable communities have the ability to address and improve their own condition provided they are 'given' the space, resources and institutional support to improve their livelihood portfolios and resilience. There was evidence that, in the short term, ISP's EGS component enhanced community capacity to protect and create livelihood assets, with government and donor assistance. However, in the event of a disaster, it was apparent the target communities would still be unable to recover using their own resources and competencies without external assistance. Thus, ISP demonstrates that donor driven EGS does not necessarily lead to sustainable disaster rehabilitation and recovery, if anything, it tends to be seasonal, intermittent and unreliable. The danger was its likelihood of entrenching dependency among vulnerable groups thereby destroying rather than enhancing the resilience of communities created over centuries. The next chapter explores the lessons from the Agricultural Rehabilitation Project in East Timor, which provides further insights into the dynamics of resilience building.

³³ Abraham Maslow's is one of the most prominent psychologists whose hierarchy of needs theory has been applied across social sciences disciplines. He proposed that every person has a hierarchy of five needs: a. *physiological needs* – food, drink, shelter, sex, and other physical requirements; b. *safety needs* – security and protection from physical and emotional harm; c. *social needs* – affection, belongingness, acceptance, and friendship; d. *esteem needs* – internal esteem factors such as self respect, autonomy, and achievement and external esteem factors such as status, recognition, and attention; d. *self-actualisation needs* – growth, achieving one's potential, and self-fulfilment as well as the drive to become what one is capable of becoming (Robbins and Coulter, 2007).

CHAPTER SIX

THE AGRICULTURE REHABILITATION PROJECT, EAST TIMOR

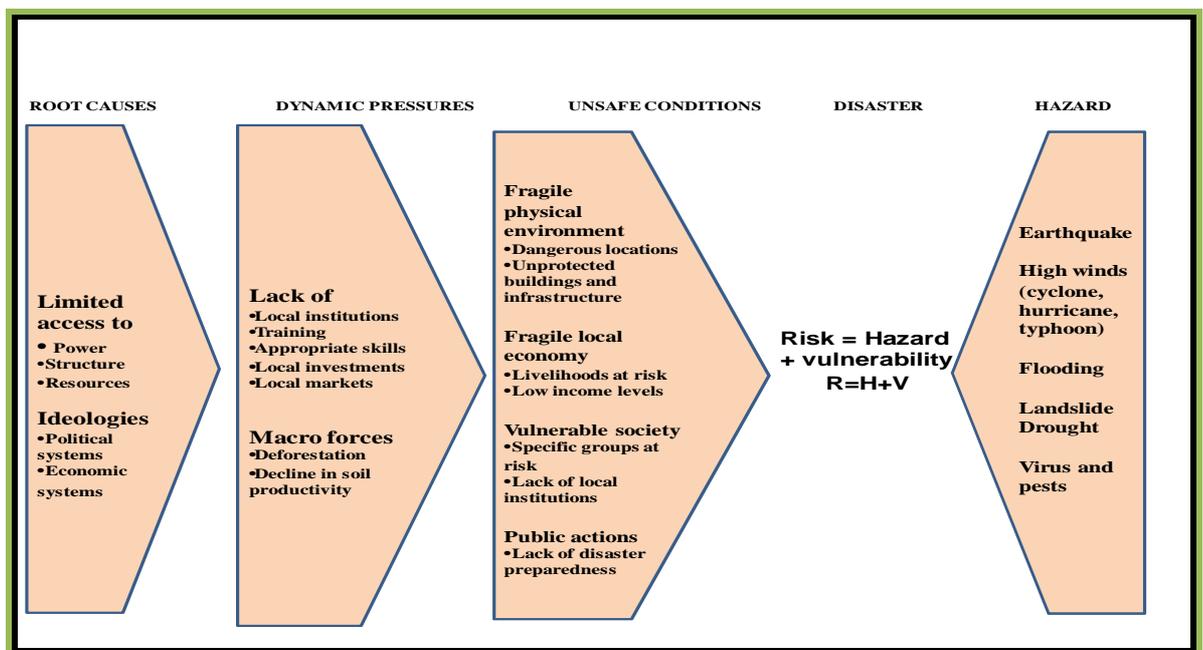
6.1 Introduction

Based on the assumption that improved agricultural production would enhance food security and sustainable development, East Timor prioritised the rehabilitation of the agriculture system in its post-conflict phase since 2001. Using data from a questionnaire survey and participatory interviews conducted in 2004, this chapter explores the extent to which The Agriculture Rehabilitation Project's Second Phase (ARP II) promoted the integration of disaster and development, community participation, social learning and livelihood security, *inter alia*, to enhance disaster resilience in East Timor. The context of East Timor, the characteristics of ARP II and the findings are presented.

6.2 Context of East Timor

To trace the vulnerability of East Timor to disasters, the PAR model has been used. Fig. 6.1 illustrates how vulnerability progresses from root causes to unsafe conditions which intersect in space with a hazard to produce disasters in East Timor.

Fig. 6.1 Pressures that result in chronic disasters in East Timor



Source: Adapted from Wisner et al. (2004)

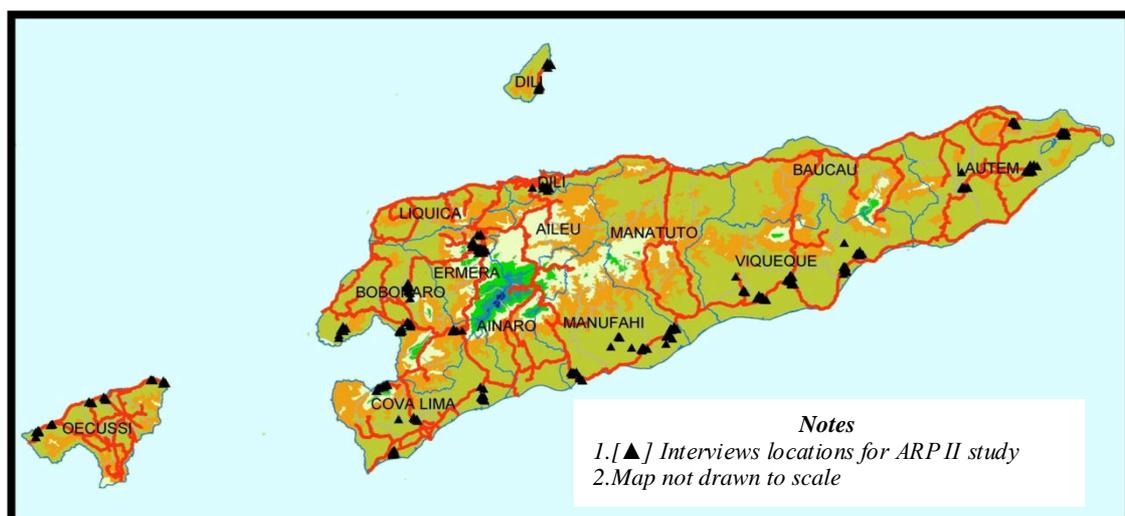
6.2.1 Physical and socio-economic background

East Timor, also known as Timor Leste or Timor Lorosaé, is located in southeastern Asia between Indonesia and Australia in the Lesser Sunda Islands towards the eastern end of the Indonesian archipelago (see Fig. 6.2). East Timor shares a common boundary with Indonesia's West Timor. It includes the eastern part of the island of Timor, the neighbouring islands of Pulau Atauro and Palau Jaco and the enclave of Oecussi (Ambeno) lying towards the northwest of Timor. The Timor Sea separates Timor Island from Australia in the south.

East Timor has an area of 15,000 km² with a land boundary of 228 km and coastline of 706 km. It is characterised by a core of rugged hills and mountains. Altitude ranges from sea level at Timor Sea, Banda Sea and Savu Sea to 2,963m at Gunung Tata Mai Lau Mountain, which forms the highest point. About 8.2 percent of the land is arable where crops like wheat, rice and maize are grown. About five percent of the arable land is used for growing crops like coffee, rubber, citrus, nut trees and vines. The remaining portion of the land comprises forests, woodlands, pastures and meadows.

The climate is hot, with an average temperature of 24°C and around 80 percent humidity. Between November and April, in the monsoon season, the rivers become torrents due to extremely high precipitation. On the northern coast, the rainfall ranges from 500 to 1,000 millimetres per year. The southern coastal plain, however, can receive over 2,000 millimetres and has two wet seasons and two harvests. Timor Island is also affected by El Niño-related weather (UNDP, 2006), an anomaly which makes it vulnerable to droughts.

Fig. 6.2 Distribution of Timor-Leste's administrative districts



Source: ARP II study team)

East Timor's population is about 1.1 million, with 45 percent consisting of people under the age of 15 while three percent consists of people aged 65 and above. According to the 2001 *Suco* Survey, 50.3 percent of the population was male and 49.7 percent female (UNTAET, 2001). The majority of the population, about 73 percent live in rural areas. The average size of a household, according to this study, was 5.8 (see Table 6.1), with a standard deviation of 0.43 and range of 1.2 between the highest (Ermera) and lowest (Oecussi). This suggests the size of the majority of households fall between 5.37 and 6.23.

Table 6.1 HH headship and size

% HHs	Districts								
	O	C	B	E	D	M	V	L	All
Female headed	12	5	7	10	16	5	11	23	11
Male headed	88	95	93	90	84	95	89	77	89
% HHs where the head is;									
Married	78	88	83	75	66	75	78	67	76
Single	0	1	3	1	2	2	3	2	2
Widow/widower	12	7	7	7	15	4	11	15	10
Separated	0	0	1	0	0	0	0	0	0
Divorced	0	0	0	1	1	0	1	1	0
Information not available	10	5	6	16	16	20	7	16	12
Average size of HH	5.1	5.9	6.2	6.3	5.3	6.1	5.9	5.6	5.8
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

The data in Table 6.1 was consistent with UNICEF and ECHO's (2002) Multiple Indicator Cluster Survey, which estimated the average household size to be 5.7. The distribution of household size about the mean provided a normal distribution. Whilst this type of data was already available from other household surveys of Timor-Leste, it was important to generate it anew for this study as a check on the accuracy of the data. Consistent findings on the basic demographics from the sample of this survey, together with statistical observations such as conformity to normal distributions in the data, all suggest there was a high degree of accuracy in the data. Any error in the remainder of the data that was generated by this study was likely to be more a result of different interpretations of the meaning of some questions rather than a systemic error resulting from the sample strategy.

Farming was the main economic activity. This study established that the majority (83 percent) of heads of households' main occupation was farming. There are small variations across the sample, with Manufahi and Viqueque accounting for 87 percent (highest) each and Bobonaro accounted for 77 percent (lowest). The remainder was

distributed among other activities that included petty traders, self-employment, civil servant and being the head of a *Suco* (see Table 6.2).

Table 6.2 Main occupation of head of HH

% HHs	Districts								
	O	C	B	E	D	M	V	L	All
Farmer	86	82	77	83	79	87	87	84	83
Petty trader	2	4	6	0	0	0	2	1	2
Private employee	0	1	0	1	1	1	0	0	0
Civil servant	2	2	4	0	0	1	2	1	2
Chefe de Suco	0	0	1	0	0	1	2	1	2
Other*	0	0	3	6	17	8	8	9	6
Unable to determine	10	10	9	10	3	3	2	5	6
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

The data in Table 6.2 was consistent with the UNTAET (2001) findings of the Poverty Assessment conducted in 2001 and ARP I Impact Assessment Survey conducted in 2002, which estimated the percentage of farmer households as being 86 percent and 85 percent respectively. Similarly, the 2001 *Suco* Survey, established that farming was the main source of income. Approximately 94 percent of the population obtained their income from farming, one percent from fishing and the remainder from some other productive activities (UNTAET, 2001). For the poorest half of the Timorese society, agriculture was found to be the primary occupation of 85 percent of household heads. The main crops grown, mainly at a subsistence level, are rice, maize, cassava and coffee (UNTAET, 2001).

Administratively, East Timor is divided into thirteen districts, 65 sub-districts, 443 *sucos* and 2,336 *aldeias* (towns) (see Fig 6.2). The capital city is Dili, which also serves as the chief port and commercial centre for East Timor. It houses the administrative headquarters of all arms of government. The administrative structure installed by UNTAET in 1999 and handed over to the new Government of Timor Leste (GoTL) at independence in May 2002, remains in force today. The administrative aspects, and their implications on resilience building, cannot be discussed in isolation from the political background of East Timor, details of which are revisited in section 6.2.2.

In terms of development, the claims by Indonesia that it had promoted East Timorese development and provided vital support in areas such as health and education remain unconvincing (Patrick, 2001). Evidence of systematic neglect of East Timor and its people under Indonesian rule is, even today, compelling. In 2007, five years after independence from Indonesia, East Timor was ranked 150th in the HDI out of 177 countries while Indonesia ranked 107th (UNDP, 2008). East Timor's life expectancy was

59.7 in 2005. Forty-two percent of the population did not have access to clean drinking water while only 36 percent were using improved sanitation facilities. About 40 percent of the population live on less than US\$0.55 per day while 64 percent of the population suffer from food insecurity. Fifty percent of the population aged 15 and above were illiterate in 2005. It has also increasingly become a donor-dependent country with Official Development Assistance (ODA) accounting for 59.2 percent of GDP in 2005. Thus, building a resilient East Timor to improve community well-being is a highly relevant and appropriate undertaking.

6.2.2 Historical background of East Timor

Examining the extent to which development and humanitarian interventions promote disaster resilience cannot be complete without taking into account the wider historical and political contexts in which they are rooted. The contention here is that resilience building has a temporary dimension – it is built overtime. History can inform future resilience-oriented actions.

East Timor became independent on 20th May 2002, after 24 years of a liberation struggle with Indonesia. Before Indonesia's occupation, East Timor was Portugal's overseas province for 400 years (Palmer and de Carvalho, 2008; van Schoor, 2005). After Portugal's withdrawal in August 1975, the Revolutionary Front for the Independence of East Timor (Fretilin) took control of East Timor in November 1975. However, in December 1975, Indonesia invaded East Timor, making it its 27th province and occupied it for 24 years. It is estimated 60,000 people were killed in the conflict (van Schoor, 2005). The combined military and civil resistance together with international condemnation of Indonesian occupation resulted in a United Nations (UN)³⁴ supervised referendum in 1999, which the majority (78 percent) voted for the independence of East Timor (Charlesworth, 2003; Patrick, 2001; van Schoor, 2005).

The price for rejecting Indonesian rule was severe. Violence in the form of looting, killing and systematic destruction of infrastructure by Indonesian-supported militias killed about 2,000 people (van Schoor, 2005) and displaced about 500,000 Timorese from their homes (Patrick 2001; Kondoch, 2001). This set the stage for international military and humanitarian intervention in East Timor (Patrick, 2001). On 15th September

³⁴ The United Nations Mission in East Timor (UNAMET) was established by Security Council resolution 1246 on 11 June 1999 to organize and conduct a referendum popular in order to ascertain whether the East Timorese people accepted the proposed constitutional framework providing for a special autonomy for East Timor within the unitary Republic of Indonesia or reject the proposed special autonomy for East Timor, leading to East Timor's separation from Indonesia.

1999, through UN Resolution 1264, an International Force for East Timor (INTERFET), led by Australia was established. INTERFET was authorised to restore peace and security, support UN Mission in East Timor (UNAMET), and facilitate humanitarian operations. Following the expiring of UNAMET's mandate on 30th September 1999, UNTAET was established on 25th October 1999, through UN Resolution 1272. UNTAET's task was to administer East Timor until it was strong and stable enough to become fully independent (Kondocho, 2001). As disasters are generated by a combination of socio-economic and natural events, efforts to build disaster resilience have to contend with East Timor's political realities.

6.2.3 Institutional building in East Timor

This study hypothesises that disaster resilience is rooted in institutions and their governance. Indeed, good governance is identified by Twigg (2007) as one of the characteristics of a disaster resilient community. Community capacity building and nurturing resilience should be managed according to principles of good governance (legal authority, transparency, accountability, inclusiveness and agreed priorities) (Buckle, 2006). A brief exploration of the institutional building process and governance in the post-conflict East Timor sheds light on the role of institutions as essential fundamentals and basis for strengthening resilience to natural and anthropogenic risks.

UNTAET's institutional building process mainly focused on national level and on elections as an exit strategy. The Constituent Assembly formed by UNTAET drafted the constitution and eventually transformed into parliament (Hohe, 2005). Although UNTAET 'paid lip service to decentralisation', thirteen districts, 65 sub-districts and 443 *sucos* were created to guarantee basic local participation and transmission of sovereignty to the Timorese leadership (Hohe, 2005:60). The districts and sub-districts were initially staffed by international personnel and then handed over gradually to their Timorese counterparts. The appointment of Timorese was based on educational background and not on indigenous criteria.

UNTAET, according to Regulation No. 2000/13, created sub-district (*Conselho do posto*) and village councils (*Conselho de suco*), which would enable villagers to make their own development choices. Village councils were development agencies rather than traditional government structures, which continue to exist today. Village councils consist of at least two democratically selected representatives from each village hamlet who are responsible for collectively planning and managing village-level development activities. According to UNTAET (2000), the number of elected members should be more than 10

but not more than 60 with an equal number of women and men. Sub-district councils consist of at least two representatives of each village democratically selected by and from the members of the respective village councils. Each sub-district council should not consist of more than 10 members but not more than 40 with an equal number of women and men. Village chiefs and traditional leaders were excluded from the councils.

According to the World Bank (2006), the formation of sub-district and village councils was facilitated by the Community Empowerment Project (CEP). CEP was initiated following two meetings - the 1999 East Timor donor meeting that was hosted by the World Bank in Washington; and the donor meeting that was held in December 1999 in Tokyo. The Tokyo meeting endorsed the two trust funds; Consolidated Fund for East Timor (CFET) that was managed by UNTAET and the Trust Fund for East Timor (TFET) under the trusteeship of the World Bank with the Asian Development Bank (ADB) as co-implementer. CEP was established in early 2000 on the basis of the World Bank's Joint Assessment Mission's recommendations (JAM) of 1999 (World Bank, 2006:2).

The JAM found that the 1999 post-ballot violence left East Timor with (i) more than 75% of the population displaced, (ii) virtually the entire pre-independence governance structure dismantled, with the departure of senior and middle level civil servants; (iii) all technical sectors inoperable, with the departure of almost all technical experts; (iv) an estimated 75% of administrative buildings and 80% of social infrastructure (schools and clinics) completely or partially destroyed, especially in the cities of Dili, Manatuto, Suai, Oecusse, and Los Palos and much of their hinterlands; and (v) all equipment and materials in administrative buildings destroyed, removed or looted.

CEP was initiated to repair the damaged infrastructure and to ensure the post-conflict reconstruction activities occurred within a decentralised framework, which would strengthen community participation, transparency and institutional accountability. It appeared to signal the beginning of enhancing community resilience. A total of 406 of 416 village councils and 56 of 60 sub-district councils were established under CEP's first phase (World Bank, 2002). Indeed, disasters provide a window of opportunity for positive change. There was merit in experimenting ideas or models from other parts of the world, provided they assimilated relevantly to the needs of the Timorese people. Yet, the challenges created by UNTAET's structure continue to be experienced today as these were handed over to the new GoTL on May 20, 2002. Two of the problems, which also have relevance to resilience building, are worth mentioning.

First, the employment of Timorese professional, neutral, non-politicized, technical administrative personnel was problematic. The expectation of the Timorese was that the

administrative positions at district and sub-district levels would be filled by those who were already in the power structures regardless of their professional backgrounds. The staff employed by UNTAET was rejected by local people on the grounds that they lacked local legitimacy. There was a conflict of ideas between 'modern' ways of recruitment and selection and legitimate leaders (Hohe, 2005). UNTAET relied on a fundamentally Western model in its attempt to establish institutions in East Timor and failed to appreciate the resilience of local structures, and therefore did not reconcile the two contrasting institutional systems (Hohe, 2003). The rehabilitation programmes, including ARP I-II, operated within these challenges.

Second, the creation of parallel structures of sub-district and village councils and exclusion of traditional chiefs and leaders in these structures 'demonstrated a clash between traditional ideas and modernity' (Conflict Security and Development Group, 2003). From the international staff perspective, the separation of powers was understood to empower the community and challenge hierarchical traditional structures. On the side of the Timorese, the non-eligibility of traditional chiefs was understood as an attempt to undermine the power of traditional leadership and not as democracy. As a result, the sub-district and village councils were neither perceived as part of the political sphere of the world nor of ritual life (Hohe, 2005).

As council members turned out to be young people from random families, they remained powerless. They were not expected to be responsible for the traditional political tasks of conflict resolution and political decision-making. They were only seen as implementers of projects and, therefore their position in local socio-cosmos did not collide with the traditional powers and in turn could not challenge them. Decision-making remained with the traditional power holder, namely, the hamlet or village chief.

(Hohe, 2005:69-70)

In addition, UNTAET avoided the recognition of the National Council for Timorese Resistance (CNRT), an umbrella organisation created in 1998 for all resistance parties who worked together to achieve a victory in the referendum campaign. Yet CNRT had grassroots structures throughout the country which UNTAET's governance depended on. CNRT representatives were the main link and messenger between the administration and the people (Hohe, 2005; Garrison, 2005). Without the legitimacy created by strong community involvement and grassroots participation in decision making, the task of national reconstruction was at risk of conflict erupting again (Candio and Bleiker, 2001). The eruption of a violent conflict in East Timor, which came to a climax in May 2006, provides a remainder of the complexities faced by countries emerging from violent

conflicts (Manyena, 2007). However, projects, like the ARP I-II, provided a window of opportunity to strengthen East Timor's agriculture institutional structures and governance. The extent to which these institutions would contribute to long-term development and resilience of the Timorese is a question which the sections that follow attempt to address.

6.3 Agricultural Rehabilitation Project (ARP)

The rehabilitation of agricultural infrastructure and its institution was a fundamental step towards promotion of sustainable and resilient communities in East Timor. Prior to the 1999 referendum, agriculture and its support industries employed about 75 percent of the workforce, contributed 26 percent of the GDP, and accounted for 90 percent of foreign exchange. The agriculture sector was significantly affected by the 1999 violence. Livestock, tools, farm and processing machinery were destroyed, and food and seed stocks were looted. Farmers and fishers' houses were burned and their tools destroyed. While upland farmers remained the poorest in terms of productivity, lowland farmers suffered significant losses in assets (UNTAET, 2001).

According to UNTAET (2001), in October 2001 the GoTL was granted a sum of US\$8.0 million from the TFET to fund ARP II. The GoTL agreed to match this grant with CFET funds totalling US\$1.0 million. The grant became effective on December 11, 2001 after key appointments to the Project Management Unit (PMU) were made and the then Department of Agricultural Affairs (DAA) had completed and adopted acceptable accounting and procurement manuals. Both ARP I and ARP II operated using the institutional structure created by UNTAET's CEP.

The goal of the ARP II was to improve food security of farm families and increase agricultural production in selected project areas. Thus, ARP II would enhance the food security resilience in East Timor. The ARP II was a follow-on to ARP I emergency project. Some of the successful activities under ARP I were continued under ARP II. The transition was designed to shift from the emergency focus of ARP I to supporting sustainable development activities as Timor-Leste reconstructed in the context of a rapidly changing economy. The project would help rural communities build their farming systems capacity in order to withstand future shocks and stresses. The Ministry of Agriculture, Forestry and Fisheries (MAFF) executed the ARP II. The ARP II implementation period was originally 27 months (September 2001 to December 2003) but was extended until 31st March 2005 to enable additional work to be completed. ARP

II was designed into four distinct but interrelated components which are outlined in Table 6.3.

Table 6.3 ARP II Components

Component	Description	Target group	Coverage
Participatory Development and Natural Resources Management (PD&NRM)	Participatory development and natural resources management through provision of small grants	Upland and coastal communities	Baucau, Covalima, Dili, Liquica, Manufahi and Oecussi
Rapid Infrastructure Rehabilitation	Rehabilitation of irrigation schemes and access roads; irrigation management	Irrigation farmers	Baucau, Bobonaro and Oecussi
Service to Farmers	Information to farmers; animal health; Agriculture Service Centres (ASCs)	Farmers	Whole country; ASCs in Aileu, Bobonaro and Viqueque
Project Management	Project management; human resources development; community training	MAFF staff; consultants; community associations	Project target areas

Participatory Development and Natural Resources Management (PD&NRM)

This component was to strengthen the capacity of poor farming communities by helping them improve the management of their natural resource base and diversify their sources of income. The component provided small grants (US\$1,000-\$10,000 up to US\$20,000 per village) to community groups to fund their own proposals, against commitments of in-kind labour and materials. The proposals were checked against a positive and negative list of possible activities. The component targeted primarily 10,000 rural households in upland and coastal communities with solid local governance and traditional leadership, in seven districts (Baucau, Covalima, Dili, Lautem, Liquiça, Manufahi, and Oecussi). About 30 percent of direct beneficiaries were women. A similar approach was to be followed by other donors in the remaining districts. The project financed the costs of non-government facilitators, services, training, workshops, fellowships, study tours, community grants, and incremental operating costs associated with the following activities:

- Provision of community grants to the Village Councils (*Conselho de Suco*) for natural resource management and participatory development activities; and
- Strengthening the capacity of farmers in pilot villages, agriculture officers, and NGO partners in planning, implementation, and monitoring of the community grants,

through: establishment of facilitation teams and selection of pilot villages; applied technical and participatory training and cross visits; facilitation of community proposals; and monitoring and evaluation.

Rapid Infrastructure Rehabilitation

This component sought to increase agricultural production in irrigated areas rehabilitated by ARP II and to stimulate off-farm employment in selected rural areas of Timor-Leste. It financed civil works, consultancy services, training, study tours, policy development, workshops, and incremental operating costs in support of the following activities:

- Rehabilitation and maintenance of community-based irrigation schemes and farm-to-market access roads;
- Rehabilitation works on about seven larger light- to medium-damaged irrigation schemes in the Districts of Baucau, Bobonaro, and Oecussi
- A feasibility study for rehabilitation about three major-damaged irrigation schemes;
- Establishment and consolidation of 11 Water Users Associations (WUAs) in the irrigated areas rehabilitated by the Project, and development of a policy for the operation and maintenance of irrigation schemes;
- Provision of training on irrigation management to MAFF and district irrigation staff; and
- Rehabilitation of small works implemented through direct contracts with local communities; following upon the successful models developed under ARP I. Particular attention was paid to the operation and maintenance of all rehabilitated works.

Services to Farmers

This component was to provide essential services to farmers and help them bridge transitional difficulties associated with lack of information, unavailability of production inputs, shortage of cash, and poorly working markets. It also envisaged gradually introducing private delivery mechanisms to address the staffing and budgetary constraints of the new GoTL.

Sub-component A: Information to Farmers

This sub-component aimed at establishing a foundation for an effective communication system between isolated farmers, NGOs, Government staff, and centres of international expertise. It financed goods, services, training, and incremental operating costs in support of the following activities:

- Development of information programmes addressing the specific needs of farmers and dissemination via appropriate means of public communication, such as radio, printed and electronic media, religious venues and markets, and mobile video units; and
- Establishment of a small Consultative Group on International Agricultural Research (CGIAR) Liaison Secretariat in Timor-Leste to link MAFF staff and participating farmers to centres of international expertise in modern agriculture and natural resource management.

Sub-component B: Sustainable Animal Health Services

This sub-component continued the veterinary vaccination programme initiated under ARP I, while providing the training and starter kits to a cadre of private (about 200) Village Livestock Workers (VLWs) who would assist farmers in simple treatment of diseases and improve their access to veterinary inputs. It financed vaccines, equipment, supplies, services, regulatory framework, training, and incremental operating costs in support of the following activities:

- National vaccination campaigns to immunize livestock against prevailing infectious diseases of cattle, buffaloes, pigs, and chickens; and
- Establishment of system of private VLWs, including training and provision of veterinary equipment, starter kits, and medicines and assistance to MAFF staff in drafting a supporting regulatory framework.

Sub-component C: Pilot Agriculture Service Centres (ASCs)

This sub-component helped to consolidate and operate three existing ASCs established under ARP I and expand to an additional two to three ASCs in other locations. The ASCs would be farmer-owned legal commercial entities, established under the guidance of a professional Farmer Ownership Model (FOM) team. Links to output markets were to be established first, and then worked backwards to support production and processing. Two types of ASCs were envisaged: larger enterprises specializing in particular markets (such as the domestic rice market and candlenut export), and nucleus-type ASCs linked to enterprises that were already existing such as Café Timor. It financed the rehabilitation of offices and facilities, equipment (processing machinery, tools, and spare parts), goods (agricultural inputs), vehicles, specialized technical assistance, training, and incremental operating costs to assist in the establishment and initial operations of the ASCs.

Programme Management

This component was to help the new GoTL to evaluate key policy options, help upgrade core skills of agriculture staff, and oversee the implementation of the agriculture programme. It financed policy studies, technical assistance, services, workshops, goods, vehicles, training, and incremental operating costs for the Project Management Unit (PMU) and the District Agriculture Offices in support of two sub-components.

6.4 Relevance of ARP II

Enhancing resilience could be viewed as the extent to which development and humanitarian interventions respond to local needs and priorities (O’Keefe *et al.*, 2002; ALNAP, 2006). The appropriateness of ARP II would be determined by the extent of the outcome of two broad needs of Timorese: policy needs on one hand; and long-term food security needs on the other. As stated earlier in this chapter, section 6.2.3, UNTAET had created a decentralised and democratic system of governance through the establishment of sub-district and village councils. For ARP II to be considered policy relevant, participatory development was of paramount importance. Likewise, as East Timor was a food insecure country (UNDP, 2006), the relevance of ARP II would be judged by the extent to which it provided longer-term solutions to food security through the establishment and consolidation of a sustainable agricultural institution. Thus, ARP II would build resilience to food insecurity by ensuring that many rural households had adequate food throughout the year.

There was evidence that, to some extent, ARP II initiated participatory development, which would contribute to resilience building. This was contrary to the top-down processes that were dominant during Indonesian times. PD&NRM activities, for example, adopted learning by doing capacity-building process. Villagers worked with UNTAET’s village and sub-district councils as well as administrative structures to obtain small project grants and also access community-based training while implementing environmental related livelihoods projects. Table 6.4 shows the usefulness of PD&NRM. Views on the usefulness of PD&NRM varied across participating districts and ranged between 14 percent (Manufahi) and 65 percent (Oecussi) while there was little variation between the majority of non-participating.

Table 6.4 Usefulness of PD&NRM component

% indicating they were;	Districts								
	O	C	B	E	D	M	V	L	All
Very useful	30	12	1	0	4	0	1	6	6
Useful	35	9	4	2	35	14	3	18	15
Slightly useful	0	1	1	1	0	0	0	1	1
Not useful	1	4	1	0	0	2	2	1	1
% N/A / no clear reply	34	74	93	97	61	84	94	74	77
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Most of those who found PD&NRM useful indicated that the agreements between MAFF and the community were fulfilled. Communities had also started working together (see Box 6.1). Nonetheless, a small proportion (less than two percent of households) did not find PD&NRM useful because of, among others, lack of clear information, lack of agreement amongst group members on the proposed project, or simply their household was not targeted by PD&NRM (Box 6.1).

Box 6.1 Usefulness / unusefulness of with PD&NRM

Usefulness of PD&NRM	Unusefulness of PD&NRM
<ul style="list-style-type: none"> • MAFF has fulfilled its agreement with us such as budget and training • The project has benefited us and our environment • The project has improved our capacity to produce better crop harvests • Improve our agriculture production • The project was initiated by the community with support from MAFF • All is done through team implementation and community • People agreed with the implementation of the programme on small budget 	<ul style="list-style-type: none"> • No assistance from the project and the information is not clear • No payment from these services • No female participation • No training in PD&NRM • No agreement amongst group members, but the programme is good • Insufficient budget • Programme has not reached our area • No response to our proposal • Sometimes we did not have enough materials to implement the activities

The underlying problem, which runs through the usefulness or unusefulness of PD&NRM in Box 6.1, was its emphasis on incentives for households or groups to participate. Accessing financial and material resources in particular, was the driving factor for households or groups to participate. The participatory development literature (Smith, 1998; Mengers, 2000; Cornwall, 2008) claims that incentive-driven, top-down projects, like PD&NRM component, may not be a better guarantee for community ownership and commitment to the project process and outcomes. Thus, apart from fulfilling the UNTAET community empowerment policy, by emphasising incentives rather the needs of beneficiaries, the PD&NRM component could have failed to respond

to the fundamental needs of households or groups. This suggests PD&NRM would have minimal impact on both project sustainability and resilience building.

Despite the limitations the PD&NRM experienced, rehabilitation of the irrigation infrastructure to increase food security resilience had some relevance to the Timorese people. Civil works were carried out in 11 irrigation schemes as well as the establishment of the operation and maintenance (O&M) system. The latter focused on building management capability of staff through training in design, O&M of irrigation schemes as well as the establishment of functional community institutions, the Water User Associations (WUAs) for each irrigation scheme. On average, only 14 percent indicated the rehabilitation of irrigation schemes was useful. Responses varied across districts with one in three participants in Oecussi and nil in Dili indicated the rehabilitation of irrigation schemes was relevant to the needs of the target community (Table 6.5). Similarly, the usefulness of rehabilitated roads scores ranged between one percent (Manufahi) and 22 percent (Oecussi) (Table 6.6). On the usefulness of WUA, about two thirds of the participants reported that WUAs were not useful mainly because some irrigation schemes did not have water due to incomplete civil works (Table 6.7).

Table 6.5 Usefulness of rehabilitated irrigation system to community

% who said rehabilitated irrigation system was	Districts								
	O	C	B	E	D	M	V	L	All
Useful to the community	32	28	28	0	0	17	6	1	14
Not useful to the community	2	6	6	0	0	3	3	0	3
No information provided/ N/A	66	66	66	100	100	80	91	99	83
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.6 Usefulness of rehabilitated road

% respondents indicating	Districts								
	O	C	B	E	D	M	V	L	All
road rehabilitation was useful	22	7	13	6	6	1	20	2	10
rehabilitated road was not useful	0	1	1	1	0	1	1	1	1
No information provided/ N/A	78	92	86	93	94	98	79	97	89
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.7 Usefulness of WUA to your community

% Respondents;	Districts								
	O	C	B	E	D	M	V	L	All
Indicating WUA is useful	38	23	28	0	0	11	7	0	14
Indicating WUA not useful	33	29	13	37	40	31	39	32	31
No information provided/ N/A	29	48	59	63	60	58	54	68	55
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

However, caution should be taken when interpreting these results. One reason for such low percentages could be that some of the sampled households had little involvement in irrigation rehabilitation. For example, some households had little, if any, idea about the WUA concept, especially in districts where there were no irrigation schemes. At the same time, it could perhaps indicate that the WUA concept was still a long way from being accepted by the Timorese communities since it was new to their traditions. This suggests that innovative reconstruction programmes in post-conflict situations should build on *existing resilience* by understanding *what people already do* before introducing *new things*.

The services to farmers component was to provide essential services to farmers and help them bridge transitional difficulties associated with lack of information, unavailability of production inputs, shortage of cash, and poorly working markets. Information plays an important role in improving agriculture production of any nation (Adomi, Ogbomo and Inoni, 2003; Kalusopa, 2005; Aina, 1995). An effective information and communication system between isolated farmers, NGOs and Government staff, was relevant to East Timorese needs. While provision of information to East Timorese farmers could have been relevant and essential to reconstruction, the findings suggested that the medium of disseminating information was inappropriate. The majority of respondents (Table 6.8), 78 percent, did not own ‘working’ radios. Table 6.9 shows that five percent of the respondents listened to someone else’s radio suggesting that potentially up to about 27 percent of households listened to the radios. Despite the fact that radio broadcast (Tables 6.10) was taking place through Radio Timor-Leste (RTL) regularly, there were no reliable figures on radio listenership in Timor-Leste.

Table 6.8 Ownership of a working radio

% Respondents indicating	Districts								
	O	C	B	E	D	M	V	L	All
ownership of a working radio	16	17	25	51	23	13	18	25	22
no ownership of a working radio	84	81	75	49	76	86	82	75	78
No information provided/ N/A	0	2	0	0	1	1	0	0	0
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.9 Respondents listening to someone's radio

% Respondents who listened	Districts								
	O	C	B	E	D	M	V	L	All
to other people's radio	1	5	4	16	1	4	7	5	5
to no other people's radio	90	81	71	45	82	83	84	75	78
No information provided/ N/A	9	14	25	39	17	13	9	20	17
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.10 Sources of agricultural news

% Respondent indicating	Districts								
	O	C	B	E	D	M	V	L	All
receiving agriculture news from RTL/RTK/Falentil/Rankabian	14	22	22	40	24	11	17	15	19
not receiving news from RTL/RTK/Falentil/Rankabian	3	1	7	2	0	5	1	10	4
No information provided/ N/A	83	77	71	58	76	84	82	75	77
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

This suggests that radio broadcast took place without either MAFF or RTL knowing the number of people who listened to the programmes and how effective the programmes were. RTL indicated that it lacked the staff to carry out radio listenership surveys. In spite of this, one in three participants was satisfied with the timing of broadcast and time allocation for agricultural programmes. Poor transmission, however, especially in rural areas, meant that farmers could rarely access information even if they had radios (Table 6.11).

Table 6.11 Quality of transmission

% indicating transmission;	Districts								
	O	C	B	E	D	M	V	L	All
Always good	9	6	7	46	21	8	10	15	13
Good most of the time	0	1	2	1	1	0	1	0	1
Good but not very often	4	12	10	8	1	1	5	5	6
Never, the reception is too poor	1	4	10	1	2	8	3	6	5
No information provided/ N/A	86	77	71	44	75	83	81	74	76
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Because of the low number of people owning working radios and poor transmission, traditional channels such as people-to-people and through *suco* chiefs were the main and preferred medium for information dissemination. Table 6.12 suggests that the majority of the participants (52 percent) were of the opinion community organisations played a major role in information dissemination to farmers.

Table 6.12 Information from community organisations

% Respondents	Districts								
	O	C	B	E	D	M	V	L	All
Not satisfied with information from community organisations	80	74	65	43	30	30	31	37	48
Satisfied with information from community organisations	20	26	35	57	70	68	69	63	52
No information provided/ N/A	0	0	0	0	0	3	0	0	0
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Focus group interviews revealed that animal health vaccination campaign relied on letters or person-to-person communication channels through *suco* chiefs and community organisations such as farmers' groups, church, women associations and village cooperatives. Like the PD&NRM component, the information to farmers sub-component largely ignored the established communication channels in favour of modern technology, which was inaccessible to the majority of farmers. Thus, again ignoring the importance of traditional systems in the resilience building equation

Regarding the establishment of the CGIAR Liaison Secretariat, its relevance in enhancing a resilient farming system was not apparent. Not much was observed about CGIAR during the time of information gathering for this study. According to Haegens (2004:20), the establishment of CGIAR Secretariat was in doubt.

... the term CGIAR Secretariat may have been somewhat ill-chosen ... the term may also lead to the unjustified conclusion that there are solid and institutionalised contacts between the two institutions, which in reality are not the case. Whereas under ARP II cross-visits between MAFF and CGIAR Centres had been envisaged, this ... resulted in two expert-visits from two CGIAR Centres during the first half of 2003. Unfortunately, these visits did not lead to either 'personalised' or 'institutionalised' contacts between MAFF and the Centres in question.

However, all MAFF Departments and Divisions had access to the Internet. MAFF staff had the email facility to exchange information electronically through a Local Area Network (LAN). It was revealed through interviews that the network was only a first step to a more sophisticated internal network with internal servers for mass storage of, and access to all information produced by MAFF, which was to be explored under ARP III. The possibility of extending the network to other parts of the country was doubted due to the huge set-up and maintenance costs.

Likewise, with eight out of ten East Timorese owning livestock (World Bank, 2002) and confirmed by this study (Table 6.13), the establishment of an institution responsible for animal health was relevant to their needs.

Table 6.13 Ownership of animals

% indicating they;	Districts								
	O	C	B	E	D	M	V	L	All
Owned animals*	69	65	63	84	81	87	91	96	80
Do not own animals	30	35	36	14	11	8	9	2	18
No information provided/ N/A	1	0	1	2	8	6	0	2	2
HHs in Sample	139	161	163	87	125	172	181	191	1219

* does not include HHs with animals owned by other members of the family that live in different HHs

The relevance of the ASCs component in enhancing resilience of the farming system was unconvincing. Most of the respondents (96 percent) were not aware of the existence of ASCs in the sample districts (Table 6.14). Table 6.15 reveals that no more than one percent of the respondents indicated that they were members of ASCs.

Table 6.14 Presence of ASCs

% indicating	Districts								
	O	C	B	E	D	M	V	L	All
<i>knew of an ASC in their district</i>									
Yes	0	0	4	5	1	1	7	0	2
No	100	94	94	95	98	98	92	99	96
No clear reply / N/A	0	6	2	0	1	1	1	1	2
<i>existence another community association in their district during the past four years</i>									
Yes	0	0	1	6	1	0	3	0	1
No	100	94	97	94	98	99	95	98	97
No clear reply / N/A	0	6	2	0	1	1	2	2	2
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Challenges and problems that ASCs faced suggest weak information flow between farmers and ASCs, limited awareness of benefits of ACSs, competition from NGOs and other agencies with similar objectives, and the unclear legal status of ASCs. It was also unclear whether they were operating as a public, private or a cooperative enterprise. The closure of ASC in Aileu confirmed the existence of problems in the ASCs component.

Table 6.15 Membership and awareness of ASCs

% they or another member of their HH was a member of an ASC	Districts								
	O	C	B	E	D	M	V	L	All
Yes	0	0	1	1	0	0	2	0	1
No	0	0	7	33	26	22	19	26	16
No clear reply / N/A	0	0	93	66	74	78	79	73	83
<i>was a member of any another community association</i>									
Yes	0	0	0	2	0	0	1	0	0
No	0	0	4	26	19	16	11	4	9
No clear reply / N/A	100	100	96	71	81	84	88	96	91
<i>were aware of the activities and function of the ASC in their district</i>									
Yes	0	0	3	1	0	0	6	0	1
No	0	0	3	30	23	20	6	20	12
No clear reply / N/A	100	100	94	69	77	80	88	80	87
<i>were aware of the activities and function of another community association</i>									
Yes	0	0	3	1	0	0	3	0	1
No	0	0	2	3	14	9	6	4	5
No clear reply / N/A	100	100	95	96	86	91	91	96	94
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

In summary, ARP II was to a limited extent relevant to the needs of the Timorese people in assisting them rebuild their lives and livelihoods. Apart from CGIAR and ASCs whose inappropriateness was apparent, PD&NRM, infrastructure rehabilitation, animal health and information to farmers were relevant to the needs of the farmers. Encouraging community participation through incentives, or tokenism (Arnstein (1969), particularly financial and material provision, could have meant relegating the needs of the communities to the margins rather than to the centre of the project. Likewise, ignoring the existing resilience, embedded in community traditional value systems, raises questions about the conceptualisation, compatibility and congruence of ARP II. Eade and Williams (1995) state that incompatibility between the (external) intervention and local traditional values can have a profound impact on the project implementation process as well as its sustainability. Juma and Surke (2002) argue that incompatibility between humanitarian interventions and local institutions can result in the erosion of local institutional capacity. Although there is no conclusive evidence that ARP II could have contributed to loss of resilience built of centuries, the extent to which the project design incorporated local needs seem to have been limited. However, given that ARP II was designed during a relatively non-violent period, a comprehensive needs assessment exercise was possible which would have taken into account the prioritised needs of the farming communities.

6.5 Efficiency of ARP II

Examining the efficiency of ARP II provides insights into how it attempted to enhance resilience in relation to cost, quality and time (O’Keefe, *et al.*, 2002, ALNAP, 2006). Efficiency is an economic term; it focuses on achieving goals at the least cost - the focus is on wanted outcomes to ensure the efficient use of resources (O’Keefe *et al.*, 2002). For the purpose of this study, the economic rate of return and the frequency of technical support rendered to beneficiaries provide an indication of the efficiency of ARP II.

Cost-benefit analysis

A cost-benefit analysis was not performed; it required more time and resources and, in any case, it would have been difficult to establish intangible returns, particularly those related to human resources capacity building. This was consistency with the literature (Dasgupta and Pearce 1972; Gittinger, 1982; Hanley and Spash, 1993; Mustafa, 1994) on the limitations of cost benefit analysis in socio-economic projects, particularly on intangible benefits. However, according to the World Bank (2005) completion report, economic returns to investment were below expectations of double cropping and intensive use of inputs. The overall economic internal rate of return (EIRR), at the time of conducting this study was estimated at six percent against 20.6 percent which was estimated at the appraisal stage of the project. The EIRR for the light to medium dam schemes was three percent against 35 percent; for the community-based schemes the EIRR was 11 percent against 26 percent; and the livestock vaccination it was estimated at 23 percent against 28 percent. The EIRR for the ASCs was negative against 32 percent. In addition, according to the World Bank (2005) project appraisal document ARP II’s expected net present value (NPV) was almost US\$3.0 million, of which US\$1.5 million (50 percent) was expected to come from the ASCs. Thus, ARP II’s costs outweighed the benefits, suggesting that ARP II’s returns to investment were based on flawed assumptions. Therefore, it was doubted ARP II would make a significant contribution to building a resilient food security system in Timor.

Technical support to farmers

The efficiency of ARP II was also discerned by the level of technical support given by MAFF to the beneficiaries. However, the MAFF’s support for the community level structures, notably WUA was below the expectations of target communities. Table 6.16

reveals that 58 percent of the participants were never visited by the District Irrigation Officer to provide technical assistance to WUAs.

Table 6.16 District Irrigation Officer’s visits to WUA to provide support

% who were visited	Districts								
	O	C	B	E	D	M	V	L	All
Twice a month	8	0	4	0	0	0	1	0	2
Monthly	13	0	4	0	0	0	1	0	2
Every two months	3	0	2	0	0	0	0	0	1
Every three months	6	2	1	0	0	0	1	0	1
Never	37	50	37	63	63	68	67	72	58
No information provided/ N/A	33	48	52	37	37	32	30	28	36
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

However, Oecussi, where there were more irrigation activities than anywhere in the country, about one in three respondents reported being visited by an Irrigation Officer. In Bobonara, only one in ten of the respondents was visited at least once every three months by MAFF’s District Irrigation Officer.

In relation to visits by MAFF’s District Livestock Officer (Table 6.17), seven percent of respondents were visited at least once every three months. There was little variation across the sample districts with Ermera scoring 13 percent (highest) and Dili scoring four percent (lowest). Forty-four percent indicated the District Livestock Officer had never visited them.

Table 6.17 Frequency of visits by the District Livestock Officer (DLO)

% indicating DLO visited them;	Districts								
	O	C	B	E	D	M	V	L	All
Monthly	4	1	3	13	0	2	3	3	3
Every two months	1	2	2	0	3	4	3	1	2
Every three months	7	3	5	0	1	1	1	1	2
Other	32	21	18	12	36	21	18	28	24
Never	25	35	36	47	38	54	58	53	44
No information provided/ N/A	31	39	36	28	22	18	17	14	25
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Further, Table 6.18 shows that one in four of participants in the PD&NRN targeted districts³⁵ rated the support provided by MAFF as ‘enough’. In Oecussi, two in three participants had received enough support from MAFF’s district implementation team while Manufahi had the lowest nine percent. The data suggests that MAFF did not have adequate resources to support the established structures. At the same time, dependence

³⁵ The targeted districts were Oecussi, Cova Lima, Dili, Manufahi and Lautem. Twenty-five percent is the average of the five districts.

on contracted facilitators was more expensive than having permanent MAFF staff. It was problematic for facilitators and consultants on short-term contracts to successfully provide continued support for PD&NRM activities, compared with the continuity that would have been provided by MAFF staff.

Table 6.18 Rating of support/assistance provided by the NRM team

Assistance was;	Districts								
	O	C	B	E	D	M	V	L	All
None	1	4	1	2	1	6	2	5	3
Not enough	4	11	3	0	6	1	1	1	3
Enough	58	12	1	1	30	9	2	20	16
More than enough	1	1	1	0	7	1	0	1	1
Question did not apply / no clear reply	36	72	94	97	56	83	95	73	77
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Established local structures such as PD&NRM, WUAs and VLWs were highly likely to face some difficulties in managing their activities without external support. It would appear this lack of capacity was due to, among others, insufficient institutional capacity of MAFF to support locally established structures.

In summary, the lower than expected EIRR and the limited technical support provided by MAFF to beneficiaries suggest that ARP II was not as efficient as was expected. That ARP II was designed during a relatively peaceful period, the project design should have been fairly realistic in incorporating the felt needs of the Timorese people, building on the resilience created over centuries.

6.6 Effectiveness of ARP II

The effectiveness of ARP II was assessed by the extent it achieved its targets in relation training, community participation, and operations of established structures. The study established that most of the ARP II objectives were achieved as planned.

Training

Training, like in most capacity building interventions, was one of the major features of ARP II. As already stated in Chapter 2, section 2.5.5, resilience building is a social learning process, which directly alters the inherent resilience for the next event (Adger, 2005; Cutter *et al.*, 2008). Table 6.19 shows the distribution of participants who benefited from ARP II training. There was a variation between the targeted and the untargeted districts. In Oecussi (target district), two in three participants benefited from

training while only three percent of the participants benefited in Viqueque (untargeted district). Similarly, six percent of the participants benefited from O&M training in Oecussi while none of the participants attended O&M training in Dili, Lautem and Ermera (Table 6.20).

Table 6.19 Benefits of NRM training to respondents and the groups

% indicating training	Districts								
	O	C	B	E	D	M	V	L	All
benefited them or the group	61	22	5	2	41	12	3	25	21
did not benefit them or the group	1	3	1	1	1	4	1	2	2
N/A / no clear reply	37	75	94	97	58	84	96	73	77
% benefited they or their family member	56	16	3	0	24	7	2	19	16
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.20 Training on operations and maintenance

% respondents who;	Districts								
	O	C	B	E	D	M	V	L	All
Received training on O&M	27	6	5	0	0	6	1	0	6
Did not receive training O&M	6	29	26	0	0	15	10	1	12
No information provided/ N/A	67	65	69	100	100	77	99	99	82
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Although the data suggests that ARP II training approach, to a certain extent, did not reach the wider community, most project activities were carried within the specified time frame. In some cases, outputs surpassed the targets. However, ARP II training occurred within the MAFF structure to help participating community improve performance rather than being agents of transformative change (Ledwith, 2002). If anything, ARP II attempted to create the resilience of the structure rather the resilience of the people to (re)create the structure.

Achievement of targets

There are three notable examples where ARP II achieved the targets. First, Table 6.21 shows that the targets for the rehabilitation of roads and irrigation schemes, including the establishment of WUAs, were generally achieved. At least nine out of 13 activities achieved 100 percent of more of the targets. For example, the rehabilitation of community irrigation schemes achieved 131 percent. However, the participation of women was below target by 55 percent. This confirms that the project design underestimated the challenges around gender equity in East Timor, particularly the subordination of women to men according the Catholic Church traditions.

Table 6.21 Level of achievement of targets

Activity	Dates	Target	Actual	Completion (%)
Community Irrigation Rehabilitation	09/02 – 02/04	2,100 ha	2,745 ha	131
	07/04 – 12/04	3,245 ha	3,908 ha	120
		1.8 tons	1.0 to 2.1 tons	44 – 116
Farm to Market Roads	09/02 – 12/03	100 km	107.9 km	108
Feasibility study of: Seical, Maliana I, Uatolari	09/02 – 05/03	1,030 ha	1,030 ha	100
		510 ha	510 ha	100
		950 ha	950 ha	100
		1,090 ha	1,090 ha	100
Light-to-Medium-Damaged Irrigation Scheme (LTMD) – 11 schemes		4,505 ha	3,965 ha	88
		3 tons /ha	2.3 tons/ha	77
Establishment of WUAs		11	10	91
Participation of women		20%	9%	45
Staff training				100

However, these results need to be interpreted with caution. For example, the farm to market access roads targets were amended and limited to rehabilitation of structures, bridges, culverts, and roadside drains that would give longer lasting improvements to the roads. Paving and pothole filling was discarded as it was said to be short term particularly in steep hilly sites that were easily washed away during the rainy season. This means that the achieved targets did not necessarily mean that the rehabilitated infrastructure had returned to 100 percent of its original state.

Secondly, two campaigns both for Haemorrhagic Septicaemia (HS) for cattle /buffalo and Classical Swine Fever (CSF) for Pigs were conducted during ARP II and three million doses of Newcastle Disease (ND) vaccine were also purchased and distributed. With limited personnel, approximately 15 times less than during the Indonesian occupation, ARP II had achieved between 78 and 97 percent of its set target in livestock vaccination (see Table 6.22).

Table 6.22 Livestock Vaccination coverage and targets 2002-3

Livestock/Year	2002			2003		
	Target	Vaccinated	Coverage %	Target	Vaccinated	Coverage %
Pigs	343,072	333,755	97	377,379	350,000	93
Cattle/ Buffalo	243,573	188,907	78	243,573	192,935	79

While the MAFF's technical report gives an aggregate coverage of the vaccination programme of 97 percent and 79 percent for pigs and cattle / buffalo respectively, the distribution of those animals among households was not given. The survey established that less than half of the households interviewed had animals that were vaccinated between 2002 and 2004. Pigs' vaccination had the highest response of 42 percent,

followed by cattle / buffalo with 14 percent and chicken with the lowest at one percent. However, some caution is needed in assessing this data, as its focus was not on the number of animals owned by households, but on households whose animals were vaccinated. Also included in this sample were those households that had no animals at all suggesting that the vaccination coverage could have been much higher.

Thirdly, Table 6.23 presents the achievements of the information to farmers' component.

Table 6.23 Information to farmers' achievements

Activities	Achievement (%)
Assessment of information needs	75
Training of central and district MAFF staff and NGO partners	100
Development of multi-media materials: print	100
Development of multi-media materials: radio	100
Dissemination using the mobile units, radio, TV and print media	75
Establishment of CGIAR Liaison Secretariat Office	50
Establishment of Information Network	40
Provision of Technical Advice from International Centres	60

Apart from failure to establish the information network and CGIAR Liaison Secretariat Office, most of the activities had either achieved or were about to achieve their targets.

Community participation

Despite the difficulties some participants faced in proposal design to access funding, there was exceptionally high motivation, commitment and awareness by PD&NRM groups (see Tables 6.24-6.26).

Table 6.24 Problems getting NRM activities funded

% respondents indicating	Districts								
	O	C	B	E	D	M	V	L	All
had no problems getting NRM funding	45	15	4	1	37	6	2	17	15
had problems getting NRM funding	21	12	3	2	7	11	4	11	9
No clear reply / question considered not to apply	34	73	93	97	56	83	94	72	76
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.25 Level of participation of NRM group members

% respondents indicating	Districts								
	O	C	B	E	D	M	V	L	All
Few participate	1	11	3	0	0	0	2	4	3
About half participate	1	9	1	0	9	2	1	3	3
Majority participate	14	3	0	1	4	0	1	2	3
All participate	48	4	1	2	30	14	1	18	14
Question did not apply / no clear reply	36	73	95	97	57	84	95	73	77
received PD&NRM training from team	64	24	3	1	37	6	1	22	19
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.26 Women’s involvement in PD and NRM groups

% indicating women were involved in the group with which they or a member of their HH were associated	Districts								
	O	C	B	E	D	M	V	L	All
less than 20 women	45	9	1	2	21	8	3	15	13
20 to 50 women	10	1	0	0	14	1	2	4	4
50 – 75 women	1	0	0	0	4	1	0	0	1
75 – 100 women	0	0	0	0	0	0	0	1	0
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Tables 6.24-6.26 show that Oecussi had the highest proportion of participants in PD&NRM targeted districts. In Table 6.24, problems of getting funding for PD&NRM were more acute in Manufahi than in an untargeted district of Lautem, suggesting participants could have faced difficulties in writing project proposals given the high level of literacy in East Timor. The pattern was repeated in Table 6.25 and 6.26 where the participation of PD&NRM group members and involvement of women in PD&NRM was relatively higher in targeted districts (for example Oecussi and Dili) than in untargeted districts (for example, Ermera and Bobonaro). However, in Luculai, one of the untargeted districts, some community groups had planted vegetables and beans without financial assistance from MAFF. Some groups had already started harvesting fish and vegetables from small projects, albeit on a small scale. The PD&NRM group in Ossoala Village, Baucau District had started harvesting fish from their fish-farming project. The results suggest that PD&NRM activities could have been replicated in non-participating districts. However, the results could not necessarily be attributed to PD&NRM, as there were other similar activities that were being implemented by other agencies. This may illustrate the complexities of attributing programme results to a particular agency in situations where there are multiple actors, including community agency mainly driven by identified needs. Likewise, attributing resilience building to a particular agency can be a complex process, particularly where there are multiple actors and also where communities could have developed the resilience from their experience in dealing with disasters.

The level of MAFF’s support in enlisting community participation in proposal design was one of the ways of assessing ARP II’s effectiveness in building resilience. Seventy-eight percent of participants in Oecussi, a targeted district, reported they were assisted by MAFF (Table 6.27), and 57 percent participated in proposal design, whilst in Ermera, a non-targeted district, only two percent, (the lowest), had done so.

Table 6.27 Assistance through PD&NRM

% indicating their	Districts								
	O	C	B	E	D	M	V	L	All
<i>village was assisted by MAFF:</i>									
Village was assisted	78	47	18	2	55	27	5	43	35
Village was not assisted	22	53	82	98	45	73	95	56	65
No clear reply / N/A	0	0	0	0	0	0	0	1	0
<i>village was assisted by some other MAFF</i>									
Village was assisted*	24	16	20	1	6	9	6	7	11
Village was not assisted	74	83	78	96	80	86	91	89	85
No clear reply / N/A	2	1	2	3	14	5	3	4	4
<i>% they or a member of their HH were working in connection with a PD+NRM type activity:</i>									
Working with PD+NRM	66	22	7	3	46	19	4	27	24
Not working with PD+NRM	34	77	91	91	54	81	93	68	74
No clear reply / N/A	0	1	2	6	0	0	3	5	2
HHs in Sample	139	161	163	87	125	172	181	191	1219

* only 3% of respondents indicated by which other PD+NRM activity they were assisted. 1% indicated NGOs and other agencies, 1% the church, and 1% other.

This suggests that the level of support to assist communities in proposal design was higher in targeted districts than in those districts not targeted by ARP II.

However, with gender imbalance being traditionally less of major concern, decision-making in small project proposal design and their implementation generally remained in the hands of men. Although the question about who made more decisions between male and female did not apply to the majority of respondents in the sample due to their non-involvement in PD&NRM as shown in Table 6.28, it was found that males made more decisions than females in PD&NRM activities. In Oecussi, four percent of the decisions were made by ‘women of the community’³⁶ and no female leader made any decisions. In Dili, five percent of the decisions were made by individual female leaders and 10 percent by ‘women of the community’.

However, contrary to male domination found in PD&NRM activities, participatory interviews with WUA groups revealed that there was a gradual move towards assigning women into leadership positions in irrigation management. The treasurer in one of the WUA management was female. Thus, the Timorese were gradually recognising gender equity, an important characteristic of disaster-resilient communities.

³⁶ Decisions made by ‘women of the community’ were those made by women’s groups at their respective meetings.

Table 6.28 Structure of PD&NRM groups

	Districts								
	O	C	B	E	D	M	V	L	All
Average number of people that respondents said were in a group*	27	15	25	9	36	22	20	21	25
% indicating that they or a member of their HH were involved in designing the group's proposal	57	18	4	2	30	12	3	22	18
% indicating most decisions in the PD + NRM programme were made by;									
The women of the community	4	3	0	0	10	2	1	4	3
The men of the community	30	17	2	3	14	8	2	12	11
An individual male leader	22	4	3	0	5	4	3	3	5
An individual female leader	0	0	0	0	5	0	0	1	1
Both women and men together	0	0	0	2	7	4	0	8	3
No clear reply / N/A	44	76	95	95	59	82	94	72	77
HHs in Sample	139	161	163	87	125	172	181	191	1219

*Actual monitoring figures for this variable can be better monitored by group facilitators

Building community-based agriculture institutions

In the rehabilitation of infrastructure, there was evidence that some institutional building had occurred which would have a positive impact on resilience. Table 6.29 shows seven percent of participants were aware about the existence of a WUA in their community, with the highest 37 percent in Oecussi followed by 16 percent in Bobonaro.

Table 6.29 Establishment of Water Users Association by MAFF

% Respondents;	Districts								
	O	C	B	E	D	M	V	L	All
Indicating establishment of Water Users Association at the community farm level	37	1	16	0	0	4	2	0	7
Indicating there was no establishment of Water Users Association at the community farm level	40	65	55	93	94	94	95	97	79
No information provided/ N/A	23	34	29	7	6	2	3	3	14
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

The data should be interpreted with caution. As most of the participants were non-irrigation farmers, there was a high possibility that they did not know about what WUAs meant. The responses in Table 6.29 perhaps reflect the percentage of farmers who were involved in irrigation farming and who were aware of the existence to establish WUAs.

Nevertheless, most of the rehabilitated irrigation schemes had established WUA management committee and these, through training, had begun to assume responsibility in running their own affairs. Table 6.30 shows a variation across the districts in the distribution of participants who were involved in the repair of irrigation schemes.

Table 6.30 Participation in the repair of irrigation schemes

% participated/did not participate	Districts								
	O	C	B	E	D	M	V	L	All
Participated	32	30	23	0	0	17	7	1	14
Did not participate	66	36	71	95	98	80	88	94	78
No information provided / N/A	2	34	6	5	2	3	4	5	8
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Oecussi district, where irrigation agriculture was the major economic activity, had the highest 32 percent, followed by Covalima with 30 percent while Dili, Ermera and Lautem, where there were no irrigation schemes recorded the lowest proportions. The pattern in Table 6.30 was repeated in Tables 6.31 and 6.32, with a variation across the districts in the participation in cleaning canals and water supply meetings.

Table 6.31 Participation in cleaning / maintenance of canals

% Respondents;	Districts								
	O	C	B	E	D	M	V	L	All
Indicating participation	37	33	43	0	0	12	7	0	17
Indicating no participation	37	31	24	79	82	74	81	87	62
No information provided/ N/A	26	36	33	21	18	14	12	13	21
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.32 Participation in farmers' water supply meetings

% Respondents;	Districts								
	O	C	B	E	D	M	V	L	All
Indicating participation	39	19	38	0	0	11	6	0	14
Indicating no participation	37	46	29	75	79	70	78	85	63
No information provided/ N/A	24	35	33	25	21	19	16	15	23
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

There is need for caution when interpreting the results in Table 6.30, 6.31 and 6.32 as they include overall data of participants across the sample districts, including those who were not involved in irrigation farming. Thus, the proportion of participants who were involved in cleaning canals as well as those who attended water supply meetings could have been relatively higher than reported. Some of the people interviewed were not in leadership positions and therefore were not invited to the meetings, suggesting the attendance to those meetings could have been higher than reported. This was confirmed by group interviews, which established that WUAs had begun taking a lead in minor O&M works. It was also reported WUA meetings were being held according to schedule and proceedings were recorded indicating improved community organisation. Fifty three percent of participants in Oecussi, a target district claimed that at least each WUA held a

meeting every three months (Table 6.33) as compared with very low proportions in non-target districts such as Viqueque and Ermera. This suggests that some capacity building had taken place in target districts, which would ultimately contribute to improved community organisation, one of the characteristics of resilient communities (Twigg, 2007).

Table 6.33 Frequency of village implementation team meetings

Meetings take place about;	Districts								
	O	C	B	E	D	M	V	L	All
Twice a month	12	5	1	0	12	1	1	5	4
Monthly	37	2	2	0	22	6	0	5	8
Every two months	1	1	0	0	4	0	1	3	1
Every three months	3	3	2	0	4	1	0	2	2
Some other level of frequency	1	7	0	3	2	6	4	12	5
Question did not apply / no clear reply	46	82	95	97	56	86	94	73	80
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

In addition, some WUAs had begun contributing in kind towards O&M. This suggests that farmers were willing to pay for the O&M services if they were made aware of their responsibilities prior to the rehabilitation of irrigation schemes, which would go a long way in improving their resilience. However, participatory interviews with WUA BODs and key informants revealed a few concerns, which highlight some lessons for disaster-resilience oriented development and humanitarian programmes.

Firstly, there was concern that ARP II was in danger of entrenching dependency among farmers. Farmers waited for government or donor assistance, even on activities they were able to carry out without help. Cleaning canals was the most cited example where participants requested for government assistance when it was their responsibility. Such an attitude, if anything, would reduce the community capacity to manage their own affairs. It appears ARP II made much emphasis on the hazard risks that destroy the irrigation schemes rather than the resilience of people to withstand such hazards through appropriate ways of anticipating and managing the risks. There was need to seek ways of maintaining motivation and commitment among irrigation farmers rather than farmers expecting government and non-governmental agencies to help them. Many would agree that the government's paternalistic attitude was acceptable to an extent it did not increase vulnerability or decrease the resilience of communities to hazard risks.

Similarly, there was lack of clarity of roles between local consultants and WUA management committees. MAFF engaged local consultants to support WUA management committees, which was in the form of mentoring and coaching in organisational management, technical training in O&M and use of tools and chemicals.

Group interviews revealed that the local consultant played a major role in the affairs of WUAs to the extent of organising and chairing WUA management committee meetings. In these circumstances, it was highly unlikely that WUAs would assume *all* responsibilities at the end of the project. In addition, the consultative process leading to the formation of WUAs appeared to have been flawed. In the majority of cases, the WUAs were formed after the rehabilitation works were completed. While farmers had a keen interest in the O&M of their schemes, the retrospective formation of the WUAs appeared to be unhelpful in clarifying their roles and responsibilities and those of consultants in relation to the rehabilitated irrigation resources. Interviews with MAFF staff and WUA groups revealed that WUAs should have been formed and made functional at least six to nine months before the commencement of rehabilitation work. In addition, inadequate numbers of skilled staff to support WUAs capacity appears to have been a huge problem. Three local consultants supported by one MAFF staff member were inadequate to cover all the WUAs that were reactivated or established under ARP II. The ten WUAs formed had ceased functioning by 2004, and an international adviser was appointed in mid-2004 to work with MAFF staff and farmers to reactivate them. The rehabilitated schemes were therefore underutilised as a result of lack of capacity by the WUAs. It would appear, once again, the focus of ARP II was on rebuilding the physical infrastructure destroyed during the conflict at the expense ‘soft’ community system that would enhance community agency.

Finally, group interviews and observations revealed that there was disillusionment among some irrigation farmers, as ARP II did not protect their paddy fields from the threat of being washed away by flash floods. In addition, siltation and sedimentation of primary canals lead to difficulties in drawing water into the secondary canals. Participants called for the development of a policy framework on water rights and river management systems. This study questions ARP’s entry strategy – it would appear benefiting communities had limited knowledge, if any at all, regarding the reasons for rehabilitating irrigation schemes. It is doubted whether communities were made aware that the assistance they were receiving from government and non-government agencies would one day come to an end and they would be responsible for the O&M of their schemes.

The ‘services to farmers’ component generally achieved its objectives. Of the three sub-components, the animal health component appeared to have been the most successful. However, the data in Tables 6.34 which shows low proportion of households whose livestock was vaccinated should be treated with caution.

Table 6.34 HHs whose animals were vaccinated

% indicating their;	Districts								
	O	C	B	E	D	M	V	L	All
<i>Cattle buffalo vaccinated</i>	19	13	14	6	0	17	19	17	15
<i>Pigs vaccinated</i>	30	19	40	36	62	58	46	46	42
<i>Chickens vaccinated</i>	3	3	6	6	6	1	9	21	8
<i>Other animals vaccinated</i>	3	1	1	0	2	1	3	2	3
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

The data includes respondents who did not own livestock, suggesting the proportion of households whose livestock was vaccinated could have been higher if only those who owned livestock participated in the study. Similarly, data in Table 6.35, which shows low proportion of respondents who were satisfied with the vaccination information, should also be treated with caution as the data includes those respondents who did not own livestock.

Table 6.35 Satisfaction with vaccination information

% were satisfied with information	Districts								
	O	C	B	E	D	M	V	L	All
before vaccination	28	9	16	9	0	16	16	14	13
before vaccination of pigs	30	16	35	29	56	53	28	23	33
before vaccination of chickens	2	1	5	2	3	2	7	3	3
before vaccination of other livestock	1	0	4	0	1	1	2	1	1
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

There was evidence of a reduction in cattle, buffaloes, pigs and chicken diseases as a result of the vaccination campaigns. One in three respondents reported a reduction in pig deaths or sickness because of the vaccination programme (Table 6.36). Similarly, there was reduction in cattle or buffalo deaths by 12 percent.

Table 6.36 Reduction of animal deaths / sickness as a result of vaccination

% Respondents indicating;	Districts								
	O	C	B	E	D	M	V	L	All
Reduction in deaths / sickness of cattle / buffalo	20	11	14	9	0	13	17	7	12
Reduction in death /sickness of pigs	27	16	36	30	58	45	33	17	32
Reduction in chicken deaths or sickness	10	4	2	23	6	16	13	31	13
Reduction in other animals death / sickness	1	0	3	0	1	1	2	1	1
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

The data in Table 6.36 varied across the sample with Dili having the highest proportion of 58 percent while Covalima had the lowest 16 percent. Oecussi had the highest (20

percent) with Dili, with very few, if any cattle / buffalo and, like other urban areas, recorded no decrease.

In relation to animal health, a private livestock health system with potential for sustainability was established as per objectives. Table 6.37 shows an average of 21 percent of participants had started using the VLW service.

Table 6.37 Provision of service by VLW

% Respondents indicating;	Districts								
	O	C	B	E	D	M	V	L	All
They had their livestock treated by VLWs	29	10	31	12	27	25	19	12	21
Their livestock was not treated by the VLWs	44	53	29	66	57	63	57	74	55
No information provided/ N/A	27	37	40	22	16	12	24	14	24
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

In addition, one in four participants was satisfied with the service provided by VLW service (Table 6.38). Dili had the highest proportion while Covalima had the lowest percentage. Considering that the VLW concept was new, the results suggest that ARP II was effective in establishing the animal health extension service. At the time of the fieldwork, there was a draft framework in the form of a constitution that would regulate the operations of National Livestock Workers Association.

Table 6.38 Satisfaction with VLW service

% indicating they;	Districts								
	O	C	B	E	D	M	V	L	All
Were satisfied with the VLW service	36	11	31	16	40	30	24	13	25
Were not satisfied with the VLW service	35	51	28	59	38	54	46	65	47
No information provided/ N/A	29	38	41	25	22	16	30	22	28
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Despite the successes of VLW, farmers questioned why they were asked to pay for VLW services when the government vaccination programme was provided for free. It would therefore appear, ARP II was not effective in making farmers aware of the difference between the private livestock health services provided by VLWs and the government's vaccination programme. Resilience actions are informed by choices on available options. How would farmers make choices with limited clarity on the available animal health care options? In addition, fees for provision of private animal health services were subject to negotiation between the farmer and VLWs, but there was little, if any consideration for ensuring the poorest of the poor farmers were not denied access to the services on the basis of their inability to pay for the service. Yet, livestock is a major asset which

increases the copying capacity and resilience of poor households in the short and long term respectively.

On the effectiveness of MAFF in relation to the achievement of its objectives, there is need for caution. It was difficult to attribute all the achievements to MAFF when other agencies also worked with communities on similar activities. For example, while a low proportion of participants attributed the rehabilitation of roads to MAFF (Table 6.39), there were other agencies who were involved in road rehabilitation as shown in Table 6.40. Similarly, Table 6.41 reveals that 14 percent of the participants indicated that WUAs were established by other agencies.

Table 6.39 Rehabilitation of community road

% indicating	Districts								
	O	C	B	E	D	M	V	L	All
rehabilitation of road by MAFF	32	28	28	0	0	17	6	1	14
no rehabilitation road by MAFF	2	6	6	0	0	3	3	0	3
No information provided/ N/A	66	66	66	100	100	80	91	99	83
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.40 Rehabilitation of roads by other

% Indicating rehabilitation of	Districts								
	O	C	B	E	D	M	V	L	All
road by other agencies	25	3	7	1	6	2	18	1	8
community road by other agencies	72	63	75	93	85	93	71	90	80
road by community itself	1	2	2	2	3	1	2	1	2
road by community itself with other agency	1	7	10	3	3	1	1	1	3
No information provided/ N/A	1	25	6	1	3	3	8	7	7
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.41 Establishment of Water Users Association by other agencies

% indicating	Districts								
	O	C	B	E	D	M	V	L	All
Establishment of WUAs at the community farm level by specified agencies	29	29	34	0	0	11	7	0	14
No establishment of WUAs at community farm level by other	46	32	25	87	81	74	86	93	65
WUAs established by communities themselves	0	2	7	0	0	0	1	0	1
WUAs established by unspecified agencies	0	0	1	3	1	0	2	1	1
No information provided/ N/A	25	37	33	10	18	15	4	6	19
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Like in most development and humanitarian interventions, it tends to be difficult to attribute achievements solely to a particular organisation. It would appear resilience building, like many other aspects, might be difficult to attribute it to a single agency when there are multiple agencies performing similar tasks. Wider consultations with key informants from agencies involved in similar activities can reduce the problem of attribution.

In summary, ARP II was generally effective in achieving set targets. Indeed, the established infrastructure and institutional structures would, to some extent contribute, to community resilience. Rehabilitated roads and irrigation schemes would in some ways improve the livelihoods of the East Timorese. Likewise, the institutions that were established would to some extent lead to improved community organisation. However, gender balance remained a challenge, confirming that resilience building has to contend with several challenges, particularly those related to traditional values and customs.

6.7 Impact of ARP II

In considering the extent to which humanitarian projects such as ARP II attempt to promote resilience, change was assessed by comparing ‘before’ and ‘after’ the project. Change in agricultural production, availability of food throughout, area of land owned and irrigated, and livestock ownership were considered adequate measures of ARP II’s impact on food security. The data included an analysis of change in levels of production between 2002 and 2004 in the eight sample districts. Four findings emerge from these tables, which have an implication in ARP II’s resilience building in East Timor.

Crop production

Firstly, in relation to crop production, there was considerable variation from one district to the other. The respondents in the eastern districts generally reported higher increases in agricultural production than western districts. One in three households had an increase in crop production in Viqueque district while about one in ten reported an increase in Covalima district. This was consistent with the 2002 *Suco* Survey that asserted that the eastern districts were more food secure than the western districts. This variation can be explained by a variety of factors. One explanation was that the households in the eastern districts had more livestock assets as compared with the western districts which were used for draught power.

Secondly, the data indicates a general decrease in crop production between 2002 and 2004. More than 50 percent of the respondents in the sample districts reported they

could no longer satisfy their food needs compared to 2002. Table 6.42 illustrates that between 2002 and 2004, only two percent of the households reported a big increase (75 percent or more), 23 percent reported a small or quite big increase (25 percent – 75 percent), 13 percent reported no increase while 49 percent reported a decrease in crop production. Although there was a general increase in area of land owned by participants (Table 6.43), there was a decrease in number of households that grew crops such as rice, maize and cassava between 2002 and 2004 (Table 6.44).

Table 6.42 Increase in crop production over past two years

% Respondents indicating	Districts								
	O	C	B	E	D	M	V	L	All
Big increase (75% or more)	1	4	3	0	1	4	2	1	2
Slightly big increase (25-75%)	6	3	7	6	11	9	18	9	9
Small increase (less than 25%)	4	1	9	25	8	23	15	17	13
No increase	19	8	15	20	12	7	15	13	13
Decreased	35	69	48	43	59	52	37	51	49
No data / N/A	34	15	18	7	9	5	13	10	14
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.43 Area of land ownership

% HHs owning;	Districts								
	O	C	B	E	D	M	V	L	All
Not more than 0.5 hectares	40	3	5	32	31	8	37	29	22
0.5 – 1 hectare	45	26	23	48	53	51	37	50	41
1.1 – 2 hectares	12	61	42	10	7	31	14	11	25
3 – 5 hectares	2	9	15	7	5	4	5	3	6
More than 5 hectares	0	0	4	0	1	3	1	0	1
No information provided	1	2	12	3	3	4	7	6	5
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.44 Change in number of crop type grown

% indicating that in comparison to two years ago they now grow:	Districts								
	O	C	B	E	D	M	V	L	All
More crop types	10	6	7	0	2	5	11	3	6
Less crops	69	78	63	68	83	76	65	74	72
About the same amount	14	6	16	26	10	8	16	14	13
Do not grow crops	4	3	6	6	5	8	3	7	5
Unclear reply / did not respond	3	7	8	0	0	3	5	2	4
HHs in Sample	139	161	163	87	125	172	181	191	1219

O-Oecussi, C-Covalima, B-Bobonara, E-Ermera, D-Dili, M-Manufahi, V-Viqueque, L-Lautem

Table 6.45 shows that households that produced rice decreased by 10 percent from 38 percent in 2002 to 28 percent in 2004. Maize registered the highest decrease of 18 percent from 68 percent in 2002 to 50 percent in 2004 while cassava had the lowest decrease of 3 percent from 34 percent in 2002 to 31 percent in 2004.

Table 6.45 Change in selected crop output

	Districts								
	O	C	B	E	D	M	V	L	All
HH producing rice 2002	59	63	116	7	2	106	81	31	465 (38%)
HHs Producing rice 2004	49	42	114	6	0	45	43	26	325 (27%)
50kg bags of rice per producing HH 2002	9.9	27.6	27.8	14.6	6.0	47.9	26.6	10.4	28.4
No. of 50 kg bags of rice produced 2004	9.1	22.4	19.3	5.3	0	19.8	9.5	8.5	15.7
HHs producing Maize 2002	65	121	114	59	84	97	125	169	834 (68)
HHs Producing Maize 2004	68	82	90	43	73	49	94	106	605 (50%)
50kg bags of maize produced 2002	8.4	13.7	10.1	4.6	84.4	65.7	22.1	3.6	24.5
50 kg bags of maize produced 2004	6.2	9.0	8.0	2.8	32.5	29.5	11.3	2.2	11.8
HHs producing cassava 2002	14	57	88	31	25	45	91	63	414 (34%)
HHs producing cassava 2004	14	58	85	30	22	46	70	56	381 (31%)
50kg bags of cassava produced 2002	2.2	5.9	11.5	4.2	2.4	4.3	4.0	3.6	5.7
50 kg bags of cassava produced 2004	2.3	5.1	10.0	4.5	2.2	4.7	4.4	3.8	5.5
HHs producing beans 2002	4	11	15	0	7	0	6	4	47 (4%)
HHs producing beans 2004	4	12	12	0	9	0	6	3	46 (4%)
50kg bags of beans produced 2002	1.1	9.4	25.1	0	0.6	0	1.5	.6	4.9
50 kg bags of beans produced 2004	1.5	5.0	3.2	0	0.6	0	0.4	0.3	2.6
HHs in Sample	139	161	163	87	125	172	181	191	1219

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The average number of 50 kg bags was measured in sacks. Maize recorded the highest decrease of 13 bags from 25 in 2002 to 12 in 2004. Rice recorded a decrease of 12 bags from 28 bags in 2002 to 16 bags in 2004. Beans recorded the lowest decrease of two bags from five bags in 2002 to three bags in 2004. There was no change in cassava outputs. While the data on production and food security had higher responses as compared with the rest of the study, the data should be treated with caution. One limitation is that the data relied on farmers' knowledge and recall of events two years ago which could have been inaccurate. However, this was triangulated through group discussions and key informant interviews. During group discussions with MAFF officials, it was claimed that respondents gave lower figures of their production to attract sympathy for delivery of more humanitarian aid. However, the data gave some indication on the general food

security level in Timor-Leste. The main findings that emerge from this data show that food production had decreased between 2002 and 2004 in Timor-Leste.

Availability of food

Likewise, on food security, Table 6.46 shows that 12 percent experienced an improvement, 19 percent experienced no change, while 55 percent of respondents indicated their household was less able to meet food needs in 2004 compared with 2002. Similarly, there was a reduction in household income (Table 6.47), suggesting that a decline in food availability equated to a drop in income.

Table 6.46 Change in ability to satisfy food needs

% indicating ability to satisfy food needs in comparison to two year ago as:	Districts								
	O	C	B	E	D	M	V	L	All
A big improvement	5	4	3	1	1	1	2	2	3
A slight improvement	15	3	15	5	5	4	14	6	9
No change	25	8	14	23	21	17	28	16	19
Less able to meet food needs than previous	48	77	55	39	63	61	37	52	55
Unclear reply / did not respond	7	8	13	32	10	17	19	24	14
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Table 6.47 Change in HH income

% indicating change HH income compared to two years ago as:	Districts								
	O	C	B	E	D	M	V	L	All
A big increase	5	5	2	0	0	1	1	1	2
A small increase	18	9	14	2	2	3	14	6	9
No change	23	14	25	38	35	36	38	50	33
A decrease	51	70	48	60	62	54	43	39	52
Unclear reply / did not respond	3	2	11	0	1	6	4	4	4
HHs in Sample	139	161	163	87	125	172	181	191	1219

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However, for the case of income, the number indicating no change was significantly higher than for the case of meeting food needs. This may suggest that the association between the two was only partly complete. It was the balance between food production, its storage and sale, together with consideration of the role of other income generating activities that more fully defines food security.

Table 6.48 suggests, despite some notable variation between districts, that about 68 percent of respondents indicated that their households did not have enough food to eat throughout the year. The periods of the year that appear to be the most food insecure, are about January – February, and a second less extreme period in August – September (Table 6.49).

Table 6.48 Enough to eat throughout the year

% Respondent	Districts								
	O	C	B	E	D	M	V	L	All
Indicating enough to eat throughout the entire year	22	15	40	23	27	52	30	24	30
Indicating not enough to eat throughout the entire year	77	83	58	75	72	45	66	74	68
Unclear reply / did not respond	1	2	2	2	1	3	4	2	2
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Again, the data suggests that ARP II's goal to enhance the Timorese resilience to food insecurity was limited, if any, at all. Thirdly, on food storage, Table 6.50 shows that a significantly higher percentage of families (42 percent) indicated they managed to store food for the critical months than those that did not (27 percent). The other 31 percent were made up of those that were not asked this question because they had indicated that they did not have any food insecure periods.

Table 6.49 Seasonality of food shortage

% respondents indicating a shortage of food by month	Districts								
	O	C	B	E	D	M	V	L	All
January	78	80	50	66	53	29	29	52	53
February	72	65	42	58	50	24	31	45	47
March	32	11	21	21	2	2	11	7	13
April	3	2	9	14	1	1	17	3	6
May	1	7	8	3	1	8	14	3	6
June	2	11	0	5	4	13	19	7	8
July	7	11	0	6	8	15	22	12	11
August	9	17	1	28	50	23	18	33	22
September	17	34	5	56	65	33	28	58	36
October	0	0	0	0	0	1	0	0	0
November	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Table 6.50 Storing food for the critical months

% indicating their family	Districts								
	O	C	B	E	D	M	V	L	All
Manages to store food for the critical months	63	65	45	43	40	33	19	35	42
Does not manage to store food for the critical months	14	17	18	29	29	17	49	41	27
Unclear reply / did not respond or N/A*	23	18	27	28	31	50	32	24	31
HHs in Sample	139	161	163	87	125	172	181	191	1219

* *i.e.* Respondents not indicating food shortage problems were not asked this question

However, this ratio is for the sample of the eight districts as a whole. It is important to note that for the case of Viqueque district, and to some extent Lautem district,

significantly greater proportions of respondents indicated their family did not manage to store food for critical months than they did in 2002. Yet, some types of local foods such as *aifarina* (cassava), *kumbili* and *akar* were stored by families experiencing food insecurity as detailed in Table 6.51. This suggests that ARP II could have benefited from indigenous local knowledge (ILK) and resilience of communities to disasters created over centuries if its design had captured this. Indeed, resources for resilience building are “more than money and include knowledge and skills” (Buckle, 2006:99) including ILK. Cultural knowledge can play a valuable role in identifying capacity and resilience that could be developed through community development (Paton, 2006) and humanitarian interventions.

Table 6.51 Storage of localised food types

% indicating food shortage problem at certain times of year who store the following food types:	Districts								
	O	C	B	E	D	M	V	L	All
Aifarina	10	16	34	29	31	9	12	23	20
Akar	34	35	5	0	1	0	0	0	9
Kumbili	0	3	0	0	1	0	1	0	1
Kontas	0	0	9	1	0	1	0	4	2
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Table 6.52 provides further detail by indicating the total quantity of crops people estimated they produced and sold by area, together with the average quantity sold. It is clearly a rough estimate, as individual types of crop were not specified here. However, it serves to show that only a very small percentage of overall production was being marketed (perhaps about four percent), as very few households were able to sell their crops (see Table 6.53. However, for those that did sell crops, the average of what they sold was about 21 percent of what they produced.

Table 6.52 Household estimates of quantity (in kgs) of crops produced and sold

	Districts								
	O	C	B	E	D	M	V	L	All
quantity of crops produced	104,000	192,000	176,000	3,000	0	83,039	159,237	48,000	765,276
quantity of crops sold	1,657	9,032	8,243	0	0	2,958	3,144	749	25,782
Average quantity produced	1,733	1,829	1,872	1,500	0	1,887	1,942	2,000	1,862
Average quantity sold by	237	475	330	0	0	329	1,048	375	397
HHs in Sample	139	161	163	87	125	172	181	191	1,219

* crop types are not specified here. Purpose of question was to confirm sale of some crops rather than quantify exactly how much of each crop, which is more the focus of other HH production surveys being carried out by the Ministry

Table 6.53 Sale of crops

%HHs indicating	Districts									
	O	C	B	E	D	M	V	L	All	
They sold some of their harvest	6	13	17	0	0	6	3	1	6	
They did not sell any of their harvest	35	49	40	2	0	18	39	11	26	
Unclear reply / did not respond or considered not to apply	59	38	43	98	100	76	58	88	68	
HHs in Sample	139	161	163	87	125	172	181	191	1219	

Crops were most frequently sold at a traditional market or to neighbours. However, not more than 5% of respondents provided information in response to questions about their sale of produce.

The impact of ARP II on livestock production might shed light on the extent to which it contributed to building community resilience to food insecurity. Table 6.54 provides the impact of ARP II on livestock production.

Table 6.54 Change in number of animals owned

% indicating that in comparison to two years ago they now have:	Districts								
	O	C	B	E	D	M	V	L	All
More animals	4	11	11	6	12	6	15	8	9
Less animals	60	42	32	65	48	60	49	50	50
About the same amount	9	9	16	16	25	23	25	33	20
Do not keep animals	24	34	33	12	10	8	4	5	16
Unclear reply / did not respond	3	4	8	1	5	3	7	4	5
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Table 6.54 reveals that about one in ten participants reported an increase in livestock compared to two years prior to the study. About half of the participants reported a decrease in livestock ownership, with little variation across districts, while one in five reported no change in ownership of animals. This data suggests that ARP II might not have a positive impact on livestock production hence its contribution to resilience building might be doubted.

The main findings that emerge from this data show that food production had decreased between 2002 and 2004 in Timor-Leste. This finding is consistent with FAO / WFP's Crop and Food Supply Assessment of 2003 that predicted a decrease in cereal production (FAO/WFP, 2003). Similarly, the 2007 FAO/WFP Crop Assessment indicates that crop production had contracted by 25-30 percent compared with the average of the last few years (FAO/WFP, 2007). The data suggests that ARP II's goal of enhancing the Timorese capacity to improve food production was limited, if any, at all. In these circumstances, it might be extremely difficult for East Timorese to 'bounce back' or rather 'bounce forward' when confronted by disasters triggered by hazards such as drought, earthquake and flash floods.

6.8 Sustainability of ARP II

Capacity building through rehabilitation programmes can be a difficult, slow process. Yet 'any proposal for sustainable development that does not explicitly acknowledge a system's resilience is simply not going to keep delivering the goods (or services)' (Walker and Salt, 2006:9). This study found that the sustainability of both the activities and impacts of ARP was unlikely.

Regarding the sustainability of rehabilitated infrastructure, this was dependent on two notable considerations: community members' willingness to pay for the operation and maintenance of rehabilitated irrigation schemes, and the continued institutional support and provision of resources by the government. Table 6.55 shows the distribution of willingness to pay for the O&M of their rehabilitated irrigation schemes.

Table 6.55 Willingness to pay for O&M for rehabilitated irrigation schemes

% respondents who were;	Districts								
	O	C	B	E	D	M	V	L	All
Willing to pay something	17	11	15	0	0	12	0	0	7
Willing to pay \$1-\$10	14	1	7	0	0	0	1	0	3
Willing to pay \$11-\$20	0	0	0	0	0	0	0	0	0
Willing to pay \$21 and above	0	0	0	0	0	0	0	0	0
HHs in Sample	139	161	163	87	125	172	181	191	1219

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Table 6.55 shows at least 10 percent of participants were willing to pay something for the O&M of their rehabilitated irrigation schemes. However, only about three percent of the respondents were willing to pay between US\$1 and US\$10 for the O&M of rehabilitated irrigation schemes. The results in Table 6.55 suggest that without external financial and material support, rehabilitated irrigation schemes would face some operational difficulties. This also raises the question regarding willingness and ability to pay, particularly in poverty-stricken communities such as those in East Timor. Even if households were willing to pay, where would they obtain the money for them to pay given limited sources of income?

Nonetheless, the sustainability of the rehabilitated community irrigation schemes was possible, particularly for those schemes that did not require substantial water diversion channels. However, those schemes that required substantial diversion of channels to access irrigation water, their sustainability was unlikely due to huge capital costs involved. But the sustainability of light-to-medium-damaged schemes rehabilitated by ARP II was likely if there was immediate effective use of enforceable O&M agreements between MAFF and the respective WUAs. In the absence of fully functioning WUAs and enforceable O&M agreements, the sustainability of the major investments in these schemes without substantial MAFF support was likely to be difficult. Fully functioning WUAs would require significant funds from their Association's membership to discharge their expected portion of total O&M costs. There was however, little progress towards that end by 2005³⁷.

Similarly, the sustainability of the improvements that were made in the rehabilitation of rural roads appeared to be difficult unless the GoTL acquired alternative resources. Introduction of road taxes over time would be one of the sources of incomes provided the volume and incomes of road users increased.

In contrast with WUAs, the sustainability of VLWs was likely. The VLWs set the foundation for the privatising animal health and production model to complement the government's annual vaccination programme. The VLWs were members of a National Livestock Workers Association, who would be contracted to carry out village-level vaccinations when need arose. Assuming this model would work at least cost in providing animal health services; there was a high likelihood for the community to continue realising the VLW benefits. Key to sustainability of the VLW organisation

³⁷ See the ARP II World Bank Completion Report No. 32473 available at www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/08/02/000090341_20050802084141/Rendered/PDF/32473.pdf; accessed on 12th January 2009. .

would primarily depend on a number of variables. User awareness, public interest, willingness to pay for the services, on-going support and capacity building for VLWs and research into animal extension, would be some of the factors of sustainability³⁸.

The major concern from participants was the inappropriateness of the privatisation of the animal health services through the Village Livestock Workers (VLW) Programme. It was assumed the VLWs would be more accessible to communities and able to assist them within an appropriate period, without the need for ongoing government support. That users of VLWs would meet the costs was a major cause for concern amongst Timorese. Although 63 percent declined to respond, in relation to their ability to pay for animal health services offered by VLWs, nearly one-third of the farmers were unwilling to pay for the VLW services (Table 6.56). During group interviews, farmers questioned why they did not pay for the GoTL-sponsored vaccination programme when compared with the VLW programme where they were required to pay for the service.

Table 6.56 Willingness to pay for livestock services provided by VLWs

% indicating they were;	Districts								
	O	C	B	E	D	M	V	L	All
Willing to pay	28	5	17	13	17	8	12	8	13
Were not willing to pay	10	15	17	15	41	29	24	36	24
No information provided/ N/A	62	80	66	72	42	63	64	56	63
HHs in Sample	139	161	163	87	125	172	181	191	1219

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In relation to ASCs, Table 6.57 reveals that no more than one percent of the respondents indicated that they were members of ASCs, that ASCs were operational, attended meetings at ASCs, received training from ASCs, bought or sold something from ASCs or benefited somehow from them. The three ASCs that were created by Executive Order in Bobonaro (2001), and in Aileu and Viqueque (2002) were highly unlikely to be sustainable. All the three ASCs were unable to cover operating costs such as transport and labour. At the time of the study, there was no shareholding in the ASCs in line with the Farmer Owner Model as was envisaged at the design stage of ARP I and II. Interviews with farmers and ASCs staff revealed that the information to and from farmers was weak in the majority of areas for them to access ASC services. Therefore, farmers were unaware of the incentives to join ASCs.

³⁸ Ibid.

Table 6.57 Further comments on ASCs at the community level

% indicating	Districts								
	O	C	B	E	D	M	V	L	All
That the ASC had been fully operational	0	0	3	1	0	0	3	0	1
They regularly attended ASC meetings	0	0	0	1	0	0	2	0	0
They received training on technical or business aspects from ASCs or any other community association on a regular basis	0	0	0	1	0	0	2	0	0
Bought something from ASC or other community associations	0	0	3	0	0	0	1	0	1
They sold something through ASC or another community association	0	0	1	2	0	0	2	0	1
ASC activities are benefiting the community	0	0	3	1	0	0	3	0	1
They were willing to sustain their involvement with the ASC or other community association for years to come	0	0	3	1	0	0	2	0	1
They were satisfied with the ASC or other community association business programme implementation	0	0	4	1	0	0	3	0	1
HHs in Sample	139	161	163	87	125	172	181	191	1219

Note: The data is extracted from the random sample for the entire area. As few people had involvement in ASCs the above response rate on ASC produce very low percentages

To sum up, sustainability of both activities and impact of a rehabilitation project like ARP II, were likely to be complex. Taking into account that the Timorese struggle for independence from Indonesia took almost quarter of a decade, challenges were likely to be met. Local communities had become accustomed to top-down rather than bottom-up institutions. They expected the government to supply goods and services including animal health and O&M of community irrigation schemes. At the same time, exclusion of ‘traditional institutions’ from ARP when they provided support to their subjects during the liberation struggle, contributed to the lack of sustainability of project benefits. Therefore, sustainability of ARP II depended fundamentally on the project design, entry and exit strategies as well as the institutional and organisational structure of the executing agency. It depended on the extent to which communities ‘unexpendable essential elements’ were incorporated into the design and entry and exit strategies. While incorporation of local traditional values would not have necessarily guaranteed the sustainability of ARP II, weaving them into project design would have gone a long way in enhancing their own capacity. ‘Information to farmers’ and ASCs are examples of unsustainable project activities. However, some of the PD& RNM, irrigation and animal health activities and impacts had a chance of being sustainable, which would go a long way in contributing to the improvement in East Timor’s food security capacity and community resilience building.

6.9 Conclusion

This study confirmed that food insecurity was increasing in East Timor. Rehabilitation of the agriculture system was one of the most appropriate ways of enhancing livelihood security. It can, however, be concluded that building a resilient agricultural system using ARP II was dependent on the assumptions on which the project design was based, institutional arrangements, and organisational capacity of MAFF to implement the project. To the extent that ARP II promoted participatory development through the creation of community-based structures such as PD&NRM, WUAs and VLWs, it subscribed to neoliberal post-modernism. Yet, ARP II was based on flawed assumptions about the reality in East Timor. Evidence from this chapter suggests that ARP II was incompatible with the local institutional needs.

Exotic institutions such as the village and sub-district councils which were created by UNTAET (and handed over to the new GoTL), had problems of legitimacy. The traditional institutional systems, which were excluded from village and sub-district councils, had more legitimacy and power than the ‘modern’ development institutions established by UNTAET. Erosion of local institutional capacity is cited as one of the negative consequences of incompatibility and incongruencies between interventions and local values and traditions, which has been raised in the literature (see for example, Adamoleku, 1990; Eade and Williams, 1995; Leach, 1995; Juma and Surke, 2002). But the tensions between modern and traditional institutions reflects the extent of the underlying ‘arrogance’ of the conventional, universal and homogenising over the relativist and empowering notions of development as well as disaster risk reduction. This chapter concludes that the ‘modern’ institutions created by UNTAET were built on what the Timorese considered as non-essential elements by excluding traditional institutions, and that the intervention reduced rather than enhance their resilience built over centuries. The discussion on resilience, structure and institutions is revisited later in Chapter Seven, section 7.4 and Chapter Eight, section 8.3.4.

However, the conventional humanitarian interventions, particularly those based on the ‘continuum’ (Frerks, *et al.*, 1995; Kelly, 1996; Kelly, *et al.*, 1997; Kelly, 1998) approaches, where policy and funding bodies structure interventions to fit the linear fashion of the disaster cycle, assume a compartmentalised approach in responding to beneficiary needs. ARP II was therefore about rehabilitation – it was not about development delivery. After all, the development phase would ‘fix’ development problems after the rehabilitation phase. But ARP II demonstrates how rehabilitation programmes can undermine (future) development and DRR efforts if they are not well-

designed, particularly if they do not build on existing resilience. The linkage between existing resilience, relief, rehabilitation and development are discussed further in Chapter Seven, section 7.5 and Chapter Eight, section, 8.3.5.

ARP II was based on tokenistic participation (Arnstein, 1969), ‘participation for material incentives’ or ‘functional participation’ (Pretty, 1995, cited by Cornwall, 2008:272), which would create a suitable institutional policy framework for GoTL, rather than one which would empower the community to adapt the institution to their needs. The approach where ‘beneficiaries’ played a leading role at each phase of the project, could have informed the project design in incorporating *essential elements* of their survival particularly local systems and values, such as traditional methods and gender equity. Indeed, organisations, as designers and implementers of capacity building programmes, should by implication, incorporate elements that support shared community values, established social infrastructure, community agency and partnerships between agencies (Buckle, 2006).

Similarly, promoting community agency required MAFF to have adequate organisational capacity especially human resources rather than relying on ‘expensive’ external facilitators and consultants. It might be safe to conclude that ARP II concentrated on strengthening the structure instead of the agency which would be needed to promote sustainability of project benefits, and which empowers communities to create and re-create the structures that would respond to their needs. Resilience building is about the *structure being subordinate to the agency*. As long as East Timor maintains the structure-agency rather than the agency-structure subordination, it will be likely that ongoing disaster risks are reproduced by the GoTL structures. The discussion on agency-structure is picked later in Chapter Eight, section 8.3.4. The next chapter discusses the lessons emerging from CCJP, ISP and ARP case studies.

CHAPTER SEVEN

DISASTER RESILIENCE: EMERGING LESSONS

7.1 Introduction

Building disaster resilient communities through development and humanitarian programmes can arguably take many forms. However, determining the extent to which such interventions enhance resilience is a substantive challenge. Evaluation remains one of the approaches that can provide various insights in helping us determine the contribution of development and humanitarian programmes to both the theory and practice of resilience building. Moreso, evaluations provide a diversified rather than unified standpoint from which to analyse tensions between development and humanitarian interventions, particularly at the various phases of the disaster cycle.

This chapter discusses the findings of this thesis guided by information in Table 7.1. Using a cross-tabulation format, the table (Table 7.1) shows the extent to which the three interventions promoted thematic characteristics of resilience based on the evaluation assessment criteria. Nonetheless, it should be pointed out from the outset that comparisons and generalisations of the findings from the three case studies may be difficult to make given the different spatial, institutional and temporary scales at which they operated. The discussion is, however, guided by the purpose of establishing the extent to which development and humanitarian interventions contribute to resilience building in disaster-prone locations. As a result, the discussion is broadly centred on themes emerging from the resilience thematic areas. The chapter sets off by revisiting the conceptual challenges of resilience discussed in Chapter Two, sections 2.1-2.3. The remainder of the chapter explores the extent to which the three case studies attempted to promote sustainable livelihoods, community participation, institutions, social learning and linking (existing) resilience, relief, rehabilitation and development (LRRRD).

Table 7.1 Results Summary

Theme	Case study	Assessment criteria				
		Relevance	Efficiency	Effectiveness	Impact	Sustainability
Integration of disaster and development	CCJP	vulnerability reduction, empowerment, entitlement	investment in development to reduce disaster costs	advocacy structures; identification of livelihoods projects	vulnerability reduction downward accountability, civic awareness	entry strategy, no clear exit strategy; livelihoods created
	ISP	policy; vulnerability reduction	timely delivery; training model	structures coordination; improved EGS quality	community organisation, livelihoods	exit strategy, safety programme launched
	ARP	peace-building; rehabilitation	extension system established using relief resources	outputs exceeded targets; reduction in animal diseases	food insecurity increase; willingness/ inability to pay; dependency	poor entry exit and exit; incentives
Sustainable livelihoods	CCJP	political capital ; five livelihoods capitals	benefits outweigh costs	livelihood enhancement through training	tangible versus intangible livelihoods assets	non-interventionist; willingness/ability to pay
	ISP	protect and creation of livelihood assets	LRRD to protect and (re)create livelihoods	environmental rehabilitation; training	marginal increases in livelihood security; LRRD	non-interventionist, entry and exit strategy
	ARP	reduce food insecurity, democratic principles	costs outweigh benefits	target achievement; poor community participation	agriculture production decreases; food insecurity	poor entry and exit strategy; willingness and ability to pay
Community participation	CCJP	decentralised structures	use of volunteers; rights based approach	operational rights-based institutional framework	civic awareness; community agency; institutional tensions	existing structures; incentives and poverty
	ISP	democratisation policy	cascading training; wide coverage	needs based	community organisation; HR restructuring	exit strategy; safety programme launched
	ARP	creation of democratic structures	WUA, ASCs, PD&NRM, VLWs	agriculture institutional framework established	importance of traditional leadership	institutions created – eg WUA, VLW, ASCs
Institutional resilience-building	CCJP	promotion of democracy	existing structures; use of volunteers	advocacy structure working;	increased civic participation; question of incentives	existing church structures; incentives
	ISP	DRR policy and Hyogo Framework	non-interventionist	improved EWS, DRR systems established;	policy awareness; DRR coordination; livelihoods	trained graduates; DRR studies
	ARP	localised decision-making	existing rather than parallel structures	agriculture structures established	institutional tension; gender; community organisation	entry and exit strategy
Training (Social learning)	CCJP	rights-based knowledge and skills	cascaded to community level	improved community organisation	agency – civic participation	continuation of RBAs by other agencies
	ISP	knowledge and skills in DRR necessary	cascaded to local levels	workmanship and outputs	behaviour change; LRRD; government restructuring	DRR studies; safety net programme
	ARP	knowledge and skills	community-based established structures	beneficiary involvement in training programme	improved community organisation	no strategy beyond project

7.2 Conceptual challenges of resilience

Before examining the lessons that can be learned from development and humanitarian interventions, the conceptual challenges of resilience itself were considered a useful starting point. The challenge centres on translating resilience from an ambiguous construct to one that is meaningful to disaster theory and practice. With more than a dozen definitions, the concept of resilience is ‘confusing’ (Twigg, 2007:5). The construct of resilience, having originated from everyday language like many other social science concepts, can be problematic to pin down. It suffers from what may be termed as the Social Sciences Definitions Disease (SSDD). Grounding the construct into the existing philosophical foundations of knowledge, reality and existence can highlight the extent to which the resilience can be useful to both disaster theory and practice. The following section explores the philosophical and definitional challenges of disaster resilience following the examination of its practical context presented in this thesis.

7.2.1 Philosophical challenges

The concept of resilience is based on certain assumptions of reality. Until the 1970s, the conservative approach, in the form of the hazard paradigm, dominated the disaster debate. Hazards were disasters *per se*. They were acts of nature or God (Wijkman and Timberlake, 1984). Disaster prevention, mitigation, preparedness and response took a technological approach to reduce the impact of the hazard. In the late 1970s, the hazard paradigm came under severe challenge, particularly from the radical school. It was argued that disasters were a social construction; they resulted from the intersection of a hazard or the triggering event and the vulnerable population. Attention shifted from a hazard focus to socio-economic conditions creating vulnerability (Wisner *et al.*, 2004; O’Keefe *et al.*, 1976; O’Keefe *et al.*, 1976; Quarantelli, 1995). Recently, particularly in the 2000s, the vulnerability paradigm has also come under scrutiny. It has been claimed, the vulnerability paradigm tends to focus on the deficits rather than the capacity of the people prone to, or affected by disasters (IFRC, 2004). The ‘resilience thinking’ (Walker and Salt, 2006) is therefore built on the assumption that, with appropriate capacity, communities can recover from destabilising events, using their own resources, with little or without assistance. In other words, the recovery of communities from a disaster is dependent on the ‘enabling’ conditions for mediating ‘resilience actions’. This raises both ontological and epistemological questions regarding the facts and what we know, or can know about the conditions under which ‘resilience actions’ can guarantee recovery of

affected populations following a disaster. It also raises questions related to the methodology and methods regarding the overall logic of inquiry and the general principles by which research tools, procedures and analysis techniques are applied.

The term 'resilience' is an abstract word, which originates from everyday language use. It does not have an image. It tends to represent a condition, which can be visualised through certain characteristics, particularly during the recovery phase. Resilience is futuristic and 'action' oriented. It is rather difficult to observe resilience before the disaster occurs although institutional preparedness systems can give hints about the level of resilience of a particular community. Resilience is about 'action' to recover, following a disaster which, for the purpose of this study, has been termed as 'resilience action'. Action here is applied from Giddens'(1984) view and means to make a difference to a pre-existing state of resilience through transformative capacity or power by the community as own agents. The 'resilience actions' include mobilisation and activation of available human, material and financial resources before, during and after the disaster for the purpose of community recovery and continuity. The questions, which the social science disaster researchers will continue to grapple with, centre around the 'artiness' or a 'scienceness' of resilience which translates to the structure *versus* agency debate. The epistemological contentions in relation to assumptions about reality have already been explored in Chapter Three. It might, however, suffice to reiterate that, on one hand, the naturalist views the world as consisting of a series of real entities and steady processes, which are fragmentable into series of independent subsystems or variables. It is assumed the enquirer has no effect on the phenomenon to be studied and vice versa (Guba and Lincoln, 1982). In relation to this study, the naturalist perspective leads to the development of nomothetic knowledge base (Guba and Lincoln, 1982) of resilience characterised by general laws. On the other hand, the subjectivists view the world as consisting of interrelated multiple realities that complement each other. None of the realities can be considered to be truer than the other. It is assumed enquirers are human with 'foibles and biases' – thus, it is fruitless to assume interaction does not exist (Guba and Lincoln, 1982). In other words, all data have an element of subjectivity. In relation to this study, the subjectivist perspective leads to the development of idiographic knowledge base of resilience with generalisations in the form of 'thick descriptions' (Patton, 2002) of particular events.

From both the literature review and field work, it can be argued that resilience goes beyond the epistemological divide; it is at the ontological level of 'being' – the condition of 'being' able to adapt or change the system to reach and maintain an acceptable level of

functioning and structure so affected communities can ‘move on’ with their lives. However, the processes of knowledge creation to understand the conditions for ‘resilience action’ to occur, can assume either or both the naturalist and the subjectivist approach. The CCJP and ISP case studies in Chapter Four and Chapter Five respectively, were generally informed by a subjectivist approach, while the East Timor case study in Chapter Six adopted the positivist approach. However, there were some overlapping elements between either of the approaches. Notwithstanding that CCJP adopted a participatory methodology, it had some quantitative elements as well. For example, Table 4.5 (Chapter Four, section 4.6) shows the frequency of meetings that were held by each of the CCJP committees during the year 2000. The quasi-experimental design adopted by the East Timor case study was supplemented by participatory approaches to explain some of the statistical data. For example, focus group discussions were held with Key Informants and WUA Board of Directors to establish the reasons for the lack of participation of their members in operations and maintenance of canals. As stated in Chapter One, section 1.3 (p.3), this study did not take a purist one-sided view of either positivism or subjectivism. It adopts what Patton (2002) terms ‘pragmatism’ or ‘methodological appropriateness’ which aims at superseding a one-sided paradigm allegiance by increasing the concrete and practical methodological options available to addressing the issue being studied.

Assessing resilience can take many forms depending on the purpose. Buckle (2006) suggests a functional approach where vulnerability and resilience are assessed on the basis of the ability of a person or group or community to work towards and to attain certain goals such as the capacity to manage their own affairs, to have access appropriate levels of resources, including education, food, shelter, health care, cultural activity, social inclusion and information. Rose (2006) uses mathematical modelling to measure economic resilience. Mathematical models can be problematic when quantifying intangible attributes, particularly those related to psycho-social attributes. Wisner *et al.* (2004) suggest use the use of checklists or aide-memoires in assessing vulnerability and resilience although they do not explain how people and groups become or remain or move out of vulnerability and resilience. The evaluation criteria provide one of the ways of assessing resilience particularly in development and humanitarian interventions.

As already stated elsewhere in this study (for example, Chapter One, section 1.2.1, Chapter Three, section 3.1 and Table 7.1), the OECD/DAC evaluation methodology was adopted for this study to assess whether resilience was enhanced by the three case studies. Five out of the thirteen evaluation criteria were used: relevance, efficiency,

effectiveness, impact and sustainability. Since these case studies were project based, it was the objective to determine whether CCJP, ISP and ARP enhanced resilience of target communities. As shown in Table 7.1, examining the three projects' relevance, efficiency, effectiveness, impact and sustainability in relation to community participation, social learning, livelihood security and integration of disaster and development provided a unique way of understanding resilience building. There are, however, two notable observations which need highlighting. First, these criteria were developed mainly for measuring projects and programmes for accountability and lessons-learning purposes rather than to measure resilience. Thus, they may sound inappropriate. However, they present one of the most feasible ways of determining the impact of development and humanitarian programmes in their contribution to vulnerability reduction and resilience building. Secondly, the three case studies did not use the 'disaster resilience' terminology then. However, in practice, the project activities were oriented towards resilience development.

The resilience characteristics and indicators developed by Twigg (2007) which were still being piloted (when the report for this study was being compiled) were among initiatives that were aimed at improving the monitoring and evaluation of DRR. Twigg (2007) further acknowledges the diversity problem of the indicators which can potentially make the harmonisation with the existing evaluation frameworks difficult. He concludes by stating:

However desirable this may be, two factors should be borne in mind. First, every DRR initiative is context-specific, so generic or harmonised assessment schemes will always have to be customised to fit the context to which they are applied. Second, this is a relatively new area of work. Further piloting of methods and debate about their results are needed before general conclusions can be drawn with any confidence.

(Twigg, 2007:19)

Thus, the search for a framework for assessing the extent to which resilience has been enhanced requires more debate. This study contends that resilience building is not a new project. It has been undertaken before through, among others, community development and humanitarian projects. What may be new is the 'resilience thinking' (Walker and Salt, 2006) which has more focus on what communities can do to recover following disasters. From this vantage point, building on the existing evaluation criteria to improve the assessment of resilience could be useful. The current view is that the OECD/DAC criteria of relevance, efficiency, effectiveness, impact and sustainability and the additional criteria of connectedness, coherence, coverage, coordination (the 4Cs) and

timeliness provide a comprehensive framework of assessing humanitarian interventions. There are two options if resilience has to be incorporated into the existing criteria; either as an additional evaluation criterion or by integrating resilience into the existing evaluation criteria.

There are merits and demerits in adding resilience, as new criterion, to the existing criteria. Adding resilience to the existing criteria will not only attract attention but also increase debate on how progress can be assessed from the state of resilience prior to and after the intervention. There is no apology to add it to the already ‘long list’ of the humanitarian evaluation criteria, if it is an indispensable and necessary dimension that encapsulates the potential for new possibilities for people and societies to adapt to changed realities. Adding as many criteria as possible, including resilience, will widen the base from which commissioners of evaluation and evaluators can ‘shop around’ for the appropriate criteria. The process of choosing the criteria has a potential of involving some debate on reasons for including or excluding the other criteria. This can lead to an improved conceptualisation of resilience building interventions.

Confusion and duplicating what already exists is one of the potential downside of adding resilience as a new criterion. It is assumed that the current humanitarian evaluation criteria implicitly rather than explicitly incorporate some aspects of resilience. If resilience is a new concept with old practice, it is assumed that the evaluation criteria already incorporate some of the aspects. Yet, it is unclear which aspects of the ‘resilience’ which were already incorporated into the criteria. Box 7.1 highlights some views from evaluators on their views on incorporating resilience into the evaluation criteria.

Box 7.1 Views on resilience as an evaluation criterion by evaluators

- I don’t think changing evaluation methodology will have any significant effect on community resilience until there is better accountability to the affected population. Then the next step would be to invest in training and learning, which is not well linked to evaluations.
- Adding resilience to the existing evaluation criteria would not make any difference apart from making the evaluation criteria unnecessarily long.
- Making an emphasis would remind evaluators to focus on issues around resilience of communities.

Source: correspondence from evaluators

Although there are merits in adding resilience to the existing evaluation criteria, the views from evaluators suggest otherwise. It is therefore the contention of this study that it would make more sense in embedding resilience in the existing criteria rather than creating new criteria which would otherwise duplicate some aspects of existing criteria. For example, this study shows some elements of short and long-term resilience that were

assessed in the three case studies using the sustainability criteria. As was clearly the case in Chapter Four, section 4.7, CCJP managed to enhance resilience through building the civil capacity of Binga residents in influencing development programmes to respond to their felt needs. For example, using their social, human and political assets, the Simatelele community managed to advocate for the establishment of the clinic in their area. The Simatelele Health Centre would go a long way to increasing their resilience to preventable diseases of poverty such as malaria, cholera and dysentery. Table 7.1 reveals that DRR systems, particularly coordination, improved as a result of ISP. As stated in Chapter Five, section 5.9, dissemination of early warning information to internal and external stakeholders to trigger a response is one of the capacities of DPPA which was enhanced by ISP. In 2003, a humanitarian food crisis was averted due to, among others, timely early warning dissemination of information. As stated in Table 7.1, the ARP II's livestock vaccination campaign reduced the incidence of animal diseases. Thus, livestock assets were protected that would contribute to food security. For example, cattle/buffaloes could be used for draught power as well as provide meat and milk. But the exact wording of questions to be incorporated under each of the existing criterion is a subject for further investigation.

7.3 Capacity building strategies and resilience

7.3.1 Community agency and resilience

Resilience building, at whatever disaster phase, can take many forms. As already mentioned in Chapter One, section 1.5 (p.7), the radical and conservative approaches are dominant in this study. On one hand, the attention of the radical approach is towards social change particularly in the status quo. Communities are viewed as change agents who, given the appropriate knowledge and skills, can confront the authorities to transform institutional and legislative policies to address local needs. Central to radical programmes' agendas is 'community action' which is supported by empowerment of the poor and marginalised groups. On the other hand, the non-interventionist approach tends to take an incremental approach to resilience building by working within the establishment or status quo. Strengthening the capability of DRR practitioners is central to the non-interventionist approach.

The rights-based approach to development and vulnerability reduction, adopted by CCJP, essentially meant to promote community agency to the solution of chronic local problems. The thread running through CCJP intervention in Table 7.1, shows that the

participatory approaches through learning for transformation strategy, helped to mobilise communities to sustainably demand and defend their rights with minimal resources. To date, Binga community has consistently defied the threats from the ZANU (PF) government and continues to vote for the MDC political party. The civic actions were a starting point towards creating and sustaining the political capital which this study considers to be central to the creation and protection of both individual and communal sustainable and resilient livelihood assets. Increased access to resources such as Lake Kariba waters, fishing and wildlife resources can only be unlocked via a political process which created them in the first place. For example, opening up irrigation schemes along the Lake Kariba to grow crops such as maize and vegetables can go a long way in improving food security in the Zambezi valley. As was clearly the case in Chapter Four, sections 4.2.1-4.2.4, the low socio-economic indicators in Binga are historical. They result from the deliberate neglect from both the pre- and post-colonial governments. Consistent with the criticism of the political neutrality of the sustainable livelihoods asset pentagon's (Neefjes, 1999; Longley and Maxwell, 2003; Middleton and O'Keefe, 2001), political power is one of the central fundamental asset for the community of Binga towards creating their resilience to disasters.

Attempts towards strengthening community agency by ISP and ARP II, albeit to a limited extent, are recurring threads in Table 7.1. ISP successfully piloted the Employment Generation Scheme (EGS) which subsequently laid the foundation for the Productive Safety Net Programme in Ethiopia. As stated in Chapter Five, section 5.3, respective communities made decisions on the type of the small projects they wanted to implement as per their identified needs. Environmental rehabilitation such as terracing, stone bund construction and gully reclamation were common projects that were designed to mediate future disaster effects. Community involvement, coupled with the training provided by ISP, contributed to improvement in local level organisation. Similarly, as stated in Chapter Six, section 6.9, ARP II led to improved organisation through the creation and strengthening of agricultural institution. NRM groups, ASCs, WUAs and VLAs contributed to improvements in community organisation such as having timetables for holding meetings and increased participation of women.

Table 7.1 provides evidence of community participation in decision-making processes in all the three projects. The differences between CCJP and the other two projects (ISP and ARP II) lie in the approaches to participation. The former adopted an 'emancipatory' approach while the later adopted 'exploitative' participation (Pelling, 2007). Participation of communities in the CCJP was not conditional. As was clearly the

case in Box 4.3, the incentive and motivation for communities to participate was premised on their successful negotiation with both elected and appointed duty bearers. They questioned authorities on certain decisions; they rejected the bus shelters project in Sinakoma Ward in preference to the construction of the clinic, for example. On the contrary, the participation of communities in the other two projects was conditional. The incentive and motivation to participate was premised on their ability to submit a convincing project proposal to authorities. As stated in Chapter Five, section 5.4, in the case of ISP, the ideas from communities were subject to assessment by respective line ministries to either accept or reject the project based on the technical ‘soundness’ of the project. If the project was rejected, communities would start all over again and think of a project to submit to authorities. Thus, the full participation of communities in EGS was dependent on their ability to initiate a project that would not only appeal to, but also satisfy, the authorities. Otherwise a project was identified for them. Similarly, in ARP II participation in PD&NRM depended on applicants’ proposals meeting the prescribed criteria. Project appraisals or vetting were conducted by the village implementation teams who were supported by MAFF’s technical staff. If the proposals were not technically feasible, they were rejected. Also, participation in WUA, and VLWA was dependent on one being registered as a member of these structures. There was nothing wrong with the conditionalities imposed on the beneficiaries to meet certain eligibility criteria for them to participate in both ISP and ARP II. However, either accepting or rejecting the project proposals of certain individual members or groups of the local community on the basis of failing to meet the eligibility criteria would have an impact on their immediate and long-term resilience. Although this study did not explore the social status (in relation to power and education level, for example) of the people whose grant applications were accepted or rejected in the case of ARP II, it would be difficult without adequate assistance for the poorest of the poor to design successful grant applications.

Thus, like vulnerability, resilience building is a socially constructed political process. From this vantage point, resilience building is radical and therefore ‘conflictual’. It is about community agency to reconstruct the social structures that cause disasters in the first place. Allowing and increasing space for vulnerable and marginalised communities to ask questions, seek solutions and act to improve their condition is *sin qua non* to the resilience building process. It is about emancipation of communities from bondage of institutionalised culture of discrimination through what may be termed ‘legitimised filters’ such as ‘eligibility criteria’ and ‘targeting’. There is nothing wrong with the legitimised filters as long as they are used for positive rather than negative

discrimination against the participation of vulnerable groups to emancipate themselves from institutionalised discrimination. Emancipatory participation in relation to resilience means communities are most likely to sustain the capacity enhanced by an intervention. The Binga communities have continued to exercise their civic rights many years after the end of the project. Exercising their civic rights has become embedded into their institution as part of the customs and value systems. A resilience-oriented participatory approach is about communities making decisions and choices from available options about what they consider to be essential and non-essential elements for their survival both in normal and abnormal circumstances³⁹. The choice of mainly environmentally oriented projects in Ethiopia's ISP shows what communities considered to be essential elements of their future survival. Thus, a resilience-oriented participatory approach is strategic and goes beyond community commitment to addressing immediate needs. When the project ends, the target communities are not only able to make decisions regarding the future of their community but also sustain the project benefits. It is about community continuity into a journey which has no end but which should ultimately lead them towards the ideal situation of resilience.

7.3.2 The question of incentives and sustainability

The relevance, effectiveness, efficiency and impact of the three projects were generally positive. However, sustaining the impacts and activities of the project without external assistance after it has ended appears to be one of the key lessons emerging from this study. Table 7.1 reveals that the sustainability of community participation in respective activities depended on the incentives provided by each of the projects. Each of the three projects had an aspect of an incentive system for rewarding beneficiaries or participants. CCJP adopted a low cost model by using volunteers and community advisers. There was, however, a pronounced need to provide tangible, material benefits to meet practical needs to reduce malnutrition. The introduction of Binga Community Development Project (BCDP), which embarked on structural projects such as dam and schools construction, was a way of responding to this need. But BCDP was, like CCJP, responding to community-wide needs rather than to satisfy individual and household food security needs. Although the community-wide projects attended to practical needs, they were more inclined towards meeting the strategic needs through strengthening community-based structures. Both the individual and households needed external financial support to sustain CCJP activities. Yet, Binga is a very deprived area, with the

³⁹ 'Normal' and 'abnormal' are used here in a subjective sense from the affected people perspective. To an outsider, what may seem abnormal may be normal to the local community and the reverse might be true.

majority of people living below the poverty line and lacking access to basic infrastructure and services. The deprivation resulted from their historical exploitation and neglect, which was exacerbated by the macroeconomic and political problems which have persisted since 2000 to date (2009). Although CCJP abruptly ceased its operations more than six years ago, the people of Binga have continued to act as their own agency in challenging the establishment.

Similarly, ISP had an incentive system built into the project, particularly EGS, where community members were employed and paid at the end of their identified tasks. When EGS ended, project activities ceased. What remained were the assets such as livestock and agricultural implements that were purchased by some participants through EGS payouts as well as the rehabilitated land. For communities to continue engagement, a continued supply of EGS resources, or similar interventions, was necessary. Although, the beneficiaries would continue to enjoy some of ISP benefits, there was no guarantee that those assets created would be protected against further threats. Dependence on external assistance in saving human lives, livelihood creation and protection rather than independence appears to have been created. Like in CCJP, the ISP beneficiaries were poor communities with little livelihood options. The beneficiaries needed resources particularly food, to satisfy their physiological needs rather than questioning the authorities on 'empty stomachs'. In any case, where would one get the energy to question government authorities on an empty stomach? Would questioning government or whatever authorities not only sound rather academic and make it difficult to receive food handouts? As rational human beings, ISP beneficiaries would take the option of satisfying their primary physiological rather than high order needs as expressed in Maslow's hierarchy.

In the case of ARP II, incentives were necessary to help East Timorese reconstruct their lives. Incentives were either in cash or kind. Examples of incentives were in the form of small grants under the PD&NRM component, provision of inputs such as seed and construction of canals under the rehabilitation component. While being mindful of the negative effects of supplying aid, particularly that of creating dependence, it would be unthinkable and inhuman to give priority to promoting community agency so that, according to (Giddens, 1984) communities would make a difference through exercising some sort of power. Again, the range of challenges the East Timorese were facing were numerous. These included physical and psychosocial rehabilitation of refugee returnees, and reduction of poverty that was created by the 24-year armed struggle against Indonesia. Making an emphasis on agency alone with a view of making demands or

carrying out certain actions such as demonstrations or creating parallel structures from those created by UNTEAT, would have been anti-peace building.

The question of incentives versus agency in disaster prone poor locations is the egg and chicken analogy. What should come first - is it incentives first then agency later or vice-versa, or should both be introduced at the same time? These are no easy questions; they can be reserved for another debate. But it is important to point out here that viewing incentives and agency from a dualist notion can be misleading. Introducing either incentives or agency or both depends on the project entry strategy based on identified needs. The two can be introduced as part of project activities as was the case with ARP II's PD&NRM without necessarily upsetting the status quo. However, evaluation of development and humanitarian intervention would need to consider each time these approaches in terms of their impact on the overall resilience of the community.

7.3.3 Resilience and learning

The three case studies highlight connections between resilience, capacity building and learning. To enable communities to 'bounce forward' following a disaster, 'learning' facilitated through training and sharing lessons from project implementation were common features of capacity building processes in the three projects. This is consistent with Wildsvsky's (1991) view of resilience which is the capacity to cope with unanticipated dangers after they have become manifest, 'learning' to bounce back. Learning is used here to mean 'resilience-building learning' (RBL). RBL is conceived as change of individuals, organisations and institutions' behaviour and culture through knowledge, skills and abilities development to perform functions, solve problems and set and achieve objectives to enhance sustainable disaster resilience. This type of learning is similar to Reg Revans's 'action learning' - a process of reflection and action, aimed at improving effectiveness of action (Johnson, 1998). The only difference with RBL and Reg Revans's learning is that the former focuses on DRR while the later focuses on organizational behavior. The sections that follow discuss training approaches and monitoring and evaluation in relation to lessons learning for resilience building.

Training approaches and lessons learning

Promoting community agency to address root causes of vulnerability was the underlying goal of CCJP. To attain its goal, CCJP supported community committees through mentoring, coaching and *Learning for Transformation* courses. Prior to facilitating community training, CCJP staff, including community advisors, underwent training in advocacy and lobbying, project planning and management, paralegal, trainer of trainers

and problem solving. The training skills acquired by CCJP staff were cascaded to community committees who took over provided training at ward and village levels. Community-based workshops or ‘forums for ‘consensus building’ were an important medium for knowledge and skills development. Following an identified problem that affected a particular community, workshop participants created a common vision on the extent of the problem and the appropriate actions that needed to be taken to solve the problem.

Similarly, ISP adopted a cascading model to human resources capacity building in strengthening DPPA. That enabled large number of participants from government, non-government and local communities to access DRR training. It also allowed the training to be adapted to the regional, zonal, *woreda* and PA contexts through innovations developed by participants that were *acceptable* to trainers. Like CCJP, ISP used the principles of adult education to develop knowledge and skills as well as behaviour and attitude change. Experiential learning or what Rev Revans calls ‘action learning’ ensured the training was practical and participatory drawing on the experiences and capacities of the participants. To reinforce skills developed during training, regional, zonal, *woreda* and PA levels workshops, ongoing monitoring, coaching and mentoring were conducted.

Monitoring and evaluation and lessons learning

The three case studies provide a number of lessons, which could have contributed in enhancing the resilience of both those involved in the implementation of CCJP, ISP and ARP and the benefiting communities. There are two aspects worth highlighting, notably the process of sharing lessons learned and the content of lessons that should be shared.

It should be stated from the outset that lesson learning is not articulated in the project documents of CCJP, ISP and ARP II. In other words, lesson learning has not yet become a central concept in Project Cycle Management (PCM). It is a given that evaluation begins at the project identification phase at which point the process of sharing lessons, which is part of evaluation, is also set in motion. Lessons are variously identified through, for example, problem identification, stakeholder analysis, and appraisal, implementation, and during monitoring and evaluation processes of the project. In relation to managerial and administrative performance, all the three projects, CCJP, ISP and ARP II, claim to have involved both technocrats and ‘benefiting’ communities at each stage of the intervention in identifying and sharing lessons. This was done through feedback following a training workshop or through reports. There was evidence in all the three projects of ‘workshop feedback forms’ which were completed by participants following a training session. It was claimed these were discussed with participants as a

way of sharing lessons from that particular workshop. Although the feedback forms were filed, all the three projects did not collate the data from those forms to have a full picture of workshop participants' responses. There was also no clear system of sharing the lessons from workshops apart from routine project management meetings where discussions could 'touch' on identified problems.

Periodic reports were in the form of management reports from staff to the project coordinator in the case of CCJP and ISP, and to the Project Advisor in the case of ARP II. Apart from CCJP, where quarterly reports were sent to community advisers, reports were mainly for internal monitoring and reporting to donor purposes. Internal monitoring reports contained information about progress of the project towards achieving outputs, problems encountered and possible solutions. Of the three projects, only CCJP sent reports to the benefiting community or their representatives. ISP and ARP II did not send such reports to the benefiting communities although most of their work was based in the community. However, although CCJP sent periodic reports to communities, the reports were written in English and not in the local Tonga language. This posed a challenge in comprehending the contents of the reports given that the majority of community advisers and church leaders had attained basic levels of primary or secondary education. This anomaly was compensated for by CCJP through regular 'coordination' meetings where issues raised in reports were discussed. Inadequate resources particularly finance, human resources and rigid funding cycle time-frames were major constraints, which faced CCJP in installing a monitoring system that takes on board technical and benefiting community's expertises. This suggests monitoring for resilience requires more time of dialoguing and experimentation by, between and with both technical staff and affected communities. In this case, the project becomes an 'open community laboratory', which creates opportunities for both communities and technical staff to observe and practice through trial and error, and share the results against their set targets. ISP's 'action research' forums, coaching and mentoring sessions helped the technical staff identify and share lessons to improve their expertise. At the community level coaching and mentoring was conducted by Development Assistants (DAs) in relation to EGS. Sharing of project experiences was in the form of *kebele* or PA community meetings where DAs were also present. Holding separate technical and community forums suggest that identification and sharing of common lessons was limited.

There is no guarantee that the dialoguing process and experiments created by the 'open community laboratory', even with more time and resources, can yield positive results in relation to resilience building. But, ensuring the dialoguing process is

determined by the pace of the target community rather than by the technical staff only can be one approach to resilience oriented learning. Thus, monitoring for resilience may need more time and resources and does not assimilate relevantly to the current short-term funding cycles. Reviewing the way the current 'Westernised' or the 'dominant' project design models which are interventionist in character can be an alternative way. 'Projects for living' which are designed within the framework of the people's day to day activities, which take into account practical cultural and strategic needs, can be a subject for further investigation. The bottom line here is that sharing lessons learned should not be an *ad hoc* or reactive undertaking particularly in development work and slow-onset disasters such as drought. Lessons learning should be embedded at every stage of the PCM as an 'open community laboratory' PCM.

But the final or end of term evaluation provides an opportunity to share lessons identified and learned. As stated in Chapter Three, section 3.4.3, the advantage of the final project or programme evaluation is that it is the summation of M&E process as well as the stakeholders, technical staff and community experiences towards achieving both intended and unintended outcomes and impacts. The evaluation or assessment of the three case studies involved collating M&E, technical staff, stakeholders and target communities. In the case of ARP II, untargeted communities were also participating in the study to establish whether the project outcomes or impacts were by chance and therefore could not be attributed to the project. The fieldwork involved the researcher and the technical staff of the respective organisations. The participatory nature of the fieldwork was meant to help staff not only gain some experience in evaluation processes but also to identify and hear 'good things they did', as well as 'mistakes they made'. At the end of the fieldwork 'provisional findings feedback meetings or workshops' were held for each of the three studies. In the case of CCJP, the workshop involved CCJP staff, Catholic priests and community advisers. Government representatives were not invited to the workshop because of their perceived hostility against CCJP. ARP II's provisional feedback meeting involved the high level government officials, MAFF staff, World Bank representatives and stakeholder NGOs. Target communities or their representatives were not invited to the feedback meeting. In the case of ISP, the meeting involved technical staff although a workshop that was planned for a later date which would involve the ISP technical staff, DPPA, line departments and stakeholder NGOs. Like ARP II, communities or their representatives were not involved because of resource constraints.

Similarly, while each project had a well articulated structure, it was not clear how the lessons identified or learned would reach the target community. The non-existence of resources and plans to share the evaluation findings with target communities suggests learning was not a priority. It might be safe to conclude that the evaluations were carried out not only to fulfil the funding conditions as a way of accounting to donors, but also mapping out future projects or programmes. However, this should not be taken in the negative sense. This should be viewed broadly as a funding regime problem. Lesson learning plays second fiddle to accountability. This is consistent with Cracknell (2000) who asserts that less attention is being paid to feeding back lessons learned from evaluations at the local level. Feedback is the least discussed topic in evaluation, when it is surely of the most important. This brings to question the effectiveness of evaluations of humanitarian action in contributing towards building community resilience. Feeding back lessons learned to affected communities means addressing well-known issues around accountability where reporting is heavily tilted towards the donors. Upward accountability, reporting to donor countries where most humanitarian agencies have their origins, has little effect in improving local resilience. If anything, it is the funding organisations, donor countries and their conduit-NGOs that become more knowledgeable of issues relating to resilience. Downward accountability, reporting progress to, and sharing lessons with, beneficiaries has more potential to increase the local resilience.

The paradox is that while beneficiaries are always involved in giving experiences about the success or failure of operations, the evaluation results or outcomes are the prerogative of the implementing and donor organisations. If at all development and humanitarian programmes and projects are well-intentioned, their outcomes should be unconditionally fed back and lessons shared with the benefiting communities. Moreso, these programmes are being peddled by the so-called civilised 'western' world; the world that purports to observe and respect civil liberties and freedoms. Failure to share lessons with the target communities is arrogance and lack of respect of benefiting communities' dignity. This brings to question the ethics of not only evaluation research or consultancy processes but also project design and implementation. It would not be naïve to call for an ethical review of project or programme design and implementation processes including humanitarian and development projects. In the context of projects or interventions being 'open community laboratories', 'project ethics' or whatever appropriate term can be used, could be introduced and applied as an equivalent of ethical use of 'animals' and 'humans' in laboratory experiments. In other words, projects should adhere to ethical standards which should be monitored over the project period. Lessons learned from the

project are, in essence, a property of the target community. Therefore, as owners of the lessons learned, target communities should know and agree the authenticity of whatever is communicated to the outside world. How can lessons learned be shared with the outside world when the owners do not know them? If resilience is about communities being able to ‘bounce forward’ following a disaster, then the communities targeted by the project should remain central. The assumption is that the lessons learned will inform policy and practice not only in designing humanitarian assistance interventions but also become inputs to reduce future disasters. Incorporating lessons learned from interventions into daily lives of affected populations can go a long way in behaviour and attitude change towards disaster risks and can be one of the building blocks towards the enhancement of community resilience.

Thus, to build resilience of communities and institutions to disasters, means attending to the well-known problems of development and humanitarian problems. These include:

- Ensuring lesson-learning is embedded at every stage of the project with the target community determining the project pace processes and outcomes;
- Viewing projects or interventions as ‘open community laboratories’ where communities and technical staff explore and engage into a learning process which may have an impact on resilience building.
- Ensuring ethical issues are determined and continually monitored at all phases of the project to ensure information emerging from the project is owned by the target group.
- Putting in place a lessons-learning structure within the project management information system at each phase of the project, including end of term evaluation.

7.4 Resilience, structure and institutions

The three case studies show the existence of tensions between traditional and modern institutions. The traditional institutions are those institutions which are indigenous to locations of the case studies while modern institutions are those which were imposed by outsiders to those areas. The impact of tensions between the traditional and modern institutions on the resilience building equation, are explored in the sections that follow.

In East Timor, there was a clash between traditional ideas and modernity in the implementation of ARP II. The structures created UNTAET under the CEP were charged with the implementation of development programmes including ARP II. For example, the village implementation teams (VIT) which were sub-committees of the village

councils, appraised and vetted project proposals under the PD&NRM small project grants. However, there were clashes between traditional chiefs and modern structures in the implementation of development programmes in ARP II. The East Timorese regarded their traditional chiefs as custodians of the local traditions, customs and values. Chiefs were their legitimate leaders. As a result, the East Timorese found it difficult to recognise the legitimacy of the village and sub-district councils⁴⁰. The village councils' (*Conselho de Suco*) lack of legitimacy in organising ARP II beneficiaries meant that they were only place holders while the real power rested in the hands of traditional chiefs. It might be safe to assert that the introduction of UNTAET's 'Westernised' modern structures to 'teach East Timorese democracy' was based on flawed assumptions. In any case, the project's starting point should have recognised the institutions that existed in which resilience built over centuries resided. Failure to recognise traditional institutions as cleavages through which programmes and projects can be rooted, interventions can be of no consequence, or at best increase vulnerability to disaster risks.

There were, however, some merits in creating modern institutions in East Timor. The post-conflict rehabilitation, in which ARP II was implicated, provided a window of opportunity to chart East Timor along a modern path whose strength was founded and rested on democratic institutions. Farmers would exercise their civic rights in building and sustaining agricultural institutions such as WUA, VLA and ASCs. Indeed, there was evidence of farmers, particularly those involved in WUA, starting to get more organised and taking responsibility in managing their affairs. But modernity may not be a panacea to vulnerability reduction. In some cases, instead of reducing vulnerability, modernity can increase it. Thus, the project's starting point is to recognise the local institutions in which resilience built over centuries resides.

In establishing the early warning systems in Ethiopia, ISP had a bias towards modern technology. Physical capacity in the form of vehicles, information technology and office equipment were some of the defining features of the project. With the training of DPPA staff on how to operate the equipment, the EEWS has improved in both data collection, analysis and information dissemination. However, the apparent exclusion of indigenous local knowledge (ILK) from the EEWS is worth noting. Although ILK in relation to EEWS needed further investigation, there were a few notable aspects worth mentioning. The exclusion of the ILK by ISP was deliberate; ILK was viewed as traditional and non-scientific as compared with the 'modern' or 'Western scientific

⁴⁰ During the field work, the assessment team was advised to contact suco chiefs for permission to interview their subjects and not the village or sub-district councils. The problems between the two structures were explained to the team prior to field work.

knowledge'. Although this study considers the concept of 'science' being subjective, as that depends on one's world view point, treating ILK as non-scientific confirms the bias and dependence towards westernised solutions to DRR challenges by DRR theory and practice. Resilience thinking means 'reversals' in thinking to 'decolonise the minds' of DRR theory and practice - for it was colonialism and its cousin 'capitalism', aided by western discourse in which western bias finds comfort. ILK is scientific. The colonial world did not and does not perceive their capitalist intentions benefiting from the ILK save for exploiting 'developing world' resources including labour and natural resources.

On the contrary, it can be argued that the same 'scientific' ILK has failed the Ethiopians to prevent, prepare and withstand disasters such as the 1984 famine which led to loss of lives and livelihoods. Incorporating ILK would not add value to the EEWS.

The use of the modern EEWS in 2003, a humanitarian crisis of the scale of 1984 was averted. The modern EEWS boasts of state-of-the-art equipment such as LAN and WAN computer networks and radio communication which can be said to be superior to traditional systems in data analysis, synthesis and information dissemination. It would be naïve to discredit the contribution of modern technology in enhancing resilience to disasters. However, the 'extractive' nature of EEWS appears to be its downside. While communities provide EW data, little or no information gets back to the communities so they can use it for monitoring their vulnerability. EW information in Ethiopia remains in the hands of the government bureaucracy and NGOs who mainly use it as a basis for interventions especially at the regional, zonal and *woreda* levels. Many will agree that the resilience of communities built over centuries varies in time and space, from one disaster to another and depends on the nature of the hazard, the pre-disaster socio-cultural context, the geographical setting, and the rehabilitation policy set up by the authorities (Gaillard, 2007). What is fundamental is the awareness of positive existing livelihood strategies and building on them rather than ignoring or destroying them in the name of modernity.

CCJP adopted both interventionist and non-interventionist approaches. With regard to the latter, the project operated through existing Catholic Church structures. The 26 CCJP committees that were spread across Binga comprised mainly of members of the Catholic Church members and a few non-Catholic Church members. This arrangement did not upset the status quo within the Catholic Church structures. Actually, the CCJP activities strengthened the Catholic Church communities. Parish priests in both Kariangwe and Binga underscored the importance and relevance of CCJP. Rooting CCJP work within existing Catholic Church structures contributed to the sustainability of its

impact which can still be seen today in the voting patterns for local leaders, especially those from the opposition MDC. However, CCJP's radical awareness raising campaigns on civil and development rights including inheritance laws and roles of elected and non-elected leaders, were seen by the Zimbabwean government as promoting the opposition Movement for Democratic Change (MDC) political party. While chiefs and councillors appreciated CCJP work, they would not want to be seen supporting activities which undermined the government. In addition, local communities appreciated CCJP civic education activities. The importance of CCJP work is not about its success but rather about its effective approach of rooting the intervention within an existing local structure.

In addition, the Ethiopian Early Warning System's ability to trigger local and international response to disaster threats, has significantly improved because of the ISP capacity-building programme. ARP II in East Timor, established basic crop and animal health extension services, irrigation management systems and provided debate over the ASCs, an institution that would support farmers in the production and marketing of products. Nonetheless, if disaster resilience can learn from these capacity-building projects, it is about local institutions⁴¹, which appear to be building blocks for resilience. But there are more questions than answers if local institutions are indeed building blocks for resilience. For example, is it not the same local institutions that have failed populations before in disaster prone locations such as Ethiopia and Binga? Or have these institutions been overpowered by the acts of God or Blair, Bush and Mugabe?

This study's findings suggest that local institutions are important and indispensable to strengthening resilience to disasters. However, there is need for caution. As pointed out by Leviton and Hughes (1981) the evaluation methodology, which was also adopted for this study, differs from other social science research. Evaluations are often more politically sensitive; governments or commissioners of evaluations can influence the assessment process so the findings can reflect a good picture of their work. Further, institutional analysis in relation to resilience building can shed more light to confirm or disprove these findings. For example, the Institutional Analysis and Development (IAD) framework can be used to assess the connections between resilience and institutions. The IAD framework was developed in 1994 by Elinor Ostrom and other scholars associated with the Workshop in Political Theory and Policy Analysis at Indiana University (Koontz, 2005). It is claimed the IAD can be used as a tool for identifying actors and

⁴¹ 'Local' institution is preferred rather than 'traditional' institution. This study views the term 'traditional institution' in the negative sense as a demeaning term. It encourages a dual view of either 'traditional' and or 'modern' institution which translates to western views of the southern institutions ultimately lending itself into power relations between 'north' and 'south'.

institutional incentive systems with realism and conceptual precision. This helps to illuminate the linkages between various institutional levels including how policy changes at the regional, national or international level, are filtered through to the local context (Aligica, 2005; Ostrom, Gardner and Walker, 1994; Andersson, 2006). Focusing on structural capabilities in meeting DRR challenges is in-keeping with the UNISDR's HFA. From the HFA's perspective, resilience building is synonymous with structural capability in preparing and responding to disaster incidents. Strong international, regional and national institutional and legislative frameworks are emphasised in the HFA's 'priorities for action' 2005-2015 (UNISDR, 2005). Thus, community empowerment has to take place within the prescribed institutional and legislative frameworks including the national platform on DRR.⁴² The HFA takes a macroscopic approach to resilience building through the creation of international, regional and national institutions such as 'national platforms'. This approach has generally ignored the micro level, particularly the household level where DRR is mediated on a daily basis. Further studies into the tensions between macro and micro levels can illuminate some of the challenges in resilience building, including the relationship between scale and resilience.

7.5 LRRD and resilience building

That there exist intimate connections between disaster and development has become a familiar assertion. Relief, rehabilitation and development resources can be mobilised to reduce the impact of (future) disasters while promoting achievement of development goals. As shown in Table 7.1, two case studies, ISP and ARP II, confirm the existence of the relationship between relief, rehabilitation and development. Disasters offer an opportunity towards reconstructing affected communities by addressing risks specific to the particular context. Availability of relief resources during the relief and rehabilitation phases of a disaster makes it possible to engage affected communities in satisfying both their practical and strategic needs. Thus, it is assumed that linking relief, rehabilitation and development (LRRD) is like 'killing two birds with one stone'. Development can be achieved and resilience enhanced using relief and rehabilitation resources.

⁴² See the UNISDR (2007) 'Guidelines for National Platforms for DRR' which defines a National Platform for DRR as a nationally led forum or committee of stakeholders able to serve as an advocate of DRR at different levels of engagement. It strives to provide coordination, analysis and advice on priority areas requiring concerted action through participatory processes and should strive to become a coordination mechanism for mainstreaming DRR into development policies, planning and programmes. It also strives to foster the development of a comprehensive national DRR system appropriate to each country guided by the Hyogo Framework. Between 2000 and 2006, there were 34 National Platforms.

As already stated in Chapter Five, section 5.3, ISP's Employment Generation Scheme (EGS) provided employment to able-bodied vulnerable members of the community in areas that were considered to be at high risk to famine. Cash-for-work (CFW) rather than food-for-work (FFW) was the preferred mode. Participants had more options to meet their needs using cash such as purchasing of productive assets - livestock and agricultural inputs. FFW does not allow the same autonomy concerning decisions over what benefits to procure for the household (Harvey, 2007; Guluma, no date). As stated in Chapter Five (for example, section 5.4), EGS participants worked on a number of identified projects which included access roads, water harvesting and environmental rehabilitation (terracing, stone bund construction and gully reclamation). At the completion of the tasks, they were paid cash instead of food which they used to meet their needs.

In ARP II, all the components were focused towards using rehabilitation resources to achieve development goals. Through PD&NRM component, participating communities accessed small project grants to work on identified projects such as fish ponds and vegetable gardens. The produce from small projects helped them to strengthen their off-farm income bases. To some extent, a diversified income base rather than relying on a single source of livelihood increased the household's resilience to shocks and stresses. The small projects provided a foundation for communities to achieve food security and development goals. Similarly, the rehabilitation of irrigation and road infrastructure as well as setting institutional structures assisted irrigation farmers to increase their production. The Water Users Association had started assuming responsibility for managing the irrigation schemes especially the operation and maintenance of canals. Likewise, the VLW had also assumed responsibility for animal health extension services. All these strategies were aimed at achieving development goals while enhancing the resilience of the East Timorese community to disasters.

Yet, these efforts were faced with several dilemmas if relief resources are to be used to achieve sustainable development and disaster resilience. One dilemma is worth highlighting. In both ARP II and ISP relief resources were employed to attain development goals. There is nothing wrong with that as long as the resources meet the primary aim for which they were raised; to save human lives. As mentioned in Chapter Two, section 2.5.3, the use of humanitarian resources is guided by ICRC's principles of humanity, impartiality and neutrality. As the humanitarian resources are raised on the basis of humanitarian imperative, the concern is for the person in need. The conviction is that all people should have equal dignity by virtue of their membership of humanity.

Using relief resources to reduce future disasters risks as well as attain development goals is mischievous and diverting attention from real issues concerning investing in DRR. The trend already shows that more resources are being channelled towards humanitarian assistance rather than official development assistance (Walker and Pepper, 2007). Such a shift can be problematic. There are two notable aspects worth highlighting – politicisation of relief resources and lack of donor policy guidelines for the implementation of LRRD.

Firstly, particularly in relation to food aid, relief resources can be open to politicisation and corruption by local political leadership including public servants. Relief resources, particularly food and cash, are susceptible to being hijacked by politicians in their bid to woo electorates. For example, in Zimbabwe, the ZANU PF government has been accused of denying the opposition MDC supporters access to food relief resources⁴³. Using relief and rehabilitation resources to attain development can make politicians have increased access and control on how those resources have to be distributed. Thus, use of relief resources towards development can be at the expense of saving lives of the most vulnerable. It can lead to negative discriminatory conditionalities where the most vulnerable populations are denied access to those resources. But politicisation of relief resources, especially food aid, is not a new thing. Relief and rehabilitation resources are themselves political. Relief resources are tied to the politics of their origins. Donors may want media visibility not only for purposes of public accountability but also to win electorates at home.

Secondly, Ethiopia's ISP and East Timor's ARP II were local attempts aimed at piloting LRRD with a possibility of multiplying these to other parts of the country. Of the three case studies, it is only in Ethiopia where LRRD is clearly articulated in the NPDPM. It is a requirement in Ethiopia for relief agencies to integrate humanitarian assistance into wider development activities. EGS or its variant, the Productive Safety Net Programme (PSNP), provides a framework for integrating relief work into development. As stated in Chapter Five (for example, section 5.3), EGS is a community based employment programme where able-bodied vulnerable groups are offered short-term employment to work on identified local projects such as water harvesting, road construction and hillside terracing. Those who participate in EGS are paid a wage at the end of the given task in either cash or kind. This means vulnerable groups are able to

⁴³ The author has personal experience of this in Binga in 2003 where food aid distribution was administered by the 1970s Liberation 'war veterans' and supporters of ZANU PF. Some MDC supporters were not on the lists of the people eligible to receive food aid even if they were more deserving than ZANU PF supporters.

meet both their short-term nutrition needs through food handouts or cash which can be converted into food and long-term development needs through the creation of livelihood assets. However, lack of programme policies by donors is the major drawback for LRRD. Although major donors such as USAID and European Commission encourage the LRRD, the absence of LRRD policies in these organisations means its implementation is at the discretion of recipient countries. In their letter to the Secretary of State on EU communication on humanitarian policy, the UK's Disaster Emergency Committee (DEC)⁴⁴, had this to say:

The EU needs to develop policy guidelines on Linking Relief & Rehabilitation to Development (LRRD) in order to ensure that there is no gap between the humanitarian phase and the long term development phase... The EU needs to champion LRRD approaches in a participatory and holistic way, as a cross-cutting issue in all sectors, guided by the Hyogo Framework for Action.

Disaster Emergency Committee (DEC) (2007:2-3)

The absence of foreign policy at the international level on LRRD makes the contiguum approach remain an academic rhetoric. If LRDD is indeed an option that could strengthen both the resilience of communities affected by disasters while at the same time attain the much-needed sustainable development goals, the onus is on the affected regions and countries to take a lead in these initiatives. There is need to demonstrate the benefits of LRRD through empirical evidence. Ethiopia's NPDPM policy is one such initiative which spells LRRD as fundamental to humanitarian and development programming. However, Ethiopia's high dependence on donors means vacillating between its set conditions and those of donors - with those of countries receiving aid being subordinate to those of donors. The question here is – focusing on LRRD alone is myopic and diverts attention from the fundamental problems of disaster causation and lack of resilience to disasters. The locus of sustainable resilience building of disaster prone regions, nations and communities lies in the international arena where the greedy capitalists' agendas carry the day at the expense of suffering masses in the 'developing' world. Therefore, actions that promote LRRD could be modelled on campaigns, like 'Make Poverty History'⁴⁵ which has added voice to debt cancellation for some developing countries.

⁴⁴ Members of DEC include CARE International, Action Aid, CAFOD, Tearfund, Health Unlimited, International Rescue Committee UK, Plan International, and International Medical Corps.

⁴⁵ According to <http://www.makepovertyhistory.org/> 'Make Poverty History' is a British and Irish coalition of charities, religious groups, trade unions, campaigning groups and celebrities who mobilise around the UK's prominence in world politics, as of 2005, to increase awareness and pressure governments into taking actions towards relieving absolute poverty.

7.6 Conclusion

It might not be an overstatement to emphasise that the future of resilience building lies in lessons learned from the humanitarian and development projects. The purpose of this chapter was to discuss some of the threads that emerged from the literature and the three case studies (CCJP, ISP and ARP). For resilience to remain useful in DRR, the need to tackle conceptual challenges cannot be overemphasised. Increased debate is necessary, not only on resilience as an art or science but also on definitional issues such as ‘bounce back’, process or outcome and its relation with other concepts such as vulnerability and adaptation. This study suggests that resilience is at the ontological level. It is about ‘action’ and goes beyond the epistemological divide. In this study, assessment of ISP, CCJP and ARP adopted a pragmatic approach using multiple methods, design flexibility and researcher reflexivity rather than having allegiance to one specific paradigm. This increased the concrete and practical methodological options that were available.

The debate should not end with epistemological, methodological and definitional issues but it should also be widened to include resilience building strategies that foster sustainability. Capacity building is implicated in the process of enhancing resilience of communities affected by disasters. Recurring capacity building threads discussed in this chapter appear not to be new. Agency versus structure, incentives versus sustainability, learning and LRRD were some of well-known issues which need to be addressed if resilience has to become a meaningful and useful concept in DRR. Chapter Eight takes the debate further and concludes by highlighting the impact of the study on the author and DRR.

CHAPTER EIGHT

CONTRIBUTION TO THE RESILIENCE APPROACH

8.1 Introduction

There are no easy answers as to how disaster resilience can be enhanced by development and humanitarian programmes or projects. Yet, some development and humanitarian interventions implemented in disaster prone areas have an implied contribution towards strengthening the resilience of communities in those locations. It would be naïve to debate resilience to disasters without engaging disaster and development experiences which can inform such future interventions. The future is located in history. The current institutions are the repositories of history and transmitters of culture, customs and value systems. The aim of this study was to contribute to knowledge of ‘disaster resilience’ debate using case studies from development and humanitarian interventions. Specifically, the study examined the conceptual challenges of resilience within the context of DRR. An evaluation of the extent to which development and humanitarian intervention promoted resilience in Zimbabwe, Ethiopia and East Timor was carried out.

To show the extent to which this study achieved its aims and objectives, this chapter is arranged into two broad sections. The first section covers the impact of the study on the researcher, particularly the use of the evaluation methodology in assessing resilience. The second section dwells on the impact of the study on DRR theory and practice. The conceptual issues around resilience, the conditions and strategies that enable or constrain resilience including agency, as well as contestations emerging from the study are explored. The thesis takes the conceptual debate on resilience further than has been the case to date. It should be also stated from the outset that, on the basis of the author’s broader experience with similar evaluations elsewhere, for example, in Mozambique and Nepal, the findings of this thesis are robust and generalisable and would not have been significantly different, if different case studies were used. Similarly, the focus of this thesis has been on structures and evaluation processes and outcomes; a different approach might have given rise to different findings.

8.2 Impact on the author

8.2.1 Impact of the research process on the author

Assessing the extent to which development and humanitarian interventions can inform disaster resilience building can be a complex process, taking different design formats and implementation models. Underlying the design and implementation processes are the

philosophical assumptions regarding the nature of knowledge, reality and existence. As stated elsewhere in this thesis (for example, on p.3), there are two major paradigms or world views to theory development. Positivism and subjectivism, with whatever variants or mutations, are the nucleus of an epistemological dualism. The two paradigms have significantly contributed to world views regarding the nature of knowledge, reality and existence. But they do not necessarily fit neatly into discrete categories; they overlap.

The research process adopted by this study can be referred to as the jig-rejig approach. The jig-rejig approach assumes that there exist multiple realities. It does not take a purist one-sided view of either positivism or subjectivism. It adopts what Patton (2002) terms ‘pragmatism’ or ‘methodological appropriateness’ which aims at superseding one-sided paradigm allegiance by increasing the concrete and practical methodological options available. Multiple methods, design flexibility and researcher reflexivity are valuable methodological features of this study. Research is about finding the ‘appropriate fit’ to answer an identified research question. The process of this was neither a fixed nor a straightforward venture. It was a fluid process of fining and refining, and defining and re-defining both the research question and the empirical evidence until these (exactly) fit together to provide a coherent story. Milestones, which defined the stages in the life of the research process, were also identified with the attendant inter-linkages to preceding as well as succeeding events. However, this does not mean that the process was linear. The interaction between and among stages was continuous.

The identification of the research question and choice of three case studies is detailed in Chapter One. It should, however, be pointed out that the identification of the research question and choice of case studies was based on the author’s experience among the studies he has conducted. The literature review helped the author refine the research questions in the light of available case study material. Chapters Four, Five and Six comprise the case study reports of CCJP, ISP and ARP. Again, the author revisited the research question, the literature, the choice of case studies in the light of each of the case studies until various pieces fitted appropriately to provide a coherent story within the DRR body of knowledge.

8.2.1 Evaluation criteria as a methodology for assessing resilience

The author has a long standing interest in monitoring and evaluation. This study offered the author the opportunity to enhance his knowledge on the types of evaluation criteria that can be used for various purposes. Although this study used at least five evaluation criteria, there are thirteen criteria which the author identified as being used in the

development and humanitarian industry. These are efficiency, effectiveness, impact, sustainability, coherence, cost-effectiveness, connectedness, timeliness, coverage, appropriateness, relevance, coordination and protection.

The use of the evaluation criteria to assess the extent to which resilience was enhanced in the three case studies was a useful adventure. First, it would have been difficult to assess the three disparate case studies without a methodology which would act as the lowest common denominator. It was therefore possible to assess, using the same evaluation criteria, the East Timor's ARP II, Ethiopia's ISP and Zimbabwe's CCJP despite diverse spatial, institutional and temporary scales. Secondly, the current evaluation criteria implicitly incorporate aspects of resilience assessment of development and humanitarian projects. However, in the absence of explicit criteria for measuring resilience, it was difficult to precisely assess resilience. The efforts being made by John Twigg in facilitating the resilience characteristics on behalf of multiple agencies working in this field is likely to contribute towards developing the criteria for assessing resilience. Whatever criteria are developed, it would be potentially beneficial if such criteria were built on, or integrated to, the existing evaluation criteria.

There are two options for incorporating resilience into the evaluation criteria – either adding to the existing evaluation criteria as a 'stand alone' criterion or embedding it into the existing criteria. The danger of adding resilience as an additional criterion might lead to the duplication of some of the criteria such as sustainability, coordination and relevance. Embedding and emphasising it in the elements of existing criteria might be more useful to avoid duplicating existing elements. But what is the added value of adding or embedding resilience as an evaluation criterion? Adding or embedding resilience criterion to the existing criteria has an implication for practice, especially the project cycle management. It will make programmes and projects not only to pay attention to issues of strengthening community resilience but also think about the project impact more broadly. It would also be useful criteria for project planning particularly in assessing the quality of project entry and exit strategies. However, it should be noted that the focus of this thesis has been on structures and evaluation processes and outcomes; a different approach might have given rise to different findings.

8.2.2 Quantitative and qualitative approaches in assessing resilience

Besides the author's research, organisational and documentation skills having been enhanced, the use of both quantitative and qualitative methodologies had a positive impact. While there is a science and art divide in theory, in practice these perspectives

are complementary. They do not necessarily fit neatly into discrete categories; they overlap. As already stated in this chapter, this study, like many studies which adopt an evaluation methodology, did not take a purist one-sided view of either positivism or subjectivism. The quantitative methodology used in ARP II was complemented by the qualitative methodology which took the form of participatory approaches such as focus group discussions, mapping, graffiti wall and spider diagrams. In all the three locations, the illiteracy rates were high. Thus, the use of the participatory approach tools encouraged participants to interact and express themselves in their own language to communicate their project experiences.

8.2.3 Research ethics and positionality

This study enhanced the author's awareness of the importance of ethical issues in research such as right to privacy, confidentiality, personal autonomy, respect and dignity especially in researching impoverished and vulnerable communities in disaster prone areas. There is no blueprint on the ethics theories which a researcher should adopt. As already stated in Chapter Three, section 3.11, depending on the project, a research can employ single or a combination of consequentialist and deontological approaches or whatever variants are (or become) available. Use of a checklist was very helpful in ensuring the ethical issues were addressed throughout the data collection process. Similarly, the study enhanced the researcher's understanding of complexities around positionality, particularly in relation to the researcher's subjectivities and biases which impact on the knowledge construction and production process. Consistent with Sadaway (2000), it should be noted that positionality is not necessarily a project about self-knowledge to account for the researcher's weaknesses and frailties, but rather concerns itself with conditions of production, if not reproduction, of 'self' and its knowledges. However, it should be noted that this should be done within the context of postmodernist epistemology and not dubiously echoing the positivist epistemology, when knowledge is a socially constructed rather than being independent of or from its constructors. In a nutshell, understanding ethical issues, including positionality, informed the interpretation of results, particularly in relation to how disaster knowledge, including vulnerability and resilience, are constructed through negotiations between participants and researchers.

8.3 Impact of study on DRR

This study confirms that resilience, like many social science concepts, is illusive and slippery and not immune from what may be called the 'Social Sciences Disease of

Definitions' (SSDD). It can range from meaning something to meaning nothing. Thus, the resilience construct can be viewed from a variety of angles rather than interactions from a unified framework. The following sections provide a commentary on what this study confirms as well as its implied or original contribution to knowledge. The commentary dwells on the notion of 'bounce back' versus 'bounce forward', resilience versus vulnerability, resilience, agency and institutions, and resilience versus disaster phases.

8.3.1 Is resilience about 'bounce back' or 'bounce forward'?

As noted in Chapter Two section 2.2, there is a fascinating debate on the concept of resilience, capacity building and disaster and development, reflecting a wide range of perspectives. The definitional issues about resilience need special attention. Most among the definitions of disaster resilience is the notion of 'bounce back' to the original position. The disaster literature appears to be treating 'bounce back' as synonymous with people's recovery within the shortest possible time with minimal or no assistance at all (see for example Ronan and Johnston, 2005; Wildavsky, 1991). This is acceptable from an elastic material view point. An elastic can be stretched (not necessarily in a disaster situation) and return to its normal position without change. However, disasters are accompanied by change. The notion of 'bounce back' does signal change. But returning to the original position does not signal change. It might mean a return to vulnerability and bouncing back to the conditions that caused the disaster in the first place (Sapountzaki, 2007).

This study views disaster resilience as the ability to 'bounce forward' and move on following a disaster. Although this might be considered rather simplistic, there could be merit in this thinking. Disaster resilience is about time and continuity - as in 'business continuity' and 'community continuity' following a disaster. This means businesses and whatever community activities will continue but 'start from where the disaster left'. Resilience-oriented capacity building processes comprises specific approaches, strategies and methodologies to transform the ability of individuals or groups, including the most vulnerable individuals groups, so they can perform functions to 'bounce forward' or 'move on' following a disaster event. This thinking has psychological and practical implications. The 'bounce forward' conception is optimistic. For instance, in the pre-disaster stage potential victims can develop attitudes of hope and self-assurance of surviving the destabilising events with minimal or no assistance at all. In other words, emphasising 'bounce forward' can have an impact on behaviour change of potential

disaster victims and service providers. In the post-disaster phase, the recovery and reconstruction activities will be tailored to the demands of the affected people, specific to their needs ‘to move on’ from where the disaster left them as well as ‘bounce forward’ should a next disaster strike.

There is need for caution here. As the ‘bounce forward’ conception is the author’s construction, there would be need for its further development in terms of how the intended beneficiaries of development and humanitarian intervention would interpret it. With this study being guided by the existence of multiple realities, it would be appropriate to subject further works to multiple rather than a one-sided paradigmatic approach. For example, further work could be subjected to surveys and participatory methods of data collection specifically around this one point of how to bounce forward.

8.3.2 Resilience: is it a process or outcome?

As pointed out in Chapter Two, section 2.23, some definitions tend to adopt either process or outcome or both process and outcome conceptions of resilience. This does not necessarily mean getting locked into, or ‘lost in abstraction’ in the process-outcome divide. It might suffice to say that the resilience outcomes are important. An outcome orientation may lead to both short and long-term resilience and be necessary where radical change has to be made. Both ISP and ARP were fundamentally driven by project outcomes. There was more than a planned achievement rate for some of the outputs. Indeed, those outputs and outcomes made a difference to the existing resilience levels of communities they served. However, in both projects, the sustainability of project benefits was highly unlikely.

Process-oriented models focus on both the process and outcome. This study adopts the position that both resilience and vulnerability are states or conditions, which are defined by processes including physical, social, political and economic processes. In the resilience model, processes take the form of learning in enhancing sustainable livelihood (capital) assets⁴⁶ to reduce life risks. It is about affected individuals, groups and communities, leading the process of building their own capacity through their own agency. While there may be no need to over-labour discussing agency as it is picked up again in later sections, it should be pointed out that the processal view of resilience has some advantages over the outcome view. For the case of the CCJP, which was process-

⁴⁶ The capital assets here are natural (water, land, rivers, forests, minerals); financial (savings, income, pensions, credit, state transfers); human (knowledge, skills, health, physical ability); social (networks, affiliation, reciprocity, trust, mutual exchange); and physical (infrastructure, shelter, transport, water, sanitation, energy).

oriented, its positive impact is still felt today and might continue to be so in future. It might not be an exaggeration to say that Basilwizi Trust⁴⁷ and the re-branded Hwange Diocese Catholic Development Commission (CADEC)⁴⁸ were a direct impact of CCJP. Whilst these were unintended, they represent positive impacts, which have contributed to strengthening the capacity of communities to withstand shocks in the Zambezi valley. In view of the existence of multiple resilience processes, research should continuously enrich the debate to include the language semantics that underlie the process versus outcome divide.

8.3.3 Rethinking the relationship between vulnerability and resilience

This study has taken forward the debate on the relationship between resilience and vulnerability. Resilience and vulnerability are common and related concepts in a number of scientific disciplines (Klein *et al.*, 1998; Berkes, 2007) and have gained currency in the work on disasters. In Chapter Two, section 2.2.4, a discussion ensued on whether (a) resilience was the opposite of vulnerability, (b) resilience was a factor of vulnerability, or the other way round. We need to reiterate that these are complex questions without singular answers, being subject to varied conceptualisation routes and linguistic applications. However, the question related to the terminology and conceptualisation is also key to increasing clarity in our application of resilience approaches. Without necessarily repeating the discussion in Chapter Two section, 2.2.4 we can conclude that the relationship between resilience and vulnerability is useful line of inquiry (see Box 8.1).

⁴⁷Basilwizi Trust was formed in 2001 by people displaced by Kariba Dam which led to untold suffering and poverty. Basilwizi Trust addresses vulnerability to food insecurity in the Zambezi valley by advocating for compensation for people who displaced as well as increased access to local resources such as water, fishing, wildlife and forests.

⁴⁸ CADEC is faith-based organisation involved in socio-economic development in respective dioceses or regions. Nutrition, agriculture, HIV and AIDS and food aid distribution are some of its core programmes.

Box 8.1 Differences between vulnerability and resilience

Vulnerability	Resilience
Resistance	Recovery
Force bound	Time bound
Safety	Bounce forward
Mitigation	Adaptation
Structure	Community agency (Community-based)
System	Network
Engineering	Culture
Risk assessment	Vulnerability and capacity analysis
Outcome	Process
Standards	Institution

Source: Author

However, this study asserts that the two concepts should be considered as discrete constructs. People can possess characteristics that can make them vulnerable and those that can influence their capacity to adapt at the same time. Until it can be demonstrated to the contrary, the two concepts should be viewed as discrete. Using the analogy of Herzberg's two-factor theory referred to in Chapter Two (p.31), job satisfaction and job dissatisfaction are not opposites; the absence of job dissatisfaction does not mean that you have job satisfaction. Here, too, with resilience: the absence of vulnerability does not make one resilient. It can be argued that while vulnerability is not necessarily the 'flip side' of resilience, it does not mean that we can fold vulnerability into resilience or vice versa.

The locus of vulnerability paradigm leans towards the structural solutions. Here structure is used broadly to include physical and social structures. The assumption here is that building physical capacity based on structured, standardised engineering systems reduces vulnerability to disasters. The rehabilitation of roads, dams and land in the case of ARP and ISP would strengthen community capacity to resist disasters. Similarly, strengthening institutional structures, particularly government structures, as was the case with ARP, ISP and, to a certain extent, CCJP would reduce vulnerability to disasters. It was assumed improved development planning and implementation capacity of the bureaucracy with the support of 'token' participation of communities would contribute to resilience building. Vulnerability risk assessments are conducted by 'experts' whose recommendations tend to have an outcome-oriented focus on structure and safety rather than security. The vulnerability approach stresses the production of nature (Smith and O'Keefe, 1996) to resist the force, stress or shock resulting from a natural hazard.

Engineering, guided by legislation, is at its nucleus. Whilst suited to some contexts, the danger of this approach is its proneness to reproducing the structures that caused the disaster in the first place. Mitigation approaches, as well as maintaining the bureaucratic structures, require sustainable capital investments, which attract the attention of international financial institutions to further drain the already impoverished communities. More bleakly, this might be termed as ‘the vulnerabilisation of communities’ where vulnerable communities are made more vulnerable by development and humanitarian actions which are legitimised through power and discourse.

The emphasis of the emerging human resilience paradigm is in the processes of enhancing human capacity to recover from a disaster within the shortest possible time with minimal or no outside assistance. This approach recognises that communities have certain levels or amounts of resilience built over centuries. Resilience characteristics are embedded in, among others, local adaptation strategies, culture, institutions, heritage, knowledge and experiences. These characteristics are the building blocks for disaster resilience in order for communities to recover, or ‘bounce forward’ following a disaster. The task of the intervention is to immerse itself into the community, by adopting an agency-oriented approach where such aspects as networks, culture, resilience analysis, adaptation and institutions continuously reorient the intervention to local needs. In other words, this approach resonates with community development and development planning. However, there is need for caution here. The success of community development and development planning were premised on the decentralisation model popularised since the 1970s. One of the major weaknesses of the decentralisation model is adoption of the structural approach where so-called decentralised structures remain centres of power. Participation of communities in constructing and reconstructing such structures remained at the ‘tokenistic’ level. For disaster resilience to be realised there is need to improve on decentralisation models to an era which might be termed ‘post-decentralisation’ or ‘real decentralisation’ rather than rhetoric of decentralisation. The emphasis of the post-decentralisation concept is on community resilience to disasters with an emphasis on agency rather than the structure.

8.3.4 Agency and institution: resilience’s hidden homes

There is no such thing as resilience without institutions. And, as stated in Box 8.1 (Chapter Eight), resilience is not about standards. Here neither is the term institution used synonymously within the context of structural-functionalist perspectives. Rather, in this context, these include people’s organic institutions, which are neither fixed nor static but

fluid and are a product of time-space dimensions. At the nucleus of the three case studies are issues around culture, governance and entitlements, which are the major tenets of an institution. The conflict between local (traditional) institutions and modern institutions especially in East Timor, and to a small extent in the Zimbabwean case studies, is not by accident. The traditional institutions are custodians of their culture and value systems, which cannot be expended at the 'whim' of Western 'enticement' with whatever 'niceties' or 'goodies'. Culture and value systems were the 'core and umbilical cord' or 'essential elements' of the East Timorese to reconstruct their lives after the civil war. It was not about choice between traditional and modern institutions. They simply could not abandon their *suco* chiefs for modern village and sub-district councils. They abandoned or expended the modern institution of ASCs because it did not assimilate relevantly to their traditions. Notwithstanding the benefits that would be brought by ASCs, to the East Timorese ASCs were non-essential elements of their lives.

As stated in Chapter Eight (section 8.3.3), resilience is embedded in local institutions and expressed in the form of culture, customs and value systems.

The ability of a community to realise its goals will be a function of the degree to which societal institutions (e.g., civic agencies, emergency planners) possess an organisational culture that embraces the value for empowering communities and actions that support bottom-up, community-led initiatives.

Paton (2006:310)

In relation to 'developing' countries, there is nothing necessarily anti-resilience simply because of its being based on Western notions. The applicability of the resilience approach cuts across the 'developing' and 'developed' divide. Being developed does not necessarily equate to being resilient. And being 'developing' does not also necessarily equate to vulnerability. Both 'developing' and 'developed' have institutions on which DRR, and indeed development, systems draw their resilience from. Also, for one to be resilient it does not necessarily mean knowing what resilience means. It can be an unconscious or planned process manifesting itself in the form of everyday 'actions' within and without a given institutional framework.

Resilience is about agency and not about structure. Agency here is used to mean the capabilities people have of doing things. It is about capabilities of individuals 'to make a difference' through exercising some sort of power (Giddens, 1984). Community agency is about continuously creating and re-creating, and owning and controlling the institutional structures. Agency and institution (as used here) could be the hidden homes in which humanitarian and development interventions should house resilience. There can

be no such thing as resilience if ignoring community agency and local institutions, or only involving them in DRR and development activities as add-ins when it is convenient to exploit them. If anything, the interventions can increase the affected community's vulnerability to disasters. It is rather unfortunate that the HFA's strategy to building resilience of nations and communities to disasters largely adopts a macro structural approach ignoring the micro approach, the individual, household local community agency. There is no doubt the HFA's approach will achieve some of its set outputs. But its impact on resilience building could be disappointing. The problem is its emphasis on the non-interventionist approach of working within and maintaining the establishment or the status quo. It is that orthodoxy that could have been the root cause of disasters in the first place. The goals and achievements of ISP in Ethiopia are commendable. The downside was ISP's heavy reliance on the structure to deliver DRR 'things', 'services' and 'new things' through relief, rehabilitation and reconstruction respectively. Rather the community should have been at the locus of resilience building. ISP's approach has strengthened the government of Ethiopia, its allied NGOs and donors to supply the 'vulnerable' communities rather the communities demanding what they needed. The CCJP is an example of the benefits of adopting a radical approach to sustainable community empowerment. The risk around confrontation with the establishment is part and parcel of the process of transferring power to the communities and the 'conflictual' resilience building process.

8.3.5 Resilience 'in' disaster phases

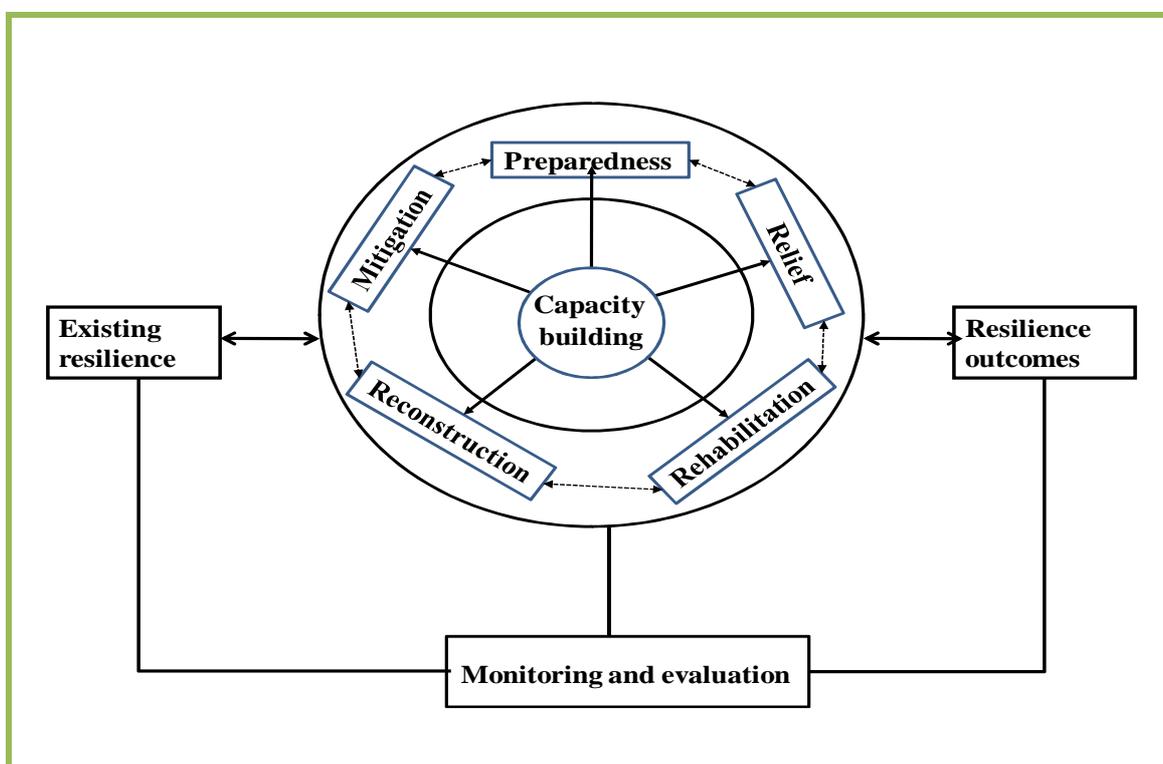
It has been illustrated by the three case studies that some activities are more prominent at particular phases of the disaster cycle. Chapter Four shows that CCJP focused more on development work although there was some indication of expanding the project to include humanitarian aid. Chapter Five shows how ISP responded to wider issues that confronted the Ethiopian people. ISP virtually touched on each phase of the disaster cycle. In Chapter Six, ARP was a rehabilitation project but linked its activities to development. The study does not fundamentally bring new knowledge about the disaster cycle. It does however confirm the existence of overlaps between phases particularly the relationship between disaster and development. In addition, if capacity building is the catalyst for strengthening resilience, then it appears there is a possibility of enhancing resilience at each of the phases.

The findings are consistent with the literature in relation to the continuum versus contiguum discussion presented earlier (Kirkby *et al.*, 1997; Frerks *et al.*, 1995; Kelly,

1998; Maxwell, 1999). This study does not take particular allegiance to either the continuum or contiguum approach. The adoption of either depends on the context. As pointed out in Chapter Seven, section 7.5, that relief resources can be employed to achieve development is now an acceptable idea. However, pursuing development goals using relief resources needs to be balanced with principles rather than expediency. In some contexts it might be difficult to link relief to development especially in chronic complex emergencies where saving life is primary (Maxwell, 1999). However, there was relative peace in all the three case study locations. Thus, for ARP and ISP, relief resources were linked to saving lives and livelihoods but were also employed to achieving wider development goals.

Although this study does not take a particular allegiance to either the continuum or the contiguum approach, the later model seems to offer opportunities in integrating issues on a broader spectrum. In practice, there is no such thing as a continuum approach as activities tend to overlap. Thus, whether a continuum or contiguum model, or whatever name that might assume, enhancing resilience at any phase of the cycle is possible, depending on the context. Fig. 8.1 is an attempt to show how capacity building as a catalyst can help link disaster phases to enhance resilience.

Fig 8.1 Resilience, capacity building and monitoring and evaluation



Source: Author

In relation to existing resilience, this study assumes that individuals, communities, nations and regions have some level of resilience relative to a particular disaster. This could be, among others, psychological, physical, technological and cultural. Existing resilience can be contained in institutions in form of laws, regulations, values and cultural systems. These systems provide a basis for disaster prone communities, as first responders, to deal with disaster losses and damages. Therefore, an intervention which starts with a vulnerability and resilience assessment (VARA) is likely to capture the existing state of safety and resilience. This sounds like the duplication of Mary Anderson's vulnerability and capacities assessment (VCA). The difference here is in the emphasis which shifts from capacity to resilience. For example, the emphasis can be on what the communities have done in the past or could do in future to enable them to 'bounce forward' and move on without external assistance following a disaster.

Similarly, recognition of existing resilience enables interventions to link resilience, relief, rehabilitation to development (LRRRD). This study contends that ISP and ARP II made little attempts to link existing resilience to relief, rehabilitation and development. At best, these interventions appeared to have created or recreated the structures that caused the disaster in the first place. But LRRRD has to contend with problems faced by LRRD. The major problem of LRRD, as stated in Chapter Seven (section 7.5), stems from the lack of policies by donors. In other words, projects are in practice linking relief, rehabilitation and development as disparate entities. They are not linked to policy programmes of donors such as the European Union (EU), UK's Department for International Development (DFID) and United States' Agency for International Development (USAID). Developing countries, like Ethiopia, that have made LRRD as part of their disaster policy, need international support to pressure donors to develop foreign policies that foster the disaster-development nexus. However, notwithstanding policy challenges being faced by LRRD, there are opportunities for interventions to implement LRRRD.

During the project implementation there is a need to monitor progress using the baseline or the state of resilience at the beginning against the identified desired outcomes. It should be noted that this model might be more suitable in areas prone to slow-onset disasters such as drought or flooding than rapid-onset disasters. It might be difficult in complex emergencies to link, for example, relief and development as the security situation might restrict the distribution of humanitarian aid.

8.4 Conclusion

There are no easy answers as to how disaster resilience can be enhanced by development and humanitarian agencies. The aim of this thesis was to explore the extent to which development and humanitarian interventions inform resilience-oriented programmes. This chapter has concluded with key aspects of resilience that come out of a thesis that understanding of disaster resilience is crucial for development and humanitarian intervention. First, resilience is a relatively new concept and this study contributes to the debate on its conceptualisation. Secondly, resilience is about attending to well-known problems of DRR and development work. It is about agency driven community development, which is inextricably and logically linked to development planning. Thirdly, there can be no such thing as resilience without institutions and community agency. Fourthly, resilience building can occur at any phase of the disaster cycle and does not necessarily need to adopt a continuum approach. Finally, it should be also pointed out that the findings of this study have wider applicability beyond the three case studies presented. On the basis of the author's broader experience with similar evaluations elsewhere, for example, in Mozambique and Nepal, the findings of this thesis are robust and generalisable and would not have been significantly different, if different case studies were used. Similarly, the focus of this thesis has been on structures and evaluation processes and outcomes; a different approach might have given rise to different findings.

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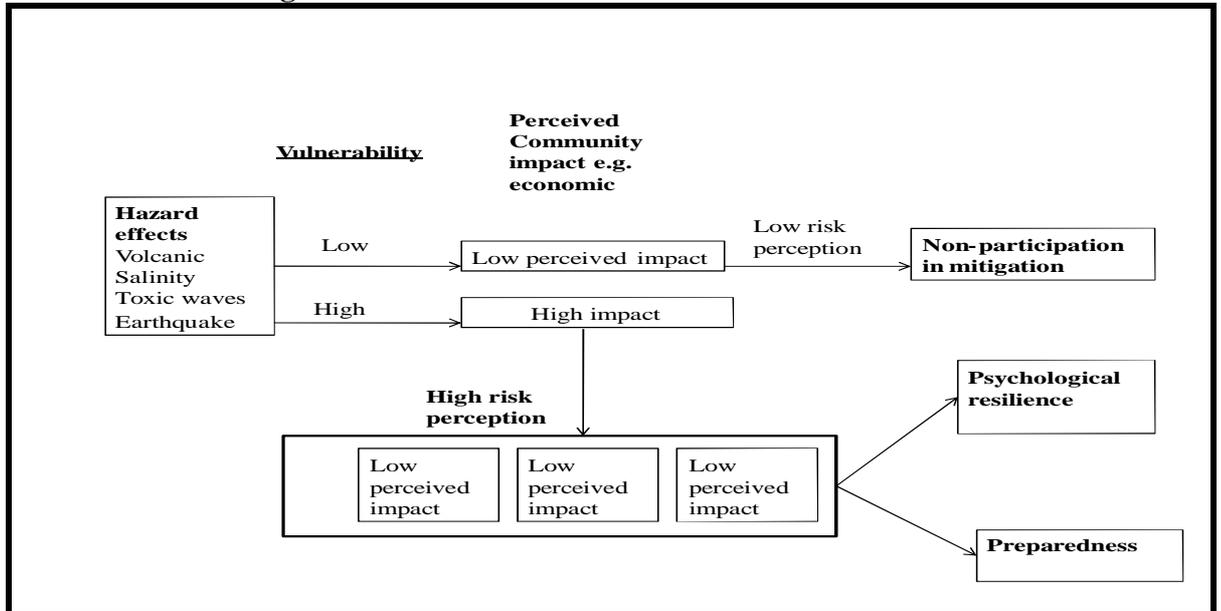
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LIST OF APPENDICES

Appendix 1: Modelling disaster resilience

Paton and Johnston (2001) suggest identification variables capable of predicting community resilience to hazard effects as shown in Fig AP 1.

Fig AP 1: A model of resilience to hazard effects



Paton and Johnston (2001:271)

Self-efficacy, problem-focused coping, and sense of community (Box A1) are some of the variables which could inform the degree of disaster resilience in the event of disaster happening.

Box A1: Variables for predicting community resilience

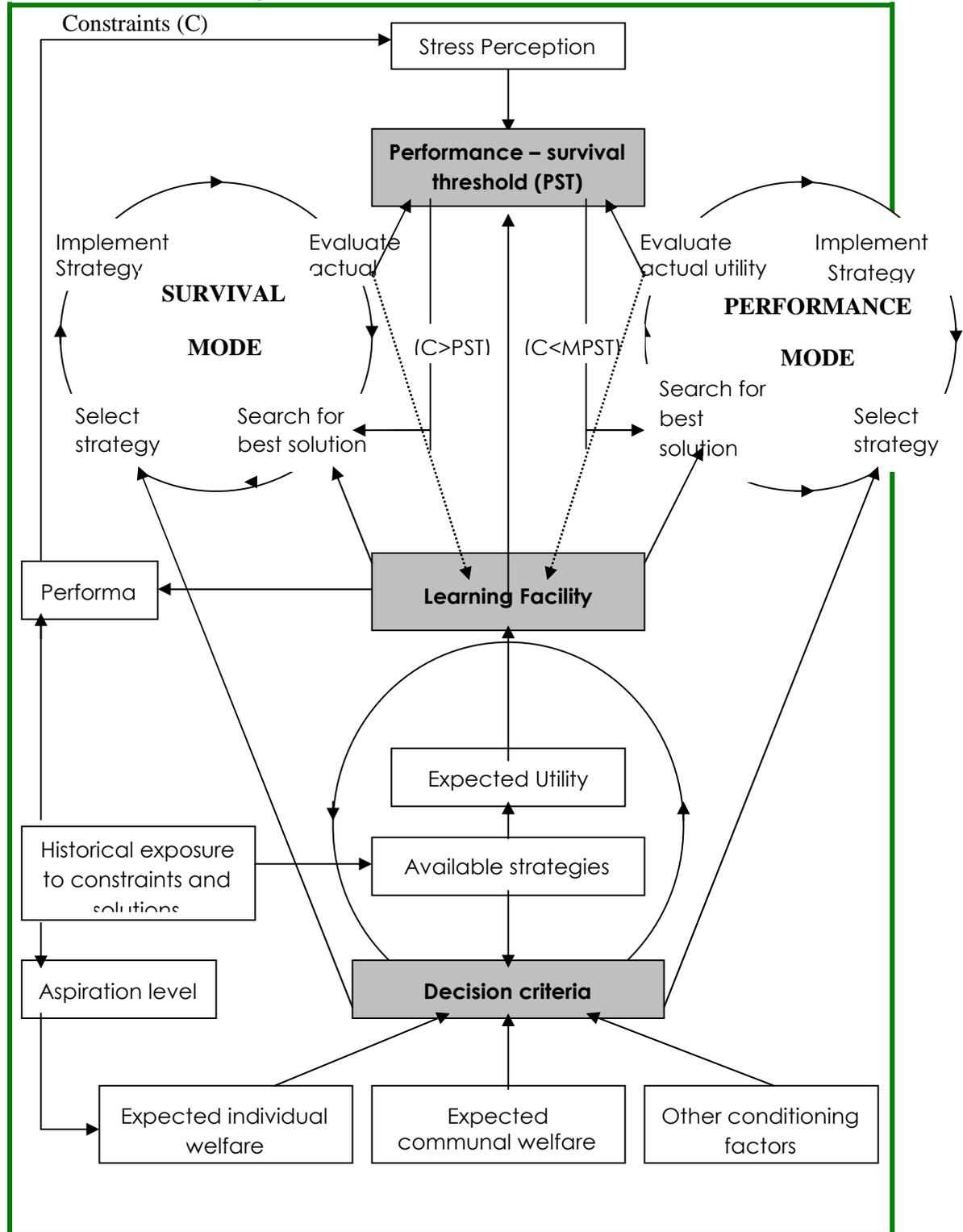
- Self-efficacy describes individuals' appraisal of what they are capable of performing, and influences people's receptivity to information and the likelihood of their acting to deal with hazard consequences.
- Sense of community is about community cohesion and encourages involvement in community response following disaster and increases access to, and utilisation of, social capital. It provides insight into the degree of community fragmentation and, consequently, the level of support likely to exist for collective intervention or mitigation strategies.
- Coping mechanisms influence how people respond to hazard effects. Problem-focused coping (confronting the stressor or problem) represents a mechanism for facilitating resilience. Emotion-focused (suppressing or denying emotional reactions without attempting to tackle the problem) coping strategies, on the other hand, tend to increase vulnerability.

(Paton and Johnston, 2001)

Social Resilience Model

The Social Resilience Model (Bradely and Grainger, 2004) (Fig AP 2) explains the elements of a social resilience using case study material from Wolof and Peul ethnic groups, in the silvopastoral zone of Senegal.

Fig AP 2: Social resilience model



Adapted Bradley and Grainger (2004: 453)

Social resilience is defined here as the ability of groups and individuals to tolerate and respond to environmental and socio-economic constraints through adaptive strategies. The social resilience of a particular territory is the sum of the varying adaptabilities of all of its inhabitants. Total resilience of an area should be regarded as the sum of its ecological and social resilience. Ecological resilience is being the capability of an

ecosystem or agro-ecosystem to tolerate and respond to biotic, abiotic and anthropogenic disturbances through adaptive responses.

The model asserts that actors switch from performance strategies to survival strategies when the perceived severity of constraints exceeds a critical performance-survival threshold (PST) is crossed. Performance strategies are adjustments made to the set of activities in an actor's livelihood in order to sustain the livelihood (and the wider community) under what is regarded as a 'normal' variation in constraints in a given area. Normality is a function of individual perception, not a fixed attribute of environmental or anthropogenic constraints. Survival strategies are adaptive responses, stimulated by constraints of greater magnitude and frequency than are perceived to be 'normal'. The frequency of performance-survival switching is an indicator of stress perception, the relative level of PST, and the level of constraint that the actor perceives as normal. Highly resilient actors possess all the features needed to sustain livelihoods under constraints while less resilient actors have a low PST. The latter switch more frequently because they enter survival mode at a level of constraint that highly resilient actors can withstand by their performance strategies, and make quite radical changes in their activities when switching.

The model, although based on desertification, improves our understanding of the concept of disaster resilience, which, more often, is confused with vulnerability. Firstly, in arid areas, mostly characterised by narrow livelihood portfolios, human-environmental relationships are more accurately represented than the deterministic environmental processes. Secondly, in addition to environmental parameters, carrying capacities and sustainability thresholds of given geographic area can be better estimated. The model can be quite useful in simulating the effects of climate change in areas being or likely to be affected; estimates of the PST can be an important framework for informing development policy and relief aid interventions. However, the model is likely to be of little consequence; one of its biggest weaknesses is its failure to recognise that the PST and indeed, high or low resilience, is partly a product of political marginalisation, which leads to entitlement losses.

Appendix 2: Typologies of participation

Arnstein's typology of participation

Citizen power	Citizen control; delegated power; partnership
Tokenism	Consultation; informing; placation
Non-participation	Therapy; manipulation

Source: Arnstein (1969)

Types and levels of participation

Type	Characteristics of each type
Manipulative participation	Participation is simply a pretence, with 'people's' representatives on official boards, but who are unelected and have no power.
Passive participation	People participate by being told what has been decided or has already happened. It involves unilateral announcements by an administration or project management without any listening to people's responses. The information being shared belongs only to external professionals.
Participation by consultation	People participate by being consulted or by answering questions. External agents define problems and information-gathering processes, and so control analysis. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
Participation for material incentives	People participate by contributing resources, for example, labour, in return for food, cash or other material incentives. Farmers may provide the fields and labour, but are involved in neither experimentation nor the process of learning. It is very common to see this 'called' participation, yet people have no stake in prolonging technologies or practices when the incentives end.
Functional participation	Participation seen by external agencies as a means to achieve project goals, especially reduced costs. People may participate by forming groups to meet predetermined objectives related to the project. Such involvement may be interactive and involve shared decision-making, but tends to arise only after major decisions have already been made by external agents. At worst, local people may still only be co-opted to serve external goals.
Interactive participation	People participate in joint analysis, development of action plans and formation or strengthening of local institutions. Participation is seen as a right, not just the means to achieve project goals. The process involves interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning processes. As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices.
Self-mobilization	People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-mobilization can spread if government and NGOs provide an enabling framework of support. Such self-initiated mobilization may or may not challenge existing distributions of wealth and power.

Adapted from Pretty (1995) cited by Cornwall (2008:272)

A typology of interests

Form	What ‘participation’ means to the implementing agency	What ‘participation’ means for those on the receiving end	What ‘participation’ is for
Nominal	Legitimation – to show they are doing something	Inclusion – to retain some access to potential benefits	Display
Instrumental	Efficiency – to limit funders’ input, draw on community contributions and make projects more cost-effective	Cost – of time spent on project-related labour and other activities	As a means to achieving cost-effectiveness and local facilities
Representative	Sustainability – to avoid creating dependency	Leverage – to influence the shape the project takes and its management	To give people a voice in determining their own development
Transformative	Empowerment – to enable people to make their own decisions, work out what to do and take action	Empowerment – to be able to decide and act for themselves	Both as a means and an end, a continuing dynamic

Adapted from White, 1996: 7–9 cited by Cornwall (2008:273)

Appendix 3: Guidance questions for CCJP study

Community characteristics

1. List the name of community, ward(s) covered, village covered and Chief.
2. When was the committee established?
3. Give details of the present and previous chairpersons, Community Advisers and members of the committee including their position, name, gender, village, dates in office and other leadership positions.

Committee meetings

1. When are the meetings usually held?
2. How many meetings were planned between 1 January and 30 June 2001? How many meetings actually took place? What were the main reasons for failure of the others?
3. Give details of each meeting held between 1 January and 30 January 2001 giving dates, members present, whether community adviser was present or not and main issues discussed?
4. What kind of records do you maintain for your meetings? If not, why not? Are the records properly written? If not, what is wrong with them?
5. What sort of role does the community adviser play in preparing for meetings, during the meetings, and in recording proceedings?
6. Do you think the meetings are useful or a waste of time? Do you think the meetings are well or poorly organised?
7. What do you think could be done to make meetings more useful as well as improve the organisation of meetings?
8. How do members receive information about activities? I

Training

1. What workshops has your group held since January 1999? Which workshop do you think was the most useful? Which workshop do you think was the least useful? What other workshops would members like to have?
2. How many members have attended a *Learning for Transformation* Course? How many of you found it useful? What effect did the course have on your work as CCJP Committee members?
3. Has the Community Adviser attended *Learning for Transformation* and *Leadership* Course? Were the courses useful? What effect did the course(s) have on his /her work as a Community Adviser? Did committee members notice any difference in his/her work as a result of the course(s)?
4. What other courses or workshops has the Adviser attended, in Binga or elsewhere? Which ones were most useful and why? Which ones were least useful and why?

Support from CCJP staff

1. When did the Trainer last visit your community? What was the purpose of the visit? Do you think the visit was useful?
2. Do you think the Trainer should visit more often? If so, why?
3. When did any other CCJP staff member last visit the community? What was the purpose of the visit? Do the members think the visit was useful?

4. When did a member of the committee last visit the CCJP Office? What was the purpose of the visit? Was the visit successful?
5. Do members think that the amount of support provided by CCJP staff is - Too much/About right/Not enough? (*Delete inapplicable*)
6. If it is not enough, what additional support is required?

Section F: Committee's role in the Community

1. What was the main problem identified in the Social Analysis Workshop?
2. What has the committee done to solve the problem?
3. Have they been successful? If not, why not?
4. Has the committee addressed any issues of gender? If Yes, give details? If not, why not?
5. Has the committee addressed any issues concerning the youth? If Yes, give details? If not, why not?
6. Has the Committee tried to address any other community issues? If so, give details.
7. Has the committee helped any individuals with human rights problems? If so, give details
8. Has the committee submitted any proposals to BCDP? If so, where they successful? If not, why not?
9. What sort of relationship does the Committee have with the chief, councillor and village head?
10. Is the Committee represented at: WADCO Meetings? VIDCO Meetings? CAMPFIRE Meetings? Any other community meetings (give details)
11. What are the main problems which the Committee faces when trying to solve human rights and development problems in the community?
12. Do you think the Committee is effective or not?
13. What do you think could be done to make it more effective?

Key Informants views

1. For the Chief, the councillor and Village Heads.
 - Has he heard about CCJP?
 - Does he have accurate knowledge of what CCJP does?
 - Does he know the name of the local CCJP Adviser?
 - Does he know the name of the CCJP Chairperson?
 - Has he attended a CCJP Workshop?
 - Does he think CCJP is helping the community?

Feedback workshop

Group discussion topics

Group 1: Chairpersons and Community Advisors

1. Should the current procedure of selecting CCJP Committees and Advisors be changed/ improved? If so, in what ways?
2. Should the CCJP Committees comprise Catholics only? If not, in what proportion should the non-Catholics be?
3. What sort of rewards should the CCJP committees receive for performing their duties?

4. What more can the CCJP Committees do in order to meet the needs of women and children?

Group 2: Community Chairpersons and Advisors

1. Should some of the committees be subdivided? If so, what criteria should be used to subdivide them?
2. Do you think the proposed reorganization of Community Advisers and Trainers will bring about efficiency and effectiveness in the performance of their duties?
3. List, in order of priority, the training needs for the next phase.
4. What sort of relationship should exist between the CCJP Committees and the Community leaders? What should committees do to achieve this relationship?

Group 3: CCJP Staff

1. What is the CCJP core business?
2. List in order of priority, those activities on which the women and children's desk should concentrate?
3. What role, if any, should CCJP play in HIV/AIDS related activities?
4. What additional support is necessary to ensure efficiency and effectiveness of the CCJP Committees?

Group 4: Church Representatives, CRS Representative, Programme Coordinator, Finance and Administration Officer

1. Is it possible for CCJP donors to coordinate in order come up with a common accounting and reporting system? If so, in what ways?
2. How can the relationship be improved between the CCJP and the Church structures at all levels?
3. How should CCJP manage political intimidation?
4. What measures should CCJP put in place to ensure the sustainability of the project output?

Appendix 4: Guidance questions for individual and group interviews for ISP

Section A: Disaster Policy Familiarisation and Management

1. Which agencies were involved in the implementation of DM component?
2. Are you satisfied with the way DM activities were coordinated?
3. Has a functional DPP Committee been formed or activated in your *woreda*?
4. What functions would you say were performed by your DPP Committee in the last twelve months?
5. How would you describe your DPP Committee in relation to its effectiveness and efficiency? Are you satisfied with the transparency of your DPP Committee activities? Are you satisfied with the institutional relationship with your DPP Committees and DPP Committees at regional and zonal levels?
6. How do you rate the support/assistance (technical, management, monitoring etc) provided by the ISP? (efficiency/ effectiveness/ partnership relationship)
7. How do you find the usefulness of integrating disaster risk management plans with other development plans especially in relation to cross-cutting issues: gender, HIV/AIDS, children, age, and environment?
8. What self-initiated DM activities have you designed and implemented?
9. Have you attended any training in DM? How would you rate the way ISP organised DM training including training resources? Have your skills and knowledge on DRR/ management improved as a result of DM training activities? If your skills and knowledge have improved, how do you apply them in DM and other development activities?
10. Has your LD put in place some resources for HRD to support DM?
11. In your opinion, do you agree that DM activities have been institutionalised?
12. Are you confident these HRD activities will be sustained (explain)?
13. How useful is the ISP four-in-one strategy and approach in addressing complex issues related to disaster risk management

Section B: Early Warning System

1. Do you have an operational EWS established?
2. How do you receive EW information?
3. Has the baseline database from existing livelihoods, vulnerability and hazard risks been established as a result of EW component?
4. Are you satisfied with the quality of EW information to trigger responses?
5. What standard control mechanisms have you installed to ensure the quality and reliability of EW information?
6. What is the most reliable source of EW information in your locality?
7. How would describe the EW information in relation to food and livelihood security, frequency and timeliness to trigger responses?
8. To what extent are women, children and other vulnerable groups involved in EW activities?
9. Are there any functional EW structures in your zone /*woreda*? How effective is your EW Committee?
10. Did you receive any training on technical aspects of EW on a regular basis?
11. What kind of training did you receive?
12. What role did ISP Officers play in training activities?
13. What role did DPPC officers play in training activities?
14. What role did NGO officers play in training activities?
15. Are you satisfied with the implementation of the EW component?

16. If you are not satisfied, suggest how it could be improved?
17. Are there other EW activities benefiting to the community?
18. Are you willing to sustain your involvement with the EW activities for years to come (after the project ends)?

Section C: Employment Generation Scheme

1. How many people benefited in LRD/EGS pilot programme? How many hand tools were provided and when were they provided? What criteria were used to choose participants? Were you satisfied with the criteria?
2. Do you have a functional EGS/LRD structures established? How many meetings were held in the last twelve months to review progress?
3. How would you describe the participation of women in LRD activities before the introduction of ISP III and now? How would you describe the participation of children in LRD activities before the introduction of ISP III and now?
4. Who plans public works at *woreda*, PA, and zonal level? What contribution has the EGS component contributed towards environmental risk reduction?
5. How would you describe the LRD/EGS structure in terms of its role and relationship with other structures? What would be the ideal structure for the EGS structure?
6. How would you describe the integration of LRD activities in your annual plans and reports before the introduction of ISP III and now? How would you describe ISP III LRD activities in relation to your understanding of the link between relief and development and building livelihood assets to enhance disaster resilience?
7. How many RFOs were built in your *woreda*? Who manages RFOs? Do you agree that people get their food payments timely? What is the furthest distance travelled by the community in collecting their food payments? Apart from storing relief food, what other purposes are RFOs used for? Do all RFOs have the required equipment? Who maintains RFOs?
8. Did you receive any training on in EGS? What kind of training have you received? How many people participated in the training? How would you describe the changes with respect to the application of knowledge and skills of people who were trained? (refer to planning, monitoring, evaluation and dissemination of lessons learned?)
9. Would you agree that communities are now able to design and implement LRD activities by themselves?
10. What would be your comment on the quality and quantity of training materials? Did you get the Amharic version of Safety Net Training Manuals? Were there any lessons learned from the forum on Productive Safety Net? Did you organise an in-country study tour? Are you satisfied with the way EGS training was organised? What role do ISP Officers play in training activities?
11. What role do DPPC officers play in training activities? What role do NGO officers play in EGS training activities? What is the level of participation of the people who attended training?
12. Has the EGS helped to reduce disaster risks as compared with other packages? Explain with reference to capital assets enhancement to help build disaster resilience. Are you satisfied with the implementation of the EGS component? If you are not satisfied, what were the problems and suggest how it could be improved? Are there any other EGS activities benefiting to the community? Where you involved in action research? Is there somebody you know who was involved in action research? Do you think the lessons learned in action research contributed to DRR? Did you encounter problems in action research?

Appendix 5: Household Questionnaire for ARP II

Questionnaire No:

GPS Alt.....m S.....deg.....min.....sec
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REPÚBLICA DEMOCRÁTICA DE TIMOR-LESTE
MINISTÉRIO DA AGRICULTURA, FLORESTAS E PESCAS

Agriculture Rehabilitation Project Phases II and III - September 2004
Questionnaire for Impact Self Assessment and Baseline

Interviewer's name	Date of Interview
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A. General Information

A.1. District	A.2. Sub district
A.3. Suco	A.4. Aldeia
A.5. Locality Lowland 1[] Upland 2[]	A.6. Interviewee's name
A.7. Interviewee's sex Female 1[] Male 2[]	A.8. Interviewee's age []
A.9. Are you the head of this household? Yes 1[] No 2[]	A.10. If not, who is? Woman 1[] Man 2[]
A.11. How many people are there in this household? []	A.12. Is the head of household Married 1[] Single 2[] Widow/Widower 3[] Separated 4[] Divorced 5[]
A.13. What is your main occupation? Farmer 1[] Petty trader 2[] Private employee 3[] Civil servant 4[] Chefe de Suco 5[] Other description 6[] (<i>specify</i>)	A.14. Indicate if any other person in your household has any of the following occupations Farmer 1[] Petty trader 2[] Private employee 3[] Civil servant 4[] Chefe de Suco 5[] Other description 6[] <i>(Specify)</i>

B. Participatory Development & Natural Resources Management

B.1. Has your village been assisted by the MAFF PD&NRM programme? Yes 1[] No 2[]	B.2. Has there been any assistance with PD&NRM through anyone else? Yes 1[] No 2[] If yes, through whom? NGO 1[] (<i>specify</i>) Church 2[] Other 3[] (<i>specify</i>)
B.3. Are you or any member of your household a part of a group of people in your village working in connection with a PD&NRM programme? Yes 1[] No 2[]	<i>(If answers in questions B.1 to B.3 have indicated no involvement at all in PD&NRM activities, advance to Section C)</i>
B.4. How many people are this group? []	B.5. Were you or any member of your household involved in designing the proposal for the group? Yes 1[] No 2[] Not applicable 3[]

<p>B.6. Who would you say makes the most decisions concerning the PD&NRM programme?</p> <p>The women in this community 1[]</p> <p>The men in this community 2[]</p> <p>An individual male leader 3[]</p> <p>An individual female leader 4[]</p>	<p>B.7. What were the main activities your group put in the proposal for funding?</p> <p>Propagation of valuable tree seedlings 1[]</p> <p>Living fences 2[]</p> <p>Agroforestry 3[]</p> <p>Fishponds 4[]</p> <p>Rehabilitation of coffee farms 5[]</p> <p>Seed bank and procurement of silo units 6[]</p> <p>Seaweed or green mussel culture 7[]</p> <p>Reforestation for water security 8[]</p> <p>Others 9[] (<i>specify</i>)</p> <p>Not applicable 99[]</p>
<p>B.8. Did you have any problems in getting these activities funded? Yes 1[] No 2[]</p> <p>(If no go to B10)</p>	<p>B.9. What kind of the obstacle did you and your group face in getting the funding?</p> <p>No major obstacle 1[]</p> <p>Difficulties in making a proposal 2[]</p> <p>Difficulties in meeting with the facilitator 3[]</p> <p>Funding flow did not properly proceed according to the NRM Operation Manual 4[]</p> <p>Community participation was very low 5[]</p> <p>Others 6[] (<i>specify</i>)</p>
<p>B.10 How do you rate the support/assistance (technical, management, monitoring etc) provided by the NRM Team, District Implementation Team and NRM Facilitators?</p> <p>None 1[]</p> <p>Not enough 2[]</p> <p>Enough 3[]</p> <p>More than enough 4[]</p>	<p>B.11. How often does the Village Implementation Team conduct a meeting in your village/small group?</p> <p>Twice a month 1[]</p> <p>Monthly 2[]</p> <p>Every Two Months 3[]</p> <p>Every Three Months 4[]</p> <p>Other 5[] (<i>specify</i>)</p>
<p>B.12 What is the level of participation of the members in your Small/Village group?</p> <p>Few participate 1[]</p> <p>About half participate 2[]</p> <p>Majority participate 3[]</p> <p>All participate 4[]</p>	<p>B.13. Has your small group/village received PD&NRM technical training from the NRM Management Team/DFO?</p> <p>Yes 1[] No 2[]</p> <p>Following training, what training areas would you prioritise in the future?</p>
<p>B.14. If yes to B.13, what kind of training did your group / village receive?</p> <p>Nursery establishment 1[]</p> <p>Plantation maintenance 2[]</p> <p>Soil erosion control techniques 3[]</p> <p>Living fence 4[]</p> <p>Agroforestry 5[]</p> <p>Fishponds 6[]</p> <p>Rehabilitation of coffee farms 7[]</p> <p>Management of finances 8[]</p> <p>Other 9[] (<i>specify</i>)</p>	<p>B.15. Did those activities benefit you and the group? Yes 1[] No 2[]</p>
<p>B.16. Were you or a member of your family one of the people who received this training? Yes 1[] No 2[]</p>	<p>B.17. Have any women been included in the group with which you / a member of your household are associated? Yes 1[] No 2[]</p>
<p>B.18. If yes, about how many women are there in this group?</p>	<p>B.19. What are the main activities that women have proposed for funding?</p>

<p>Less than 20 women 1[]</p> <p>20 - 50 women 2[]</p> <p>50 - 75 women 3[]</p> <p>75 - 100 women 4[]</p> <p>More than 100 women 5[]</p> <p>Not applicable 6[]</p>	<p>Propagation of valuable tree seedlings 1[]</p> <p>Living fences 2[]</p> <p>Agroforestry 3[]</p> <p>Fishponds 4[]</p> <p>Rehabilitation of coffee farms 5[]</p> <p>Seed bank and procurement of silo units 6[]</p> <p>Seaweed or green mussel culture 7[]</p> <p>Reforestation for water security 8[]</p> <p>Others 9[] (<i>specify</i>)</p> <p>Don't know 99[]</p>
<p>B.20. Are you satisfied with the implementation of the PD&NRM programme?</p> <p>Very satisfied 1[]</p> <p>Satisfied 2[]</p> <p>Slightly satisfied 3[]</p> <p>Not satisfied 4[]</p> <p>If not satisfied, why not? (<i>describe</i></p>	<p>B.21. Are there any complaints from the community regarding the implementation of your activities in terms of the environment?</p> <p>Yes [] No []</p> <p>Describe why yes or why no;</p>

C. Rapid Infrastructure Rehabilitation

<p>C.1. Has there been any rehabilitation of your community's irrigation system by MAFF Yes 1[] No 2[] ?</p>	<p>C.2. Has there been any rehabilitation of your community's irrigation system by anyone else?</p> <p>Yes 1[] No 2[]</p> <p>If yes, by whom?</p> <p>NGO 1 [] (<i>specify</i>)</p> <p>Church 2[]</p> <p>International Agency 3[]</p> <p>Community itself 4[]</p> <p>Other 5[] (<i>specify</i>)</p>
<p>C.3. Did you participate in the rehabilitation of the irrigation system, such as in the construction of channels? Yes 1[] No 2[]</p>	<p>(<i>If answers in questions C.1 to C.3 have indicated no involvement at all in irrigation system activities, advance to C.10</i>)</p>
<p>C.4. Did staff from the irrigation programme give sufficient guidance during the work? Yes 1[] No 2[]</p>	<p>C.5. Are you satisfied with the way the irrigation programme work was organized? Yes 1[] No 2[]</p>
<p>C.6. Did you receive training on how to maintain the irrigation system? Yes 1[] No 2[]</p>	<p>C.7. How often did the District Irrigation Officer visit your irrigation area and provide technical assistant during and after the construction process?</p> <p>Twice a month 1[]</p> <p>Monthly 2[]</p> <p>Every 2 months 3[]</p> <p>Every 3 Months 4[]</p> <p>Never 5[]</p> <p>Other (<i>specify</i>)</p>

<p>C.8. Has the rehabilitation of the irrigation system been useful to your community? Yes 1[] No 2[] If yes, what amount would you be willing to pay for this service in future? Nothing Yes 1[] No 2[] \$1-\$10 Yes 1[] No 2[] \$11-\$20 Yes 1[] No 2[] \$21 and above Yes 1[] No 2[]</p>	<p>C.9. If you or your community are not satisfied by the irrigation rehabilitation, what have been the problems? </p>
<p>C.10. Has there been any rehabilitation of your community's road system by MAFF? Yes 1[] No 2[]</p>	<p>C.11. Has there been any rehabilitation of your community's road system by anyone else? Yes 1[] No 2[] If yes, by whom? NGO 1[] (<i>specify</i>) Church 2[] Donors 3[] Community itself 4[] Other 5 [] (<i>specify</i>) </p>
<p>C.12. Did you participate in the community road repair works? Yes 1[] No 2[]</p>	<p>(If answers in questions C.9 to C.12 have indicated no involvement at all in community road repair works, advance to C.16)</p>
<p>C.13. If your community's road was repaired, are you satisfied with the way the work was organized? Yes 1[] No 2[] Please comment on this if you wish; </p>	<p>C.14. How often did the District Irrigation Officer visit your access road and provide technical assistance during and after the construction process? Twice a month 1[] Monthly 2[] Every 2 months 3[] Every 3 Months 4[] Never 5[]</p>
<p>C.15. Has the road repair been useful to your community? Yes 1[] No 2[] Describe in what way </p>	<p>C.16. Has a Water User Association been established here at the community farm level by MAFF? Yes 1[] No 2[]</p>
<p>C.17. Has a Water User Association been established here at the community farm level by anyone else? Yes 1[] No 2[] If yes, by whom? NGO 1[] (<i>specify</i>) Church 2[] Donors 3[] Community itself 4[] Other 5[] (<i>specify</i>)</p>	<p>C.18. Have you participated in the community farm level distribution of water? Yes 1[] No 2[]</p>

.....	
C.19. Did you participate in cleaning/maintaining of canals and irrigation facilities? Yes 1[] No 2[]	C.20. Did you participate in farmers meetings where water supply issues are discussed? Yes 1[] No 2[]
C.21. How often did the District Irrigation Officer visit your Water User Association and provide technical assistance during and after its establishment? Twice a month 1[] Monthly 2[] Every 2 months 3[] Every 3 Months 4[] Never 5[]	C.22. Has the Water User Association been useful to your community? Yes 1[] No 2[] If yes, comment on this if you wish;
C.23. If you or your community are not satisfied by the Water User Association, what have been the problems?	

D. Information to Farmers

D.1. Do you own a working radio that you listen to? Yes 1[] No 2[]	D.2. If you indicated 'no' for D1, do you listen to someone else's radio? Yes 1[] No 2[]
<i>(If answers in questions D.1 to D.2 have indicated no listening to any radio at all, advance to D.11)</i>	D.3. Have you received agricultural news / information from RTL / RTK / Falentil / Rankabian? Yes 1[] No 2[]
D.4. Is the quality of the transmission good enough to hear what they are saying? Always 1[] Most of the time 2[] Not very often 3[] Never; the reception is too poor 4[]	D.5. Do you receive agriculture news/information from community radio? Yes 1[] No 2[]
D.6. Is the quality of the transmission of community radio good enough to hear what they are saying? Always 1[] Most of the time 2[] Not very often 3[] Never, the reception is too poor 4[]	D.7. How do you find the programme-length of the agriculture news/information provided? Too short 1[] About right 2[] Too long 3[]

<p>D.8. Are you satisfied with the time of day of broadcasts concerning agriculture? Yes 1[] No 2[]</p>	<p>D.9. If 'no' to D8, what are the best times of day for these broadcasts? Early morning 1[] Afternoon 2[] Evening 3[] Night 4[] Don't know 99[]</p>
<p>D.10. Do you think the information provided by radio is useful for your farming activities? Yes 1[] No 2[]</p>	<p>D.11. Did you receive agricultural news/information from the following sources? By word of mouth1[] News papers 2[] Magazines 3[] Television 4[] Posters,5[] leaflets 6[] Information from a mobile van7[] Others 8[] (<i>specify</i>).....</p>
<p>D.12. Indicate if you received any posters, leaflets, brochures or information from the following? MAFF staff 1[] Village Livestock Workers 2[] Water Users Association 3[] Facilitators 4[] Chefe de Suco 5[] Others 6[] (<i>specify</i>)</p>	<p>D.13. Indicate the best source of agricultural information for your farming activities. By word of mouth1[] News papers 2[] Magazines 3[] Television 4[] Posters 5[] leaflets 6[] Information from a mobile van7[] Radio 8[] Others 9[] (<i>specify</i>)..... Do not think the information is useful10 []</p>
<p>D.14. Are you satisfied with the agriculture news/information provided through community organizations: church, farmers groups, WUAs, women's associations, village cooperatives etc? Yes 1[] No 2[] <i>If yes, go to Section E</i></p>	<p>D.15. If you are not satisfied with the agricultural information provided through community organizations, please indicate why not?</p>

E. Sustainable Animal Health Services

<p>E.1. Do you or any member of your household have any animals? (<i>do not include the animals owned by another member of your family that lives in a different household</i>) Yes 1[] No 2[]</p>	<p><i>(If the answer to question E.1 indicates that there are no animals owned by members of this household, advance to Section F)</i></p>
<p>E.2. How many of your animals were vaccinated last year? Cattle/Buffalo 1 []</p>	<p>E.3. Are you satisfied with the information provided before the vaccination programme was implemented?</p>

<p>Pigs 2[]</p> <p>Chickens 3[]</p> <p>Other4 [] (<i>Indicate which type</i>).....</p>	<p>Cattle/Buffalo Yes 1[] No 2[]</p> <p>Pigs Yes 1[] No 2[]</p> <p>Chickens Yes 1[] No 2[]</p> <p>Other Yes 1[] No 2[]</p>
<p>E.4. Did the vaccination of your animals reduce the number of deaths or sickness?</p> <p>Cattle/Buffalo Yes 1[] No 2[]</p> <p>Pigs Yes 1[] No 2[]</p> <p>Chickens Yes 1[] No 2[]</p> <p>Other Yes 1[] No 2[]</p>	<p>E.5. Are you satisfied with the way the vaccination campaign was organized?</p> <p>Cattle/Buffalo Yes 1[] No 2[]</p> <p>Pigs Yes 1[] No 2[]</p> <p>Chickens Yes 1[] No 2[]</p> <p>Other Yes 1[] No 2[]</p>
<p>E.6. Did you put your livestock in a pen during the vaccination campaign?</p> <p>Cattle/Buffalo Yes 1[] No 2[]</p> <p>Pigs Yes 1[] No 2[]</p> <p>Chickens Yes 1[] No 2[]</p> <p>Other Yes 1[] No 2[]</p>	<p>E.7. If you are not satisfied with the campaign, how could vaccination be improved?</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>E.8. Have you heard about the Village Livestock Workers?</p> <p>Yes 1[] No 2[]</p> <p>(If no proceed to E 14)</p>	<p>E.9. Has your animal ever been treated by a Village Livestock Worker? Yes 1[] No 2[]</p>
<p>E.10. Are you satisfied with Village Livestock Worker activities in your village?</p> <p>Yes 1[] No 2[]</p>	<p>E.11. Did the Village Livestock Worker/s provide assistance on any of the following:-</p> <p>Animal production activities such as forage and legume pastures Yes 1[] No 2[]</p> <p>Cattle finishing programme Yes 1[] No 2[]</p> <p>Native chickens intensification Yes 1[] No 2[]</p> <p>Other (<i>specify</i>)Yes 1[] No 2[]</p>
<p>E.12. Would you pay for animal health services and medicines provided by Village Livestock Workers or other service providers?</p> <p>Yes 1[] No 2[]</p>	<p>E.13. If you or your community are not satisfied with the Village Livestock Worker's activities, what were the problems? (<i>specify</i>)</p> <p>.....</p> <p>.....</p>
<p>E.14 How often has the District Livestock Officer visited your village to promote animal health and production</p> <p>Monthly 1[]</p> <p>Every 2 months 2[]</p> <p>Every 3 months 3[]</p> <p>Other 4[]</p> <p>Never 5[]</p>	<p>E.15 Has the District Livestock Officer ever conducted a Newcastle Disease vaccination demonstration? Yes 1[] No 2[]</p> <p>If Yes, are there any eye-dropper bottles in your village? Yes 1[] No 2[]</p> <p>Who has control for them?</p> <p>.....</p> <p>.....</p>

F. Agriculture Services Centres (ASCs)

<p>F.1. Have you ever had an Agriculture Services Centre (ASC) in your district?</p> <p>Yes 1[] No 2[]</p>	<p>F.2. Has there ever been any other community association in your village during the past four years? Yes 1[] No 2[]</p> <p>(If NO, to question F1 and F2 proceed to Section G)</p>
<p>F.3. Are you or another member of</p>	<p>F.4. Are you or another member of your household</p>

your household members of ASC in your district? Yes 1[] No 2[]	members of any other community association in your district? Yes 1[] No 2[]
F.5. Are you aware of the activities and function of the ASC? Yes 1[] No 2[]	F.6. Are you aware of the activities and function of any other community association in your district? Yes 1[] No 2[]
<i>(If the answer to questions F.1 – F5 indicates that the household has no involvement with ASC or any other community association, advance to Section G. For households who are involved in both ASC and other community associations, they should respond for the case of ASC only)</i>	F.7. Has your ASC been fully operational? Yes 1[] No 2[]
F.8. Do you regularly attend ASC meetings? Yes 1[] No 2[]	F.9. Did you receive any training on technical or business aspects from an ASC's management team or the management team of any other community association on a regular basis? Yes 1[] No 2[]
F.10. Have you bought anything from the ASC or other community associations? Yes 1[] No 2[]	F.11. If yes to F10, what did you buy? <i>(Please specify)</i>
F.12. Have you sold anything to the ASC or other community association? Yes 1[] No []	F.13. If yes to F9, what did you sell? <i>(Please specify)</i>
F.14. Are the ASC activities benefiting the community? Yes 1[] No 2[]	F.15. Are you willing to sustain your involvement with the ASC or other community association activities for years to come (after the project ends)? Yes 1[] No 2[] <i>Specify</i>
F.16. Are you satisfied with the ASC or other community association business programme implementation? Yes 1[] No 2[]	F.17. If you are not satisfied with the ASC or other community association, how could it be improved?

G. Food security

G.1. Has the area that you cultivate increased as a result of the irrigation rehabilitation? Big increase (75% or more) 1[] Slightly big increase (25-75%) 2[] Small increase (less than 25%) 3[] No increase 4[] Decreased 5[]	G.2. Compared with 2 years ago, has your crop production increased? Big increase (75% or more) 1[] Slightly big increase (25-75%) 2[] Small increase (less than 25%) 3[] No increase 4[] Decreased 5[]
G.3. How big is the area of land that you own? Not more than 0.5 hectare 1[]	G.4. How many sacks (50 kg) of the following did you produce two years ago and this year?

0.5-1 hectares 2[] 1-2 hectares 3[] 3-5 hectares 4[] More than 5 hectares 5[]	<u>Two years ago (2002)</u> Rice [] Maize [] Cassava [] Beans [] <u>This year (2004)</u> Rice [] Maize [] Cassava [] Beans []
G.5. Overall, do you now grow more types of food crops than you did 2 years ago? More types crops 1[] Less crops 2[] About the same amount 3[] Do not grow crops 4[]	G.6. Overall, do you now have more animals than you did 2 years ago? More animals 1[] Less animals 2[] About the same amount 3[] Do not keep animals 4[]
G.7. Could you indicate about how big an area you planted during the last planting season? (<i>only a rough estimate is necessary</i>) Hectares []	G.8. Can you now satisfy your food needs better than 2 years ago? Big improvement 1[] Slight improvement 2[] No change 3[] Less able to meet food needs than previous 4[]
G.9. Has your household income increased since 2 years ago? Big increase 1[] Small increase 2[] No change 3[] Income has decreased 4[]	G.10. Do you and your family have enough food to eat throughout the entire year? Yes 1[] No 2[] <i>(If Yes, go to Section H)</i>
G.11. If you answer “No” to G10, please indicate the months of the year you do not have enough food for all the family? J F M A M J J A S O N D [] [] [] [] [] [] [] [] [] [] [] []	
G.12. Do you manage to store some food as a reserve for you and your family to eat during the scarcity/critical months? Yes 1[] No 2[]	G.13 If you answer “Yes” to G.12, please specify if this storage consists of the following types of foods (local)? Aifarina 1[] Akar 2[] Kumbili 3[] Kontas 4[] Other (<i>specify</i>)
G.14. How many meals do you eat in one day during the “normal” months? On average less than one meal a day 1[] One meal 2[] Two meals 3[] Three meals 4[] More than three meals 5[]	G.15. How many meals do you eat in one day during the scarce / critical months? On average less than one meal a day 1[] One meal 2[] Two meals 3[] Three meals 4[] More than three meals 5[]

H. Average Yields (Community Irrigation Schemes)

H.1. If your total farm area is not fully planted, why not?	H.2. If you have an approximate estimate of your total harvest during the last planting season please indicate it [] 50kg sacks. Or [] tons
H.3. Are you using fertilizers? Yes 1[] No 2[]	H.4. Are you using pesticides? Yes 1[] No 2[]

If no, why not?	If no, why not?
H.5 Did you sell any of your harvest? Yes 1[] No 2[] (If NO, go to H8)	H.6. If yes, how much? [] 50 kg sacks? Or [] tons
H.7. Where did you sell? Traditional Market 1[] Neighbour 2[] Trader 3[] Family 4[] Other 5[] (<i>specify</i>)	H.8. If you produced but did not sell, why did you not sell?

I. Wealth Ranking

The wealth characteristics of ARP II beneficiaries are summarised in the table below.

(1 = poor, 2 = middle and 3 = better-off)

Characteristic		1	2	3
I. 1 Livestock Holding	Buffalo/cattle	0-2	3-5	6+
	Goats	0-5	6-10	11+
	Pigs	0-5	6-10	11+
	Horses	0-1	2-3	4+
I.2 Land under cultivation (ha) (irrigation)		0-1 ha	1-2 ha	3 ha+
I.3 Land under cultivation (ha) (non-irrigation)		0-1 ha	1-2 ha	3 ha+
I.4 Productive assets		Simple hand tools	Animals, animal drawn-plough	Tractor, miller, thresher

I.5 Do you or any other member of your household have full ownership of the animals you have indicated in I.1?

Buffalo / cattle Yes 1[] No 2[]
Goats Yes 1[] No 2[]
Pigs Yes 1[] No 2[]
Horses Yes 1[] No 2[]

I.6 If not, what is the approximate ownership you or other members of this household have of them?

Buffalo / cattle Less than half 1[] About half 2[] More than half 3[]
Goats Less than half 1[] About half 2[] More than half 3[]
Pigs Less than half 1[] About half 2[] More than half 3[]
Horses Less than half 1[] About half 2[] More than half 3[]

I.7 Do you or any other member of your household have any other income generating activities? Yes 1[] No 2[]

If yes, please specify.....

Do these earn you more income than your agricultural activities? Yes 1[] No 2[]

GUIDE FOR IN-DEPTH INDIVIDUAL AND GROUP INTERVIEWS

Section A: Details of the group (NRM, WUA, ASC or LWA)

1. Name of community, sub-district, and villages covered, suco chief.
2. When was NRM, WUA, ASC or LWA established?
3. Give details of the present members of the committee such as chairperson, treasurer and committee members including their dates of office and the reasons why they left.
4. Give details of the NRM, WUA, ASC or LWA facilitator their dates of office and the reasons why they left.

Section B: NRM, WUA, ASC or LWA Meetings

1. When are the meetings usually held?
2. How many meetings were planned between 1 January and 30 October 2004? How many meetings actually took place? What were the main reasons for failure of the others?
3. Give details of each meeting held between 1 January and 30 October 2004 giving dates, members present, whether facilitator was present or not and main issues discussed?
4. What kind of records do you maintain for your meetings? If not, why not? Are the records properly written? If not, what is wrong with them?
5. What sort of role does the facilitator play in preparing for meetings, during the meetings, and in recording proceedings?
6. Do you think the meetings are useful or a waste of time? Do you think the meetings are well or poorly organised?
7. What do you think could be done to make meetings more useful as well as improve the organisation of meetings?
8. How do members receive information about activities? Is the information to members through radio and other media effectively communicated?

Section C: Training

1. What workshops has your group held since January 2002? Which workshop do you think was the most useful? Which workshop do you think was the least useful? What other workshops would members like to have?
2. How many members have attended a training courses whether inside or outside the country? Was the training useful? What effect did the course have on your work as a group?

Section D: Support from MAFF

1. When did the MAFF staff last visit the community? What was the purpose of the visit? Do members think the visit was useful? Do members think the MAFF staff should visit more often? If so, why?
2. When did a member of your group last visit the MAFF office? What was the purpose of the visit? Was the visit successful? Do members think that the amount of support provided by MAFF staff is enough or not enough? If it is not enough, what additional support do you require?

Section E: Association/Group activities

1. What main problem has your group faced? What has the group done to solve the problem? Have you been successful? If not, why not? What are the main problems which your group faces when trying to solve its problems?
2. In what ways has your group addressed gender issues?
3. Has your group submitted any proposals for funding (in the case of NRM group)? Have you been successful?
4. What sort of relationship does your group have with your *suc*o Chief and other leaders?
5. Do you think you are effective or not? What do you think could be done to make your group more effective?
6. Are you willing to meet costs of to continue enjoying the benefits of NRM, ASC, WUA or LWA when MAFF/donors withdraw their financial/technical support?

INTERVIEW GUIDE FOR THE MAFF DIVISIONS

1. Could you give us an account of your activities under ARP II?
2. In your opinion, do you think your programme (WUA, ASCs, NRM and LWA) has been able to achieve the intended objectives under ARP II? Give details
3. What have been the strengths?
4. What were the weaknesses?
5. What do you recommend for ARP III?

NB. Issues to be raised include:

- the appropriateness of financial arrangements (disbursement from World Bank to your division/ to communities),
- administration/ management design (including extension/information), capacity of staff/ staff training/planning/partnerships with other government and non-government agencies
- community support structures and empowerment,
- cost-benefit-analysis (project worth),
- gender,
- regulation/ supportive policy,
- sustainability/exit strategy/willingness to pay

Appendix 6: Consent letters to CCJP, ISP and ARP data



27th July 2007

Mr. S. Bernard Manyena
Disaster and Development Centre,
Northumbria University
6 North Street East
Newcastle upon Tyne
NE1 8 ST

Dear Mr. Manyena

Reference is made to your letter in which you request permission to use the Evaluation of the Institutional Support Project Phase II (ISP II), you conducted in 2005, for the purpose of your PhD studies. We are happy to grant you such permission for the said purpose and will be happy to support you should you need further information.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Feleke Tadele".

Feleke Tadele
Manager of Programs-East Africa
Country Representative- Ethiopia
Save the Children Canada

All Souls Catholic Church
P.O. Box 37
Binga

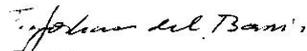
10th December, 2008

Mr. Siambabala Bernard Manyena
Northumbria Univeristy
Disaster and Development Centre
6 North Street East
Newcastle upon Tyne
NE1 8ST

Dear Mr. Manyena

Reference is made to your request to use the Evaluation of the Catholic Commission of Justice and Peace Project (CCJP), you conducted in 2001 for the purpose of your PhD studies. We are happy to grant you such permission for the said purpose and will be happy to support you should you need further assistance.

Yours sincerely


Fr. Joshua
All Souls Parish

ALL SOULS CATHOLIC MISSION
P.O. BOX 37
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27 de Julho de 2007

Mr. S. Bernard Manyena
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Northumbria University
6 North Street East
Newcastle upon Tyne
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Dear Mr. Manyena

Reference is made to your letter in which you request permission to use the Evaluation of the Agricultural Rehabilitation Project Phase II (ARP II) for the purpose of your PhD studies that you conducted in 2004.

We are happy to grant you such permission for the said purpose and will be happy to support you should you need further information.

Yours sincerely

Dr John A C Steel
Project Management Adviser

ARP III is a four-year project that is funded by the Consolidated Fund for East Timor (CFET), the European Commission (EC), and the Trust Fund for East Timor (TFET). The World Bank (WB) is the Fund Manager and MAFF is the Project Manager



Appendix 7: Author's publications related to this Thesis

Manyena, S.B. (2006) The concept of resilience revisited, *Disasters* **30**(4): 433-450.

Abstract

The intimate connections between disaster recovery by and the resilience of affected communities have become common features of disaster risk reduction programmes since the adoption of The Hyogo Framework for Action 2005–2015. Increasing attention is now paid to the capacity of disaster-affected communities to 'bounce back' or to recover with little or no external assistance following a disaster. This highlights the need for a change in the disaster risk reduction work culture, with stronger emphasis being put on resilience rather than just need or vulnerability. However, varied conceptualisations of resilience pose new philosophical challenges. Yet achieving a consensus on the concept remains a test for disaster research and scholarship. This paper reviews the concept in terms of definitional issues, the role of vulnerability in resilience discourse and its meaning, and the differences between vulnerability and resilience. It concludes with some of the more immediately apparent implications of resilience thinking for the way we view and prepare for disasters.

Keywords: *disaster resilience, disaster risk reduction, vulnerability*

Feleke, T. and **Manyena, S.B.** (2009) Building disaster resilience through capacity building in Ethiopia, *Disaster Prevention and Management* **18** (3): 317-326

Abstract

Purpose – *This paper explores institutional capacity development as an approach for enhancing disaster resilience in Ethiopia.*

Design/Methodology/Approach - *The paper is based on the authors' experiences in implementing an institutional capacity building programme in Ethiopia.*

Findings - *Institutional capacity building programmes should adopt a non-interventionist approach, using existing structures. Programmes should be demand-driven and beneficiary-based rather than supply-driven; and should be holistic and integrated with multiple sectors coordination and networking being important ingredients. Capacity building is a slow process and unless all partners are willing to make a choice in favor of assessing and working the holistic and integrated capacity building will struggle to make a lasting influence in reducing disasters and their impacts in Ethiopians*

Practical implications -With capacity building being at the centre of the building community resilience, coordination by donors as well as government agencies is fundamental. The circumstances highlight the implicit demand for the government to design a framework that will increase a coordinated approach in building institutional capacity.

Original/value - It illuminates areas of good practice as well as complexities surrounding the delivery of the disaster resilience through capacity building and how governments and development and humanitarian agencies are implicated.

Keywords: Disaster, Resilience, Capacity Building, Ethiopia

Roles of authors

Tadele, Feleke

- gray literature review

Manyena, Siambabala Bernard

- literature review, writing up, submission of the manuscript and
- dealing with correspondence

Manyena, S.B. (2006) Rural Local Authorities and Disaster Resilience in Zimbabwe, *Disaster Prevention and Management* **15**(5): 810 - 820.

Abstract

Purpose – Building disaster-resilient communities is one of the strategies of reducing the impact of disasters in marginalised communities. In Zimbabwe, the role of Rural District Councils (RDCs) as facilitating agencies in the realisation of this agenda cannot be overemphasised. However, at present, RDCs are unlikely to be effective towards the realisation of the disaster risk reduction agenda because, in effect, this means finding ways of tackling well known development problems for which there are no easy or obvious solutions. Using case study material from Binga RDC in the Zambezi Valley, Zimbabwe, this paper seeks to argue that building institutional capacity for RDCs is fundamental if the disaster resilience agenda has to be realised.

Design/methodology/approach – The paper is based on the author's experiences in Binga District in Zimbabwe to show how disaster resilience is linked with capacity building, decentralisation and internal organisational structures of RDCs.

Findings – RDCs are facing a number of challenges, which include inadequate financial and human resources; unstable political system; problems related to decentralisation and the nature and role of RDCs in Zimbabwe. Capacity building, full decentralisation package and internal organisational structure of rural local authorities are some of the central fundamentals for building disaster-resilient communities

Practical implications – With capacity building being at the centre of the building community resilience, coordination by donors as well as government agencies is fundamental. The circumstances under which RDCs are operating in Zimbabwe, highlights the implicit demand for the government to further consider fiscal and administrative aspects of the decentralisation. Proffering a devolved structure-participation outcome scenario leaves RDCs in a miserable fiscal and administrative position to tackle issues related to long-term disaster risk reduction and sustainable development.

Originality/value – The paper introduces the concept of disaster resilience focusing on Rural Local Authorities. It illuminates the complexities surrounding the delivery of the resilience agenda and how governments, local government authorities, donor community and civil society are implicated.

Keywords: *Communities, Development, Disasters, Zimbabwe*

Other publications

Manyena, S.B., Fordham, M. and Collins, A.E. (2008) Disaster Resilience and Children: Managing Food Security in Binga District in Zimbabwe, *Children, Youth and Environments* **18** (1): 303-331.

Abstract

The growing recognition of the vulnerability of children to disasters has added a new impetus to the concept of their involvement in disaster risk reduction programmes. Involving children in disaster risk reduction is among those aspects promoted in the Hyogo Framework for Action 2005–2015 to enhance the resilience of disaster-affected communities. This article presents the results from a research study which investigated the involvement of children in disaster risk reduction programmes in Binga District, Zimbabwe, focusing on food security. The results suggest that children are an invaluable part of human agency in disaster contexts, especially in view of increasing numbers of children orphaned by HIV and AIDS. Yet their involvement is still contested. Unless family and cultural pressures imposed on children are recognized and managed in disaster risk programming, the potential of children’s involvement is likely to be missed in building disaster-resilient communities.

Keywords: *Binga, Zimbabwe, children, disaster resilience, disaster risk reduction*

Manyena, S.B., Mutale, S.B. and Collins, Andrew (2008) Sustainability of rural water supply and disaster resilience in Zimbabwe, *Water Policy* 10(6):563–575.

Abstract

Rural water supply, especially through the provision of village hand pumps, is implicated in the Hyogo Framework for Action 2005–2015 to enhance the resilience of disaster-affected communities. Lessons from past programmes could help the design and implementation of future rural water supply and sanitation interventions as both a means and an end for sustainable and resilient communities, especially in disaster-prone areas. A study was carried out in the disaster-prone Binga District of Zimbabwe to ascertain whether rural water supply has helped in enhancing community resilience. The findings support the argument that, in addition to ‘hard’ technical inputs and ‘soft’ local human resource inputs, rural water supply is only effective if introduced with the ‘right’ reasons identified and made to operate sustainably, rather than for cost-cutting reasons. The latter is likely to reduce rather than enhance and sustain disaster resilience built by communities over centuries.

Keywords: *Binga; Rural water supply; Sustainability and disaster resilience; Village water supply hand pumps*

Book reviews

Manyena, S.B. (2007) Book Review: Postconflict Development: Meeting new challenges, edited by Gerd Junne and Willemijn Verkoren. London: Lynne Reiner. *African Affairs Journal*, **106** (422): 169 – 170.

Conference and seminar papers

Manyena, S.B. (2008) Disaster resilience: The case of Zimbabwe. Paper presented at the Dealing with Disaster Conference, Cardiff, Wales 10-11 July 2008.

Manyena, S.B. (2008) Identity, agency and development: The case of the Zambezi Valley. Paper presented at Zambart House, Lusaka Zambia on 26-28 June, 2008.

Manyena, S.B. (2007) Concept of resilience. Paper presented at the International Resilience Workshop, Tailloires, France, 2-6 July 2007.

Manyena, S.B. (2007) Disaster resilience: Linking relief to development in Ethiopia. Paper presented at the Dealing with Disaster Conference, Newcastle upon Tyne, 5-6 September, 2007.

Manyena, S.B. (2006) Disaster resilience: Facilitating resilience through rural local authorities in Zimbabwe. Paper number 2006S01076 presented at XVI World Congress of Sociology, Durban, South Africa 23 – 29 July, 2006.