CHAPTER 2

CONCEPTUAL FRAMEWORK AND METHODOLOGY
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Introduction

The previous chapter examined the concepts of disasters and vulnerabilities. It traced the changes in the conception of disasters over time, with the evolution of different disciplines. The chapter also identified the progress of disaster research and the focus of the research in different time periods. As seen in the previous chapter, a variety of approaches from several disciplines contributed to the growth of understanding in the field of hazards and disasters. Though the vulnerability concept played an important role in reshaping the discourse on disaster, it was still seen as an ‘unclear scientific concept’ (Bogardi and Birkmann, 2004) and a ‘paradox’ (Birkmann, 2006). These descriptions were made in the context of trying to assess and measure vulnerability. As seen in the literature review, the capability approach originally formulated by Amartya Sen and Martha Nussbaum found a lot of takers among disaster researchers. Vulnerabilities and capabilities were seen as ‘two sides of the same coin’ (Esquith & Gifford, 2010). The capability approach added a new dimension to disaster research, but the operationalisation of the concepts drew a lot of criticism because the concepts were complex and difficult to measure (Basu 1987, Nussbaum 2000a, 2000b, Krishnakumar 2007, Comim 2008). Some other authors argued that it was not at all clear how capabilities could be measured directly because the approach included non-chosen (or hypothetical) alternatives as part of an individual’s well-being (Lelli, 2008). This study is framed in the context of this uncertainty over how vulnerability and capabilities can be studied in the context of disasters.

Location of the study

The study was conducted in the northern part of Karnataka – Badami taluk, Bagalkot district. This region was used to droughts and floods were a new phenomenon. The area witnessed its first major flood in 2007, followed by one in 2009. Before the floods, lifestyles and employment patterns including migration had been developed around the seasonal variations and climate conditions. With floods coming into the picture, people’s adaptations to seasonal variations were changing. The flood, as a new hazard in the region, had also thrown up new challenges in terms of
preparedness, response, relief and rehabilitation. In addition to the communities living in the area, it was also a new experience for the state administration and civil society groups who responded to the situation. There was a lot to be learnt in terms of how communities responded to the emergent situation and how their socio-economic profile impacted the response.

**Background of the study**

Karnataka state witnessed heavy rainfall during the first week of October 2009. It was the heaviest rainfall seen by the studied villages in over a century. Between September 28, 2009 and October 3, 2009, Bagalkot district received six times more than its normal rainfall of 35 mm for the period (Johnson, 2009). The release of waters from the Almatti and the Narayanpura dams after the heavy downpour, resulted in the rivers overflowing and destroying everything in their path. In some areas, flood waters were well over 15 feet above ground level (Biocon, 2009). Many villages along the banks of the Malaprabha river and rivulets such as Bennehalla and Sasivehall were flooded. About 18 million people were affected - lives were lost, thousands were rendered homeless, crops were affected and food-stocks, household goods and animals were washed away. People were living in relief camps and many were later shifted to temporary shelters. Bagalkot was one of the most affected districts, resulting in the loss of more than 30 lives. 58,725 houses were either fully or partially destroyed and hundreds of acres of standing crops were washed away and destroyed.

In Badami Taluk of Bagalkote District, nearly 49 villages were severely affected by floods. Houses were destroyed due to heavy rains and destruction to property was also considerable. In Badami Taluk alone, 4,963 houses were completely destroyed, and 15,580 houses were partially destroyed. Badami taluk has 160 villages with 31 Gram Panchayats. The researcher was involved in the relief work in Badami taluk.

**The Study Setting**

Karnataka, which lies to the south-west part of India, was created on November 1, 1956, as part of the States Reorganisation Act. The state, which was originally known as Mysore, was renamed as Karnataka in 1973. It comprises 30 districts. Kannada is the official and most widely spoken language (Karnataka, 2011).
**Geography:** To the west of Karnataka lies the Arabian Sea; Maharashtra is located to the north, Goa to the north-west, Andhra Pradesh to the east, Tamil Nadu to the south-east, and Kerala to the southwest. The state occupies 5.83% of the total geographical area of India and covers an area of 191,976 sq kms. It is the eighth largest Indian state by area (Karnataka, 2011).

Karnataka has two eastward flowing rivers, which flow into the Bay of Bengal – the Krishna river and its tributaries (Bhima, Ghataprabha, Vedavati, Malaprabha, and Tungabhadra) in the north, and the Cauvery river and its tributaries (Hemavati, Shimsha, Arkavathi, Lakshmana Thirtha and Kabini) in the south (Karnataka, 2011).

**Figure 2.1**
River basin and sub-basin map of Karnataka

![River basin and sub-basin map of Karnataka](https://example.com/map.png)

*Source: Drought Monitoring Cell, Irrigation Department, Govt. of Karnataka*
The state has three principal geographical zones – the plains (Bayaluseeme) consisting of the Deccan plateau being the largest, the coastal zone (Karavali), and the hilly region (Malenadu) consisting of the Western Ghats. Karnataka has the second-largest arid region in India after Rajasthan. The Mullayangiri hills in Chickmagalur district is the highest point in Karnataka with an altitude of 6,329 ft. About twenty percent (38,724 sq km) of the geographical area of the state is covered by forests (Karnataka, 2011).

Six soil types are found in the state — red, lateritic, black, alluvio-colluvial, forest and coastal. Meteorologically, Karnataka is divided into three zones — coastal, north interior and south interior. The state receives 1,139 mm of rain on an average. Agumbe in the Shimoga district receives the second highest annual rainfall in India after Chirapunji. The highest and lowest temperature in the state has been recorded in the districts of North Karnataka —45.6 °c recorded at Raichur and 2.8 °c recorded at Bidar (Karnataka, 2011).

**Demographics:** According to the 2011 census of India, Karnataka is the ninth largest state of India by population size, with over five per cent (5.05%) of India’s population residing in Karnataka. The total population of Karnataka is 6,11,30,704 of which 3,10,57,742 (50.8%) are males and 3,00,72,962 (49.2%) are females, i.e., a sex ratio of 968 (a slight increase from 964 in the 2001 census). The decadal growth percentage has slightly decreased from 17.3% in 1991-2001 to 15.67% in 2001-2011. The population density, which was 276 persons per sq km in 2001 has increased to 319 persons per sq km. The literacy rate has shown an increase from 66.6% to 75.6% (82.85% males and 68.13% females) [Census of India, 2011].

**Bagalkot district**

Bagalkot district is located in the northern part of Karnataka, which is part of the larger Deccan Plateau. It came into existence as a district in 1997 during the re-organisation of districts in Karnataka. It covers a total area of 6593 sq kms. The district has 625 revenue villages, 244 habitations, 270 wards and 12 towns. The Bagalkot district consists of six administrative blocks or taluks, namely Badami, Bagalkot, Bilagi, Hunugund, Jamakhandi and Mudhol, which fall under the
Jamakhandi division. It has 163 Gram Panchayats, 26 Zilla Panchayat constituencies and 7 assembly constituencies (Bagalkot, 2011).

**Figure 2.2**

Location map of Bagalkot district in Karnataka state

**Source:** Modified from Yahoo Maps, 2011

**Geography:** The district is bounded by Bijapur district on the north, Gadag district on the south, Raichur district on the east, Koppal district towards south-east and Belgaum district towards the west. The tributaries of the Krishna river, Malaprabha and Ghataprabha flow through the district. The Malaprabha river meets the Krishna river at an altitude of 488 meters in Kudalasangama. Bennihalla, Hirehalla and Tuparihalla are the major tributaries of Malaprabha.

The climate of Bagalkot district is hot and arid throughout the year, and rainfall is scanty. Bagalkot district receives the lowest annual rainfall in Karnataka. 52% of the
total annual rainfall occurs in the months of September and December. The regions are semi-arid with no dense vegetation. The Krishna, Ghataprabha and Malaprabha rivers flow through the area, but none are perennial rivers. The soil found in the area is usually black or red. Black soil preserves moisture and is often used for the cultivation of cotton. Ragi and jowar are mainly cultivated in Bagalkot district, along with groundnut, cotton, maize, bajra, wheat, sugarcane and tobacco. The district is also rich in minerals. Due to the dry climate, the region is often prone to drought and crop failure. Floods are a new addition to the hazards faced by the district.

Demographics: According to the 2011 census of India, Bagalkot district is the eleventh most populous district in Karnataka state with over three per cent (3.09%) residing in the district. The total population of Bagalkot district is 18,90,826, of which 9,52,902 (50.4%) are males and 9,37,924 (49.6%) are females, i.e., a sex ratio of 984 (968 in Karnataka). The decadal growth percentage is 14.46 per cent (15.67 per cent in Karnataka). The population density is 288 persons per sq km (319 persons per sq km in Karnataka). The literacy rate is a dismal 69.39 per cent (75.6 per cent in Karnataka) with 80.16 per cent males literate and only 58.55 females literate (Census of India, 2011).

Eighty six per cent of the population in the district consists of Hindus, while eleven per cent of the population consist of Muslims. Jains make up a little over one per cent of the population, while Christians constitute 0.17 per cent. Scheduled Castes and Tribes make up about 17 per cent of the total population.

Culture: The culture of Bagalkot district has been influenced by Kannada culture and to some extent by Marathi culture as well. This is partly because of the district’s proximity to Maharashtra and partly because of its previous history of being a taluk under Bombay Presidency. Kannada, the state language of Karnataka, is the most extensively spoken language in the district. The conventional cuisine of the district is characteristic of the North Karnataka cuisine. Jowar based food items such as Bhakri are commonly eaten. Other varieties of Indian bread made out of Jowar are also widespread and are colloquially known as jolada rotti. As is common to most of the North Karnataka districts, Jhunka, a garbanzo beans based dish is very much prevalent and is usually eaten with Bhakri. These two dishes together are known as
*Jhunka bhakar.* Though not cultivated widely in the district, rice, as in all of South India, is part of the staple diet. It is imported from other parts of the state and region. Curries prepared from lentil and pulses are commonly eaten. Ilkal town in Bagalkot district is well known for the Ilkal sarees manufactured there (Bagalkot Zilla Panchayat, 2011).

**Employment:** Agriculture is the most important means of survival in the district. Over 65% of the working people in Bagalkot district are engaged in agriculture. Significantly, 80% of female workers in the district are engaged in agriculture. Jowar crop constitutes the chief crop of this region. Pulses, principally gram, tuvar daal, kulith and moong daal are also cultivated in the region. The district also grows linseed, castor oil and sesamum. Reservoirs such as the Kendur reservoir provide water for irrigation. A considerable fraction of the population also consists of weavers. The principal manufactured products are cotton and silk cloths. Large amounts of cotton yarn are tinted with dyes and exported to other parts of the state and country (Focus Group, 2008).

**Study villages**
The study villages of Thaminala, Budihala and Khyada T.S. are located in the northern part of Karnataka, in the Badami taluk of Bagalkot district. The region is characterised by its under-development. The High Power Committee for Redressal of Regional Imbalances (HPCRRI) headed by the late Dr. D. M. Nanjundappa (2002) analysed a total of thirty five relevant indicators covering five sectors:

- Agriculture
- Industry, trade and finance
- Infrastructure (economic)
- Infrastructure (social)
- Population characteristics

It listed Badami taluk as one of the ‘more backward’ taluks in Karnataka state. In the last Human Development Report of Karnataka (2005), Bagalkot district, with a score of 0.591 against the state average of 0.650, was ranked at the 22nd position among 27 districts with regards to human development indices (HDI).
The villages involved in the study are mainly agricultural villages where most livelihoods revolve around land and livestock. Rain-fed agriculture is the dominant practice and the presence of irrigated land is minimal. Green fodder for the livestock is obtained from the river banks. Being part of the ‘bayaluseeme’ region (plains), the villages are largely open plains with few hillocks on one side and the river on the other. The major crops grown in the villages are jowar, bajra, maize, green gram and groundnuts.

The floods affected all the three villages by causing loss of houses, livestock, household items, food stock and partial or complete damage to shelter. Because the onset of the floods was gradual, people had time to flee and escape from the rising waters. Hence, loss of lives was not reported from the three villages. As documented in previous disasters such as the Indian Ocean tsunami, the impact of the hazard, that is, floods in this case, had differential impacts on households and people within the households based on the differences in their socio-demographic profile.

The study villages are located along the banks of the Malaprabha river. All three villages are interior villages, located away from the state or national highways. They are located on the Cholachagudda-Hole Alur route.
**Thaminala**: This village falls under the Katharaki *Gram Panchayat* (GP). The households belonging to Scheduled Caste (SC) communities were the most affected in terms of shelter loss in the floods of July 2007 because they lived closer to the river and were resettled in *pueca* (brick and mortar) houses with tin sheets after the July 2007 floods. In the subsequent floods, the remaining households in the village suffered partial damage. Due to the possibility of the recurrence of floods, the remaining households will be provided permanent houses in a new location away from the river and across the Cholachagudda-Hole Alur road. The entire village,
consisting of 115 households, was selected for the study. This included those persons who had suffered partial/complete shelter damage in the floods of October 2009 as well as those who had been provided *pucca* (brick and mortar) houses with tin sheets after the July 2007 floods.

**Budihala:** This village falls under the Katharaki *Gram Panchayat* (GP). The houses in the village were located beside the Cholachagudda-Hole Alur road, away from the river, unlike Khyada and Thaminala. They suffered minimal shelter damage, but had been affected by the floods in terms of other losses such as crop loss and loss of livelihoods. The entire village consisting of 88 households were selected for the study.

**Khyada:** This village falls under the Cholachagudda *Gram Panchayat* (GP). Out of the 305 households in the village, 36 households (11.8%) were shifted to temporary shelters away from the main village after the floods of July 2007 because they suffered severe shelter damage. The persons from these households are still living in the tin-sheet temporary shelters awaiting permanent houses. The main village was subsequently affected by floods in October 2009, where the remaining households were also affected and all the houses suffered partial/complete damage. The entire village will be shifted to a new location away from the river and across the Cholachagudda-Hole Alur road. All 36 households living in temporary shelters since being affected by floods in 2007 were selected for the study.

**Rationale for the study**

Disaster research in general has tended to view hazards and disasters as challenges to the structure and organization of society. It has focused on the behaviour of individuals in the various stages of disaster impact and aftermath. The emergence, adjustments, and interactions of people and organisations to the stress of warning, impact and immediate aftermath have been central themes developed by this research (Oliver-Smith, 1996: 305). Research findings in disasters, particularly in the Western context has largely found that 'instead of reacting in an anti-social manner, individuals and groups typically become more cohesive and unified during situations of collective stress' (Drabek and McEntire, 2003).
Scholars have tended to ignore the findings of exploitative behaviour and have relegated it to the "myths" of disaster research, with generalizations such as "if disasters unleash anything, it is not the criminal in us, but the altruistic", and have tended to focus on the 'pro-social' behaviour as being the dominant characteristic (Quarantelli, 1986: 5). Research has also tended to focus more on the new disaster related tasks and responsibilities that citizens and organizations take up, and the structural changes that they bring to deal with the situation (Drabek and McEntire, 2003: 99). They are seen as linking different parts of the community together, with such linking being beneficial to the tasks at hand (Dynes, 2005).

This formulation is problematic in a society which is structured differently. Research has shown that disasters tend to have differential impacts on communities of different races, ethnicities, and income levels (Bolin & Bolton, 1986), and within these groups themselves. Similarly, the diversity in terms of social position linked to one's class, caste, faith, political affiliation, and so on will also affect the disaster response and recovery. Studies have explored how pre-disaster systems of social relationships associated with specific institutions affect the nature of post-disaster response, interaction, and the distribution of aid and other resources (Chairetakis, 1991). For instance, pre-existing morally and religiously sanctioned patterns of inequality were held responsible for further discrimination and deprivation in circumstances of famine in India (Torry, 1986). However, there is lack of empirical evidence of how these factors impact the response and recovery in the context of new and emerging disasters such as the study area where floods are a new phenomenon.

In terms of disaster research, the vulnerability and capability approach helps to focus on the variety of dimensions of vulnerability and the individual's capabilities and functioning, especially in the post-disaster emergency response and recovery phase. However, this does not adequately address the exclusionary processes and relationships within the social structures, which impinges on an individual’s capabilities and functioning.

Thirdly, as Jeremy Swift’s critique (1989) pointed out, the differential vulnerability between households or between individuals in the same household is not recognised in the existing approaches. This was an important distinction because experiences
have shown that disaster response activities revolve around the household. The understanding of vulnerability or capability needs to encompass the focus on the household, rather than on the individual alone.

Fourthly, the emergence of new and informal groups during disasters has been observed for a long time, as seen in anecdotal accounts of disasters (Form and Nosow 1958; Fritz 1961; Barton 1963; Bates, Fogleman, Parenton, Pittsman and Tracy, 1963; and Zurcher 1968 in Quarantelli 1995). These include the appearance of ad hoc and temporary groupings during plagues, for instance, descriptions of Black Death in Europe, (Gotfried 1983). They have not been the particular focus of any disaster study (Quarantelli 1995). These groups often tend to play a large role in the disaster response and recovery period. This calls into view the social capital of the households to be part of these new and informal groups. The emergence of these groups is a largely unexplored area in disaster research, and needs to be studied to understand local practices that aid disaster recovery.

**Conceptual framework**

All conventional disaster related frameworks use the 2P2R structure (prevention, preparedness, response and recovery) as their basic building block.

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**Figure 2.5**

**2P2R structure**

Ref: Adapted from Disaster Management Frame (Schneid and Collins 2001)
The 2Ps – prevention and preparedness refer to steps taken before disaster strikes. Prevention is taking proactive steps to prevent a hazard from turning into a disaster, such as building levees and floodwalls to protect against floods, or strengthening building bye-laws to ensure earthquake resistant buildings. Preparedness is gearing up to face the disaster, such as stockpiling of food, ensuring access to cyclone shelters, having life-boats ready and so on. Of the 2Rs, response refers to actions immediately after the hazard strikes, while recovery refers to the longer-term steps taken to help the affected community recover from the impact of the hazard.

While the above framework is useful for throwing light on the different aspects of a disaster such as stages, events, actions and time frame, this linear model does not illuminate the changing capabilities and vulnerabilities of disaster affected individuals and households. It presumes a longitudinal progression of vulnerabilities. The absence of a development link in the framework also limits its usefulness in a research context where the focus is on the lives of the affected communities.

Figure 2.6

Conceptual framework of the study

Adapted from Modified Sustainable Livelihoods Framework (Majale 2002)
The sustainable livelihoods framework (Majale, 2002) provides a useful analytical tool to study vulnerabilities and capabilities in the context of a disaster. The framework includes pathways that illuminate the effect of exclusionary structures and processes on the vulnerability context of the researched. It recognizes the dynamic nature of the forces that affect livelihoods. It factors in multiplicity of actors, influences and outcomes.

The sustainable livelihoods concept encompasses a much wider canvas, which includes the relationship between poverty and environment. In the context of disaster research, the dynamic focus of the sustainable livelihoods framework on household assets and vulnerability with the transforming structures and processes is particularly useful. The part of the framework dealing with ‘livelihoods’ draws attention to the capabilities, assets and functioning, while the part of the framework dealing with ‘sustainability’ focuses on the coping and recovering from stresses and shocks such as disasters. The concept of sustainable livelihood goes beyond conventional definitions or approaches in disaster research, which focus only on the technical vulnerability of the environment or only on certain aspects or manifestations of vulnerability, such as low income. It recognises the complex portfolio of assets out of which people construct their living, including both tangible assets and resources, and intangible assets such as claims and access.

Drawing primarily on the definition of Chambers and Conway (1992), and others such as Swift (1989) and WCED (1987), livelihoods and sustainability in livelihoods can be defined as follows:

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. (Scoones, 1998).

Several organizations and institutions such as Oxfam in UK, CARE in the USA, United Nations Development Programme (UNDP) and UK’s Department for International Development (DFID) have used this understanding to develop their own
analytical frameworks for understanding poverty and vulnerability. The DFID further modified the sustainable livelihoods framework (Majale, 2002) and includes power relations as one aspect of the ‘transforming processes’. This is crucial in the study of disasters, where a heterogeneous mix of communities and households face stresses and shocks and often has to compete for scarce resources on the path to recovery.

The vulnerability context as envisaged by this model encompasses the external environment of the community. These include shocks such as repeated patterns of drought and floods and seasonal variations which have deep implications on people’s livelihoods. This vulnerability context affects the household and community level assets, which include human, social, physical, financial and natural assets. These assets also influence each other, and help in enhancing other classes of assets. For instance, having access to financial assets could help in securing one’s natural assets such as land, or vice-versa. This could also help in enhancing one’s social assets through increased acceptance and links within the community. Human assets such as one’s skills and ability to work could also help in enhancing one’s financial assets and social assets. Having a home and having access to shelter, water, sanitation, schools, hospitals, roads, electricity and other physical assets could also facilitate the enhancement of one’s human assets.

The household and community level assets in the context of vulnerability to floods also aids in people’s household disaster recovery. The household disaster recovery further modified the household and community level assets. These household and community level assets operate in a context of policies and institutions, which transform the assets into contextual outcomes such as household disaster recovery. These outcomes are mediated through strategies, which are transformed by the structures and processes, and which operate at different levels – from the micro level (household) to macro levels (international structures and processes). They include both public (Government) and private (all non-governmental including corporate, business and civil society) actors. The transforming structures and processes operate by determining the access to various types of capital, to livelihood strategies and decision making bodies. They also determine the terms of exchange between different types of capital and influence the returns on different kinds of strategies. The transforming structures and processes can influence the vulnerability context and
either reduce its impact on the community or exacerbate its effects. The conceptual frame adapted from the modified sustainable livelihoods frame gave rise to the following key question: How does disaster recovery of households occur in the context of household and community level assets and vulnerability to floods in rural Karnataka?

The specific research questions are:

i) What is the context of vulnerability in which the floods occurred?

ii) What is the nature of the household and community level assets in the flood affected villages?

iii) What are the transforming structures and processes that act upon the household and community level assets in the context of floods?

iv) How do the transforming structures and processes affect the household flood recovery?

v) How does the household flood recovery further influence the household and community level assets of the flood affected community?

Questions, such as those pertaining to the influence on the household flood recovery on the household and community level assets require longitudinal studies, which can trace the impact of the floods and its response over a long period of time, and were not within the scope of this study. The objectives of the study are given in the following section.

**Objectives**

This study was conducted a year after the floods affected parts of Karnataka in October 2009. The broad objective of the study was to examine the disaster recovery of households in the context of vulnerability to floods in rural Karnataka.

The specific objectives of the study were as follows:

- Examine the characteristics of household vulnerability to floods in the study villages.
- Understand the nature of household and community level assets.
- Analyse the structures and processes that influence disaster recovery.
Methodological approaches

Study of household disaster recovery in the context of hazards such as floods entails obtaining multiple kinds of information, both from the *etic* and *emic* perspectives. These include information regarding people’s assumptions of the risks, their evaluation of risks in the context of their household assets and vulnerability (*etic*), their lived experiences and their personal interpretation of facing it (*emic*). To address this requirement of exploring these dual perspectives, the pragmatism paradigm was found suitable. The philosophical underpinning of pragmatism allowed and guided mixed methods researchers to use a variety of approaches to answer research questions that could not be addressed using a singular method (Doyle et al. 2009). Constructivism, an epistemological paradigm which proposes that realities are perceived through multiple mental constructions is a key paradigm used in the study (Schwandt 1998 in Williams and Collins 2002). The assumption that constructions can change and are tested and modified in relationships is an important foundation of this study. The constructivist position by definition does not immediately associate the study with an antirealist stance that would deny the reality of the hazard (Williams and Collins, 2002). In fact the study utilises positivist formulations to examine the characteristics of household profile, vulnerability and flood loss. The study recognises that although concepts and ideas might be constructed, they conform to relevant aspects of phenomena that exist outside social processes (Schwandt, 1997). A sense of identity arises from relations, negotiations, and interactions with other human beings and life events (Williams and Collins, 2002).

Research design

Prior studies in the disaster research arena and the prior experience of the researcher in different disaster response initiatives, such as the super-cyclone response in Orissa, earthquake and drought response in Rajasthan, tsunami response in Tamil Nadu and Kerala, provided the base for constructing the study. The researcher was also involved in the flood relief work in the aftermath of the floods of October 2009 in the study area. The study, which was conducted a year after the floods, focused primarily on the experiences of households with relations to the floods. A mixed methods research design was adopted for the study because the focus was on generalising the theoretical insights gained from the findings to the study area while highlighting the various
experiences and perspectives of the respondents. Mixed methods has been defined as ‘research in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study’ (Tashakkori and Creswell, 2007:4). The utility of this design has been known and endorsed for a very long time. Merton and Kendall (1946) opined,  

‘Social scientists have come to abandon the spurious choice between qualitative and quantitative data: they are concerned rather with that combination of both which makes use of the most valuable features of each. The problem becomes one of determining at which points they should adopt the one and at which the other approach.’ (p. 556-557)

The study used concurrent mixed methods that involved data collection using both quantitative and qualitative approaches simultaneously. The mixed methods approach was particularly useful for this because it helped to explore the findings in-depth while understanding the general prevalence of the findings in the study population (Cresswell, 2003). Researchers such as Collins, Onwuegbuzie, and Sutton (2006) have identified four rationales for conducting mixed research: participant enrichment (to optimize the sample using techniques from both paradigms), instrument fidelity (assessing the appropriateness and utilising a mix of existing instruments or creating new instruments), treatment integrity (assessing fidelity of intervention), and significance enhancement (facilitating thickness and richness of data, augmenting interpretation and usefulness of findings).

Phases of the study – selection of the study villages and sampling
It was planned that the study would be conducted in three phases to ensure that data from one phase could lead to selection of respondents for a more intensive analysis in the next phase. Basic background and secondary information regarding the floods was collected during the first phase, while the second phase was an extensive phase of primary data collection through household surveys. Based on the preliminary analysis of the data from the two phases, qualitative information was collected from groups, including emergent groups and key informants using in-depth interviews in the third phase. The details of the three phases and the changes that occurred in each phase are described in the following sections.
First phase
In the first phase, secondary information with regards to the type of damage and compensation received by flood affected households in the study villages was collected from secondary sources such as newspapers and Government offices. In-depth interviews were also conducted with five key informants – three were officials from the Karnataka State Natural Disaster Monitoring Centre (KSNDMC), and two were officials of the Revenue department, Government of Karnataka. These interviews were conducted by using an interview guide (Annexure 1). Three vernacular (Kannada) newspapers (Kannada Prabha, Praja Vani and Hosa Digantha), and three English newspapers (Deccan Herald, the Hindu and The Times of India) from October 2009 to July 2010 were scanned for news of floods relief and rehabilitation in Karnataka. This phase also included in-depth interviews with three staff members of two NGOs who were involved in the flood relief work using an interview guide (Annexure 2). The first phase, which began in July 2010, lasted three months, upto September 2010.

Table 2.1
Details of data sources in the first phase

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<tr>
<th>Phase of the study</th>
<th>Data sources</th>
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<tbody>
<tr>
<td>First phase</td>
<td>• Secondary information from newspapers and Government departments.</td>
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<tr>
<td></td>
<td>• In-depth interviews with key informants from the Karnataka State Natural Disaster Monitoring Centre (KSNDMC) and Revenue department, Government of Karnataka.</td>
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<tr>
<td></td>
<td>• In-depth interviews with staff members of two NGOs that were involved in the flood relief work.</td>
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Selection of study area
An important finding in the phase was that reliable information regarding the floods was not readily available. It was found that that the data available on the number of affected households, damage caused by floods and even the compensation received was highly contested and unreliable. Even the lists of affected villages, number of
affected households and the data on flood loss made by different state bodies had totally different data. For instance the list of affected villages provided at the flood relief co-ordinating office in Bangalore did not match with the list that was being used at the district level. The flood loss data at the Gram Panchayat level was different from the flood loss data received from the Taluk Panchayat. This difference in figures also found resonance in the parliamentary debates when the then Home Minister of India, Shri. Shivraj Patil pointed out that the Karnataka Government gave different figures for flood loss at different points of time, ranging from Rs. 1301 crores to Rs. 3273 crores [Lok Sabha debates, Fifteenth Series, Vol. V, Third Session, 2009/1931, Monday, November 30, 2009/ Agranayana 9, 1931 (Saka)].

Another finding from the interviews with Government officials and NGOs in phase one, which guided the selection of study area for the second phase, was the clear distinction between the districts in terms of Government response. Based on the interviews and newspaper reports, it was clear that districts such as Raichur and Bijapur, where the death toll was higher (thirty and seventeen respectively), were receiving maximum intervention by the Government and NGOs, in contrast to districts such as Bagalkot where the death toll was lower (five in Bagalkot). However, this reliance on the death toll obfuscated the extent of damage in different districts. For instance, fifty four villages were severely affected and were marked for shifting in Raichur while in Bagalkot the number was higher at sixty (Government notification: ‘Prashakotolagaaguvu Gramagalannu Stalhaanthisuvu Prasthaavane’, June 2010). Yet the intervention in flood relief was much lesser in districts such as Bagalkot (JAAK, 2009).

It was decided that the study would focus on Bagalkot district considering that the district had received less intervention in terms of flood relief as compared to other districts affected by floods. For instance, there were only two NGOs involved in relief work in one of the most affected panchayats, Katharaki of Bagalkot districts in comparison to sixteen or more NGOs in high profile districts of Raichur, which the Prime Minister, Shri. Manmohan Singh had visited. The relatively reduced intervention by the state and external agencies in the area afforded an opportunity to study the role of households and community in the flood recovery relatively more clearly than in areas where there was higher external intervention.
Selection of study villages

The researcher had also been part of relief work in Karnataka in the aftermath of the floods in October 2009, where he had an opportunity to observe the different characteristics of the flood-affected villages. One major aspect that shaped the experience of the flood response in October 2009 was the response of the state government authorities in determining the kind of compensation with regard to shelters. Firstly, due to the large scale shelter damage seen in the floods, the criteria for government response largely depended on the magnitude of shelter damage seen in each village. Secondly, based on the threat perception of flooding in different villages, a decision was made to either relocate the villages completely or partially to safer places. This was based on the history of flooding in the recent past (July 2007). These aspects laid the grounds for the different settings observed in the study as they allowed for a differential understanding of the impact of disasters.

The types of village settings were as follows:

i) Villages that had been severely affected in the floods of October 2009 and had suffered partial/complete shelter damage. These villages were to be shifted entirely to a new location and are referred to as ‘relocating villages’ by the administration.

ii) Villages that had been affected by the floods in terms of crop loss or livelihood, but had not suffered shelter damage. There was no intervention by the Government because they were considered as not affected by the floods.

iii) Villages that had been affected by floods in July 2007 and at least a section of the people were living in temporary shelters. These villages are referred to as ‘temporary shelter villages’ in local administrative parlance to indicate that people were still living in temporary shelters in these villages.

These divisions were also borne out in various follow-up reports of the Government, which reported on progress in temporary shelters villages and shifting villages, while it was completely silent on the other affected villages.

Because the first two types of villages were called ‘temporary shelters’ and ‘relocating villages’ locally, the same terms have been retained in the study, while the
third type of villages which did not receive any support indicated a blind spot in the response of the State and have been termed as ‘low-priority villages with respect to flood relief and response for the purpose of the study.

It was decided to choose one village representing each of the above settings to capture how the disaster recovery of households in each setting occurred in the context of differential vulnerability of the three settings. The villages that were chosen for the study were Thaminala (shifting village), Budihala (non-intervention village) and Khyada TS (temporary shelters).

**Second Phase**

The second phase of the study involved a collection of secondary information regarding the demographic details of the households of the three selected villages, list of flood-affected households and details of flood loss from the state government offices in Bangalore and panchayat offices at Bagalkot district, Badami taluk and Katharaki and Cholachaguuda *Gram Panchayats*. As mentioned earlier, firstly, the flood loss data at the *Gram Panchayat* level was different from the flood loss data received from the *Taluk Panchayat*. Secondly, the data of households received from the panchayat did not correspond to the list of households in the villages. It was found that the list being used by the panchayat had been updated during the 2001 census of India, and had not been updated even once in the past decade. Hence, it was decided to include all the households for the purpose of the study.

A pilot survey was conducted in all the three villages in households. The initial contacts were provided by an NGO with whom the researcher was associated as part of the flood relief work in the area. The purpose of the pilot study was to familiarise with issues arising from the study area in response to floods. A survey format was used for the pilot study, which was later modified as the household survey format, (Annexure 3). The household survey covering all the households was conducted in two study villages of Thamainala and Budihala, and partially in Khyada. The researcher was involved in data collection from the temporary shelters of Khyada when severe conflict broke out between different community groups in Khyada, and between some of those groups and the government over norms being followed for the resettlement. This conflict, which prolonged for several months, created a highly
volatile situation in the villages and further delayed the start of the resettlement process. The resettlement process of marking out land for plots and preparation of infrastructure such as laying roads and pipelines for water began after shoot-at-sight orders were issued by the district administration to prevent community members from stopping the work. Three bus-loads of armed police men guarded the construction site. The conflict within the community and restrictions over entry of outsiders in the villages during the period resulted in the decision to collect data from the 36 households (11.8%) living in the temporary shelters (as they were outside the main village). The second phase lasted for six months, from October 2010 – March 2011.

Table 2.2
Details of data sources in the second phase

<table>
<thead>
<tr>
<th>Phase of the study</th>
<th>Data sources</th>
</tr>
</thead>
</table>
| Second phase       | • Secondary information regarding the flood-affected households and details of flood loss from the state government offices in Bangalore and panchayat offices.  
• Pilot study and household surveys in the two study villages of Thamainala and Budihala, and temporary shelters of Khyada.  
• In-depth interviews with selected households. |

Third phase
In the third phase, after a preliminary analysis of the survey data obtained from the household surveys, qualitative information was collected from members of two emergent groups through in-depth interviews (Annexure 4). Key informant interviews were conducted with chief officials of the Bagalkot district and Badami Taluk Panchayats, panchayat president of Katharaki panchayat, panchayat members of all the three study villages, an ex-panchayat member of Budihala (who was part of an emergent group). Five group interviews were conducted with Self Help Group (SHG) members, youth groups with families of migrants, those living in temporary shelters and those who were homeless. The homeless included nuclear family units who were staying away from their parents’ homes in the fields due to lack of space in their homes. This was used to clarify, illuminate and probe further into findings of the
household survey. The third phase lasted for four months from April 2011 – July 2011.

**Table 2.3**

**Details of data sources in the third phase**

<table>
<thead>
<tr>
<th>Phase of the study</th>
<th>Data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third phase</td>
<td>• In-depth interviews with members of two emergent groups.</td>
</tr>
<tr>
<td></td>
<td>• Key informant interviews with panchayat members of all three study villages, in the study villages using in-depth interviews.</td>
</tr>
<tr>
<td></td>
<td>• Group interviews with families of SHG members, youth groups, migrants, those living in temporary shelters and those who were homeless.</td>
</tr>
</tbody>
</table>

**Sampling**

After the selection of study villages in the first phase, the household survey covered all the houses in the three villages due to a lack of accurate secondary data (excluding Khyada, where only the households living in the temporary shelters were covered). The surveys as they unfolded, revealed the experiences of people during the floods and their life-changing situations in the context of the floods.

**Table 2.4**

**Sampling**

<table>
<thead>
<tr>
<th>Name of the village</th>
<th>Gram Panchayat (G.P.)</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thaminala</td>
<td>Katharaki</td>
<td>Entire village consisting of 115 households</td>
</tr>
<tr>
<td>Budihala</td>
<td>Katharaki</td>
<td>Entire village consisting of 88 households</td>
</tr>
<tr>
<td>Khyada</td>
<td>Cholachagudda</td>
<td>All 36 households (11.8%) living in temporary shelters since being affected by floods in 2007, out of the 305 households in the village</td>
</tr>
</tbody>
</table>

The time taken for the surveys varied from a minimum of thirty minutes to more than four hours, in some cases. The decision to explore certain responses in depth with certain households, during the survey was based on the responses of the households to the preliminary survey format. This process was guided by the principles of theoretical sampling, where data collection was directed by evolving theory rather
Conceptual framework and methodology

than by predetermined population dimensions (Strauss, 1987 in Draucker, C. B., Martsoff, D. S., Ross, R. and Rusk, T. B., 2007). It involved identification of the context of the households within their particular village and community setting. The process of theoretical sampling was guided by the principle of divergence and the principle of saturation in finding the respondents and deciding on when to stop data collection in each research setting. For instance, the concept of social exclusion was explored in-depth in Budihala during the survey with households having different characteristics such as caste, landholding, type of shelter and their preliminary responses to the survey questions of their perceptions about discrimination in flood relief. After fourteen respondents, the shared perceptions within that group were clear. During the survey with the remaining households, the perceptions were cross-checked and examined to see if any new points emerged, the absence of which ensured saturation. The divergences with households having different characteristics such as caste and wealth profile were also noted, which helped in understanding the concept better.

Methods of Data Collection

In-depth interviews with key stakeholders including government officials, disaster management cadres, panchayat officials and elected representatives, leaders of women’s self help groups and youth groups and members of emergent groups formed one of the key primary data collection methods used in the study. All the interviews were conducted with the help of an interview guide. The preparation of the interview guides was based on information gathered in the preceding phases and insights gathered from the experience of the researcher who had been involved in flood relief work in the state. The personal experience was also beneficial in creating an atmosphere of greater openness during the conversations because the respondents viewed the researcher as someone who had a firsthand experience of the situation. An officer of the district panchayat, when asked to clarify some of his thoughts, told the researcher, ‘…I know you are aware of these things, I am only explaining so much because you asked me to elaborate.’

Kvale (1996) views interviews as a shift away from seeing human subjects as simply manipulable and data as somehow external to individuals. He remarks, that an interview is an inter-view, an interchange of views between two or more people on a
topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situatedness of research data (p. 14).

The usefulness of an interview also lay in the fact that the order of the interview could be controlled while still giving space for spontaneity and the researcher could probe for responses about complex and deep issues. (*ibid*)

The interviews were also beneficial in illuminating the data collected through the household survey and generating the knowledge through conversations, for which the interview method was used (Kvale 1996:11).

On the other hand, the interviews were very time-consuming in terms of fixing appointments and going through the interview schedule to get responses. Getting the respondents alone for the interview to avoid ‘safe’ answers in the presence of others and at a time when interruptions were minimal was difficult. At times it was inconvenient for the respondents because they had other competing assignments. All the respondents were assured that no identifiable information such as names or designations would be used unless they specified that it was okay to do so for any information. The researcher was also aware that due to his personal involvement in the relief work, interviewer bias may affect the interviews. To minimise any bias, the researcher followed the interview schedule and always cross-checked whether he had understood the interviewee properly by paraphrasing their answers. This was done especially for questions where opinions were involved, or when the researcher had a contradictory or different data from earlier interviews or experiences.

*Household Survey:* Because the focus of the study in the second phase was on gaining an overall picture of the experience and perspectives of households affected by floods, a survey method was used to collect data. As Weisberg et al (1996) articulate in their introduction to survey research, surveys are useful for gathering data on attitudes and preferences, beliefs and predictions, behaviour and experiences – both past and present. The information gained from this phase helped in creating a descriptive picture of the situation post-floods and the response and actions of different players. It helped to illuminate the conditions or relationships that existed, practices that prevailed, beliefs, points of views, attitudes that were held, processes
that were going on, effects that were being felt, and trends that were developing (Bogdan, and Biklen, 1992).

The effects of the previous flood and its relation to the more recent floods in terms of preparedness were also captured through the survey. This is a useful attribute of the study using surveys because it helps to bring out what existed in relation to some preceding event that had influenced or affected an existing condition or event. (ibid)

As stated in the section on sampling, data on conceptual issues arising from the survey was discussed in-depth with the households. The decision to discuss the topic with particular households was guided by the theoretical sampling frame. This meant that there was a wide variation in the time taken to complete the surveys. Certain surveys would be completed within half an hour, while some would extend beyond half a day and would include a meal at the households where it was being conducted. Effectively, the interview would include over four hours of discussion, but the time taken would be over six hours, including the meals and talk with visitors to the house.

Group interviews: An issue faced in data collection in households was that most often the survey and subsequent interviews would turn out to be a group interview. This issue is faced in many parts of rural India where an open door policy is followed by households, especially in the presence of outsiders (the researcher). The neighbours and other community members who have access to the household would drop by and sit in while questions were being asked. This was more so in the study villages because the space available inside the house was small, most interviews were done outside the homes. Watts and Ebbutt (1987) has listed the advantages and disadvantages of group interviewing as a means of collecting data. The advantages the authors identify include yielding a wide range of responses. They explain, ‘such interviews are useful... where a group of people have been working together for sometime or common purpose, or where it is seen as important that everyone concerned is aware of what others in the group are saying. The group interview can generate a wider range of responses than in individual interviews.’

Bogdan and Biklen (1992:100) add that group interviews might be useful for gaining an insight into what might be pursued in subsequent individual interviews. This was
actually what happened, because in several instances the researcher went back to the particular households from which he wanted more information, often during late evenings, and conducted personal interviews with the concerned person.

In addition to the household interviews, which extended into groups interviews, five specific group interviews were conducted – with members of self-help groups in all three study villages, members of youth groups in Thaminala, families of migrants in Budihala, those living in temporary shelters in Khyada and those who were homeless in Thaminala. Arksey and Knight (1999: 76) suggest that having more than one interviewee present can provide two versions of events – a cross-check – and one can complement the other with additional points, leading to a more complete and reliable record. It is also possible to detect how the participants support, influence, complement, agree and disagree with each other, and the relationships between them. On the other hand, one respondent may dominate the interview, antagonisms may be stirred up, individuals may be reticent in front of others, or a 'public line' might be offered instead of a more honest, personal response, and the participants may collude in withholding information. In such instances, where the researcher felt that a open conversation was not happening in the group (this was found in instances where discrimination and social exclusion was being discussed), unstructured personal interviews were conducted separately, away from the homes of the respondents. The in-depth unstructured interview with the respondents was useful in discovering the perception of the researched in the context of social exclusion, and the emergence of responses in the face of it. This method helped in probing and going deeper into the perceptions and meanings associated with their actions.

Because the researcher had visited and stayed in the villages since the flood relief work began, he was also able to observe the changes that occurred in the village and lives of people over the past two years. The researcher made extensive field notes during the stay in the study area. The researcher used a non-hierarchical approach with the researched, and adopted an interpretative position in relation to the researched. He adopted the stance of an explorer and maintained equidistance from all the stakeholders during the study.
Data analysis
The first round of data analysis was conducted after the second phase of household surveys. The data was entered into SPSS Statistics 17.0 software package. Frequency tables, bi- and tri-variate tables were obtained. After the third phase, the interviews were read and re-read, codes and sub-codes were made. The themes that emerged were compared with the quantitative data that had been obtained, and observations were recorded. This was also done to strengthen the internal validity of the study. Internal validity seeks to demonstrate that the explanation of a particular event, issue or set of data that a piece of research provides can actually be sustained by the data. Care was also taken to accurately describe the phenomena being studied to maintain the internal validity.

A related issue is the external validity of the study. The present study analyses the data from the flood response in three different contexts – villages with temporary sheds, shifting villages and non-intervention villages. These villages are located in a particular socio-cultural, political, economic and environmental context of Badami taluk in Bagalkot district of the northern part of Karnataka. External validity is the degree to which the results can be generalised to the wider population, cases or situations. Lincoln and Guba (1985:316) caution the researcher against this kind of generalisation and transferability. They suggest that the researchers should provide sufficiently rich data for the readers and users of research to determine whether transferability is possible. (Lincoln and Guba 1985: 189, 300) have listed the threats to this sort of identifying external validity. They include selection effects, where constructs selected in fact are only relevant to a certain group, settings effects, where the results are largely a function of their context, historical effects, where the situations have been arrived at by unique circumstances and therefore, are not comparable, and construct effects, where the constructs being used are peculiar to a certain group. They have suggested that credibility in naturalistic inquiry can be addressed by prolonged engagement in the field, persistent observation, and triangulation of methods, sources, investigators and theories (p. 219, 301).

The researcher has been engaged in the area since the floods of October 2009, and has stayed in the study villages for considerable periods of time since then for the data collection and for support in training of colleagues from NGOs. He has been able to
witness some of the events first-hand, observe the changes in the village, and also hear perspectives on it from different stakeholders during the interviews and household surveys. As a method of validating the data using triangulation, multiple methods such as field observation, field notes, household survey, in-depth interviews and group interviews were used. Multiple sources of data such as key informants, group leaders, group members, and households were accessed as part of the study. Multiple levels of data, starting with information received from the households in each village to the panchayat and state level, and newspaper information were also used to validate the data received. Discussion on the emerging concepts and findings with key informants, colleagues from NGOs and with the academic community (research guide and members of the doctoral advisory committee) during different phases of the research also helped in sharpening the exploration).

**Ethical considerations**

Ethics has been defined as 'a matter of principled sensitivity to the rights of others, and that 'while truth is good, respect for human dignity is better' (Cavan 1977:810). Any social research, especially those involving sharing of personal information and experiences raises certain ethical concerns. The researcher took every care to ensure that due attention was paid to these concerns, and to address them.

**Do no harm:** As is enshrined in the Hippocratic oath, the principle of *primum non nocere* (first of all do no harm) was held as the guiding principle. In cases where the researcher had any doubt that the possible response of a respondent in front of others could harm the respondent, he refrained from asking such a question, and would later approach the respondent for clarification of the same.

**Autonomy:** It was made clear that people were under no obligation to answer and that they have every right to decide whether or not they will be involved in the research, and that they could also decide to stop at any time during the session.

**Informed Consent:** The purpose of the research and the kind of questions that would be asked was explained before inclusion of research participants and informed consent was obtained.
Confidentiality: Concepts such as discrimination and exclusion are sensitive, and the act of speaking about it could invite sanctions on the research participants. It was extremely important that confidentiality was maintained. The research materials are kept confidential and the material will be used only for academic purposes. Even in academic records, the names and the identity of the persons are not revealed.

Power dynamics: The researcher’s initial foray into the community was as part of an NGO, during the flood relief. This may lead to the participants sometimes associating the researcher with the ‘outsider’ and ‘provider’ tag, which may influence the responses of the research participants. Care was taken to ensure that no false promises were made and that the ‘research’ dimension was placed before the participants.

Limitations of the study
Household disaster recovery and vulnerability by its very nature is contextual and linked to the particular field situation. Hence, the applicability of the studies to other disaster responses and recovery contexts needs to be examined. In terms of coverage, the scope was large because it covered the entire study villages, but in terms of issues covered, several more could be considered, especially with regard to the preparedness aspects of disasters.

The researcher had visited the study villages as part of an NGO flood relief team in October 2009. The identification of the researcher as a relief worker could affect the approach of the respondents to the research and influence their responses. The limitation was minimised by the fact that the study was conducted a year after the floods occurred and that the researcher had visited the area as part of a team. As mentioned in the ethical considerations, being aware of this limitation, the researcher took care to explain to the respondents in all his interactions with them that he was interviewing them purely for the purposes of a research study. He introduced himself as a ‘student’ and stated that this research was part of a doctoral degree that he was pursuing from a University (Tata Institute of Social Sciences) in Mumbai. He also made it clear that the information collected through the research would be used only for academic purposes and that no intervention could be expected out of it.
The unit of analysis in the study is the household. Diane Wolf argues in *Daughters, Decisions and Domination: An Empirical and Conceptual Critique of Household Strategies* (2008) ‘… the concept of household strategies misrepresents intra-household behaviour, obscures intra-household stratification by gender and generation, and stifles the voices of the unempowered – usually females and the young (p.119). She states that without empirical information from those involved, researchers have a free hand in interpreting behaviour ‘in ways that reflect romantic and ideological views of the family or of family solidarity’ (p.120). Considering these limitations, the study collected empirical information from the study villages through household surveys and in-depth interviews. As described earlier in the chapter, these interviews were most often group interviews with multiple members of the household which helped in eliciting multiple viewpoints from members of the same household. Efforts were also made to explore the divergences and to cross-check the meanings of behaviours and actions with the respondents of the study.

**Significance of the study**

Quarantelli (1991) has suggested that there are three different uses made of the findings of disaster research:

- The instrumental or action uses, which relates to specific studies that can be used as a basis for future decision making on specific issues.
- The conceptual or understanding uses, which suggests that research can provide background information and perspectives that influence future action.
- The symbolic or political uses, which points to the ways in which research results can provide a legitimating function for certain policies (though the same evidence could often be used in completely contradictory ways).

While the symbolic or political uses of the research as envisaged by Quarantelli are not yet quite clear, the research is envisaged as having a dual significance. The first is the instrumental significance for people engaging in disaster response and recovery, especially for those working in similar contexts. They can use the research findings to examine their field realities and identify the preparedness aspects in relation to floods, and identify the exclusionary processes that lead to discrimination. In addition,
it can also serve as a sensitising tool for practitioners and policy-makers on the potential of community groups in such situations.

The second significance of the research is the conceptual use - in its attempt to contribute to the theories of social work in disaster response. It could help to add or to clarify existing perspectives. Personally for the researcher, this study would help him to closely examine issues that he confronted during his involvement in disaster responses, in the light of existing knowledge and academic perspectives.