Social capital, resilience and transformation among vulnerable groups in the Burmese delta after Cyclone Nargis

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Introduction

Social capital and leadership have been found to be the most effective elements in mobilizing collective actions to promote community and individual recovery after a disaster. The work of Nakagawa and Shaw (2004) and Shaw and Goda (2004) on the Kobe and Gujarat earthquakes and Christopher Airriess (2008) on the Vietnamese community in New Orleans after Hurricane Katrina have shown how these elements are critical to enhancing the collective efficacy (Paton 2007) of communities, allowing them to respond more effectively and achieve a transformation of their pre-disaster status to a more positive situation.

This emphasis on transformation to a better situation post-disaster, not just building back what had been destroyed, has become the focus of international policy on disasters over the past 20 years. During the United Nations International Decade for Natural Disaster Reduction (UN-IDNR 1990-1999) the policy focus moved from post-disaster relief and rescue to pre-disaster mitigation and preparedness efforts. Dollar for dollar, research has shown that this is a more cost-effective approach.

The development focus at the core of this policy approach emphasizes empowerment of local governments and civil society groups to enhance the resilience of vulnerable population groups. Poverty reduction and disaster risk reduction were seen to be interlinked, a dual strategy which saw the UN pass responsibility for disaster risk reduction policy to the UNDP following the Kobe Great Hanshin-Awaji earthquake in 1995 and the consequent formulation in 2004 of the Hyogo Framework for Action (HFA).

Social vulnerability to disasters is thus projected as a function of under-development leading to an emphasis on socio-economic activities in formulating policies which may enhance the resilience of impoverished communities and individuals in both responding to, and recovering from natural disasters.

Policy Frameworks: Vulnerability, Resilience and Transformation

The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, defines ‘Vulnerability’ as ‘The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.’ (UN/ISDR 2004). This definition builds on the Human (In)Security Framework set out in the UNDP’s 1994 Human Development Report (UNDP 1994) which locates vulnerability across 7 vectors: economic, social, political, environmental, community, cultural and individual.
However, the research literature on disasters pays least attention to socially created vulnerabilities. They are ignored because of the difficulty in quantifying them. Most social losses are absent from post-disaster cost/loss reports, despite attempts to quantify them through the creation of an integrated Social Vulnerability Index/Disaster Risk Index, and related Vulnerability Maps for key disaster prone communities. (Such ‘Maps’ of vulnerable groups are only useful if kept up to date.) At this time, there is little comparative research on the social vulnerability of place, a gap which this project will attempt to re-dress.

**Theoretical Models of Vulnerability**

Three approaches in vulnerability research may be identified:

- **the exposure model**: researches the conditions that make people or places subject to the negative impacts of extreme natural events (Burton, Kates and White 1993);
- **the social condition model**: vulnerability is seen as a measure of societal resilience to hazards (Blaikie et al 1994);
- **the place or region model**: this approach integrates the exposure and societal resilience models. (Cutter, Mitchell, Scott 2000)

Vulnerability in this literature is presented as being socially constructed. Social constructions of vulnerability are embedded in four intersecting sets of resources:

- **Economic and material** which identify purchasing power, housing standard and location, availability of and access to transport to enable evacuation;
- **Human or personal** such as education which may assist resilience and reduce vulnerability. Typically, these types of analyses focus on age of impacted groups, racial characteristics, ethnicity, living arrangements, female headed households which may or may not be a significant contributing factor depending on the cultural context;
- **Family and Social** such as networks of reciprocity, kinship or immigrant networks which facilitate access to and can enable impacted communities to mobilize social capital (bonding, bridging and linking ) both in the pre- and post-disaster phases;
- **Political resources** which characterize the relationship with community and governmental decision-makers (Morrow 1999).

Addressing the Social Construction of Vulnerability draws in Theories of Social Capital and Resilience as means to reduce vulnerability to disasters and enable more effective transformation post-disaster.

**Transformation from Vulnerability to Resilience**

There is an abundance of definitions of Resilience. Over time, these have modified from emphasis on resilience producing an ‘outcome’ to resilience as a ‘process’. This presentation has selected six to demonstrate the changing theoretical perspectives over time which are giving rise to different policy approaches to achieving resilience. These are:
Miletti (1999) – resilience is seen as ‘an ability to withstand an extreme natural event’;

Paton, et al (2000) – resilience is ‘an active process of … growth – ability to function …at a far greater level than expected.‘

Pelling (2003) – resilience is ‘The capacity …to cope with or adapt to hazard stress.’

Resilience Alliance (2005) – resilience is ‘the capacity of a system to …withstand shocks and rebuild.’

UN/ISDR (2005) – resilience is ‘The capacity of a system, community or society …to adapt …in order to reach and maintain an acceptable level of functioning and structure.’

Norris et al (2008) – resilience is ‘A process linking a set of adaptive capacities – economic development, social capital, information and communication, and community competence – to a positive trajectory of functioning and adaptation after a disturbance.’

Norris has thus included ‘social capital’ directly in the formulation, an element that Shaw and Nakagawa identified in 2004 as the ‘missing link’ to disaster recovery.

Social Capital – the missing link in disaster resilience theory?

I am not going to summarize the development of social capital theory here which has been done elsewhere, except to highlight the general agreement on its nature and functioning. Thus social capital is theorized to operate both horizontally and vertically across networks which may be both formal and informal. It is usually characterized as: bonding social capital (connections to kinship groups); bridging social capital (connections beyond kinship groups); or linking social capital (connections to people in power). It is theorized as a set of norms and networks utilizing relationships of trust to access and mobilize resources which enable the community or individual to recover more quickly from a disaster and to be in a better future situation. (Cook 2005; Allen 2006).

Social capital in disaster research is presented as an ‘investment’ in resilience enhancement (Norris et al 2008); resilience now subsumes ‘recovery’ in the key policy approaches, as ‘recovery’ is considered too static, while ‘resilience’ is favoured as a more dynamic concept which can produce the ‘positive trajectory of functioning’ noted by Norris et al (2008).

There are, however, various arguments that social capital also has a negative operational aspect which can entrench an existing disadvantageous, impoverished situation as Cleaver found in his research on Tanzania (Cleaver 2005). Here bonding social capital and associated networks prevented the development of a ‘positive trajectory of functioning’ as key resources were withheld by power groups in the community, and exclusionary activities disadvantaged already impoverished households.

We turn to look at how these concepts – Social Capital, Vulnerability, Resilience and Transformation - may be playing out in the Burmese Delta after Cyclone Nargis and in the context of the research questions identified in our project proposal which are:

i. By what pathways do mortalities caused by natural disasters impact on women, men, children, the elderly and people with disabilities?
ii. How are family dynamics impacted by natural disasters?
iii. How does access to social capital in family and kinship networks, and land and assets influence survival rates and adaptive behaviors after a disaster?
iv. What is the impact on migration into and out of disaster-affected areas and what are the socio-economic impacts of these migration flows on individuals and populations?
v. What are the long-term demographic impacts of natural disasters for governmental planning on reconstruction, housing, education, health, gender and environment policies?

Sub-topics of the above are:

vi. What is the correlation between health care, maternal and child health, mental health and reproductive health care after a disaster?
vii. How do culture, religion and education affect the responses of populations impacted by a natural disaster?
viii. How do governments respond to natural disasters in terms of family and migration policies?

Cyclone Nargis in the Burmese Delta, 2008

On the night of 2 – 3 May 2008 Cyclone Nargis struck the Burmese Delta. A tidal surge of 4 metres across the mainly lowlying area impacted on all 4 of the most heavily populated southern divisions (Ayeyarwaddy, Magwe, Yangon and Bago) leaving 84,537 dead, 53,836 missing, and 19,359 injured (official figures). It severely affected 2.4million out of 7.35 million people in these mainly agricultural regions. Of these, 200,000 (ie 8% of the affected population) were aged 55 years or older at the time of disaster. All education and health facilities, hundreds of thousands of fragile homes were destroyed, and agricultural fields, and water supplies were contaminated with salt water.

The immediate response was led by individual citizens, community leaders, and monasteries at the local level, in a remarkable demonstration of bonding social capital. Then government, national and international organizations (ie bridging and linking social capital) swung into action. Access difficulties across the flooded regions meant that many people still had not been reached with emergency relief at the end of May 2008.

Although the Post-Nargis Joint Assessment and its associated Recovery and Preparedness Plan (December 2008) gave detailed attention to a three phase approach based on Productive Lives, Healthy Lives and Protected Lives in recognition of the major aspects of recovery which governmental and international organizations needed to focus on, there has been little concerted research on the impact of the disaster on acknowledged ‘vulnerable groups’ despite much anecdotal information. Research which has been carried out by INGOs (eg UNICEF, Save the Children, ActionAid) has focused largely on orphans, children, women in temporary shelters. Much more needs to be done to answer the research questions of this project.

HelpAge International (INGO), 2009, has provided a valuable piece of initial research into one of these vulnerable groups, the aged survivors of the storm. A network which seeks to assist aged persons impacted by disasters, HelpAge International exemplifies the advantage inherent in being able to access and mobilize the resources available through bridging social capital in a situation of fragile governance. Since the country had never experienced such a disaster previously, disaster response capacity was in disarray at governmental level, and early warning sytems were weak or ineffective, leading to a very high number of mortalities. A similar situation has been researched in Sri Lanka at the
time of the 2004 tsunami, where it was the bridging social capital available in international NGOs which made a significant difference to survivors in a similar context of ethnic conflict and doubtful governance.

HelpAge International elected to focus its study of Aged Persons on three townships in the Delta Ayeyarwaddy Division which were among those most severely impacted: Dedeye, Kyaiklat, and Bogale. (Laputta at the very base of the Delta was too greatly destroyed to make the research practicable). In terms of the social construction of vulnerability, Ayeyarwaddy Division was consistently in the middle rank of poverty indices in the 2007 (ie pre-Nargis) survey of living conditions conducted by UNDP/Ministry of National Planning and Economic Development.

**HelpAge International (HAI) Research Methodology**

HAI provided immediate relief to households with persons aged 55+ years; this took the form of food distribution, non-food items, mobile medical units, shelter repair and reconstruction.

This immediate phase was followed by two assessments of older people: (a) 100 days after the Cyclone struck; and (b) Nine months after.

Assessments were conducted in 10 villages in each of the three townships: two where HAI had worked ie Kyaiklat and Dedeye, and one where it had not ie Bogale, as a control group. A comparative approach using both qualitative and quantitative methodologies was used. The aim was to assess the effectiveness of polices towards older people during the response phase, and the recovery phase, to see if they were included, and to ascertain any sense of change and ‘transformation.’

HAI conducted a standardised survey of 326 older people aged 55+ to 70+ years; 106 of these were in Kyaiklat, 109 in Dedeye, 111 in Bogale. Questions were asked on their socio-economic situation, nutrition, food security, shelter, health, and psychological well-being.

The survey was followed by in-depth interviews with 18 older person (six in each township); and focus group discussions on the psychological impact of the Cyclone.

**Initial Findings from the HAI Study**

The First Assessment (ie 100 days after the Cyclone) showed that bonding social capital underpinned community cohesions in the traditional support system. Collective efficacy in local communities meant efforts were made to protect and prioritise vulnerable groups including older people.

The Second Assessment (ie nine months after the Cyclone) showed that longer term livelihood security had not yet been restored. Only 50% of those whose cultivated land had been destroyed had regained it; only one third had replaced poultry; wage labour opportunities were severely diminished. Before the Cyclone, 61% of older people did occasional work for cash; after the Cyclone only 42% reported that they were able to do so. None received any assistance from any livelihood support program. This was a critical gap in assistance to older people at all research sites and related directly to their feelings of independence and well-being.
Food insecurity was a critical problem after the immediate relief stopped. Older people ate less, and less often. Some 37% reported having enough to eat most of the time; 11% said they were often hungry.

The project sites at Kyaiklat (71%) and Dedeye (59%) were better off in terms of house repairs than those at Bogale (25%). Older persons’ sense of greater well-being and security was linked to house/shelter repairs, and mobile health services which they wished to be continued, accessible, regular, and free of charge.

**Longer term policy issues – Implications**

HAI found that older people at their research sites had prevalent anxieties about another Cyclone given that disaster preparedness was still weak; about their future well-being and livelihood support.

In areas where HAI interventions occurred, people were more positive about the future, and better off than in the control area ie Bogale. But even in these areas at Kyaiklat and Dedeye, only 21% felt life was ‘back to normal’ some 9 months after disaster; 14% felt ‘life was more difficult than before Nargis.’

The positive trajectory of functioning said to be a key element of resilience, was present for only a small percentage. The resilience of older people, according to HAI, could be strengthened by building on strong community cohesion, bonding social capital, to strengthen community ownership of relief, recovery efforts, and the better integration of older people into the longer-term recovery processes. Transformation could arise from this approach, together with the mobilization of bridging and linking social capital.

Older people in the HAI study saw their longer term recovery linked to their spiritual health and psycho-social support. Home visiting programs implemented by HAI were recommended for the recovery phase, plus pro-active preparedness measures eg preparing water storage tanks, food stores, strong evacuation centres in case another storm came.

In addition to the HAI study, the Centre for Peace and Conflict Studies (Cambodia) undertook some qualitative research based on interviews with civil society groups and ethnic groups across Myanmar in 2009 ie a year after the Cyclone. There was general agreement that the Cyclone had been a catalyst for the surge in civil society organizations which emerged to assist the victims of the storm; there was also a prevailing perspective among all ethnic groups interviewed that Myanmar people put aside religious and ethnic differences in response to the disaster, and among some the notion that greater cooperation among all sectors of the population, including cooperation with governmental sectors, was necessary. This is an indirect recognition of the need to mobilize bridging and linking social capital across the nation if a full transformation is to occur. However, this study did not focus on specific vulnerable population groups in the Delta.

**Research Gaps**

There is little overall concerted research yet on vulnerable groups impacted by the Cyclone in the Burmese Delta including children, women, the aged, those with disabilities etc, or the impact of social capital on their perceptions of well-being.

HAI found that in their study sites, only 3 people had migrated out of the area. This could be owing to government legal restrictions on moving. There is currently no study of
inward or outward migration after the Cyclone, or of kinship networks, professional networks and links to Disaster Reduction programs.

As Dr Siew-Ean Khoo remarked, it will be more practicable to research the population groups who have not migrated out of the area, and these are obviously the majority. Land assets and kinship networks are key factors here.

There is also no in-depth study of the impact on families affected by the Cyclone.

UNDP, Centre for Peace and Conflict Studies, Cambodia have made useful contributions to the research on poverty profiles, underdevelopment, civil society after Nargis, and the Community-based Disaster Risk Management initiatives (2008). The recognition that non-government and government sectors need to work together bodes well for future conflict resolution measures. Further research is needed on the consequences of these conflict resolution contexts for the transformation of lives and livelihoods in the Delta and the impact of changed governance arrangements.

Data Needs

Data will be problematic and will need to employ a mix of qualitative and quantitative methods. Data will be sought from the Central Statistical Organization, government ministries and various INGOs which have worked in Myanmar for many years (eg UNDP, Care Myanmar, UNICEF). However, census records are lacking as no full census has been undertaken since 1983. In this situation, it is likely that qualitative methods will be most important in obtaining data for the study.

References

Centre for Peace and Conflict Studies (2009) Listening to Voices from Inside: Myanmar Civil Society’s response to Cyclone Nargis, (CPCS: Phnom Penh)