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Disaster Resilience and Children: Managing Food Security in Zimbabwe's Binga District

Siambabala Bernard Manyena
Disaster and Development Centre
School of Applied Sciences
Northumbria University, UK

Maureen Fordham
Disaster and Development Centre
School of Applied Sciences
Northumbria University, UK

Andrew Collins
Disaster and Development Centre
School of Applied Sciences
Northumbria University, UK

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 programs. 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 programs 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

Introduction

Children are familiar icons of disasters. They are the first people to be publicized when a disaster strikes. Common are pictures or footage of "children 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, 6). Of the 242 million people in the world affected by disasters between 1991 and 2000, 76.5 million were children under the age of 15 with 75 million living in developing countries (World Disaster Report 2002). Recently Hurricane Ivan in Grenada (2004), the earthquake in Pakistan (2005) and Hurricane Stan in Guatemala (2005), as well as frequent flooding in many parts of the world, show us that school-age children and their schools are often the most strongly affected when a disaster occurs (UNISDR 2007). Yet, despite the increase in children's participation literature (Brady 2007; Hart 1997; Lansdown 1995; Moore 2000; Treseder 1997; Valentine 2004), their involvement in disaster risk reduction (DRR) activities is a recent project.

Gaps can be noticed in some of the relevant international protocols. The Geneva Conventions and the 1989 United Nations Convention on the Rights of the Child (CRC) (UNHCHR 2003) do mention children affected by armed conflict but are silent on those affected by disasters triggered by natural hazards (Jabry 2003). However, the survival rights, protection rights, development rights and participation rights of children enshrined in the CRC are particularly relevant to their right to involvement in DRR activities. The Hyogo Framework for Action 2005–2015 (HFA), agreed in Kobe, Japan at the World Disaster Conference in 2005, offers an opportunity to realize children's contributions in enhancing the disaster resilience of their communities. Disaster resilience here is defined in the broadest sense, as the intrinsic 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 organizing itself to increase this capacity for learning from past disasters for better future protection and to improve risk reduction measures (UNISDR 2005). The terms "capacity," "learning," and "organizing" are used to signal community agency within the process of building disaster resilience.

Two parallel institutional arrangements exist in Zimbabwe that are mandated to deal with disasters. Drought, a slow-onset disaster, is dealt with by the Department of Social Welfare (DSW) in the Ministry of Public Service, Labor and Social Welfare (MPSLSW). Other DRR issues such as accidents and flooding are dealt with by the Civil Protection Directorate in the Ministry of Local Government, Public Works and Urban Development (MLGPWUD). Both institutional arrangements have structures from national to village level, in conformity with the decentralization policies introduced in the early 1980s. However, at the local level, administration of drought and civil protection issues are in the hands of the MLGPWUD local officials, local councilors and traditional leaders. The District Drought Relief Committee is responsible for drought while the District Civil Protection Committee is responsible for other DRR issues such as accidents and flooding. While both structures have averted humanitarian crises such as the 2000 floods and the 1982–1984, 1987, 1992 and 1995 droughts, Munro (2006, 128) has noted some "elements of ad hocery" or weaknesses in the DRR management. Current DRR approaches tend to

be *ad hoc*, seasonal, inadequately resourced and without adequate strategies for breaking the deprivation trap. In both the 1992 and 1995 droughts, the national drought task forces and subcommittees that were created had different structures and were lead by different ministries each time (Munro 2006). The problem is exacerbated by lack of empirical evidence to design a robust DRR management system. More than half a dozen studies have been conducted on DRR as they relate to, among others, drought (for example Kinsey et al. 1998; Marquette 1997; Mason et al. 2005; Munro 2006; Owens et al. 2003) and orphans (Foster et al. 1997). While the studies are by no means unimportant, they are insufficient to provide an adequate framework for a comprehensive understanding of how various social groups such as women and children could contribute to the enhancement of disaster resilience in Zimbabwe.

This article presents the results from a study which set out to investigate the involvement of children in DRR programs focused on food security in Binga District, Zimbabwe. The paper starts from the position (justified below) that building on children's resilience to disasters and creating a supporting social environment in Binga can contribute to the decline of disaster risks which are manifest in the form of multiple disasters, such as chronic food insecurity and frequent waterborne disease outbreaks. However, children's participation in DRR programs could be crucially dependent on how family and cultural aspects are negotiated. This might be particularly true in a district like Binga where historic cultural aspects could be considered still in part intact despite external influences from Christianity, changes in inheritance practices, and other influences from Ndebele and Shona cultures. Failure to consider cultural aspects specific to individual locations could affect children's participation, sometimes to the extent of harming family relations. This can become counterproductive to the best interests of the child.

Methods

Data collection occurred in two phases. The first phase involved a literature review of journal articles, books and reports drawing on electronic databases such as ISI Web of Knowledge and MEDLINE. The second phase involved primary data collection in Binga. This was to capture the "real" experiences of children in this context. Acquiring this type of information can be problematic. As Reynolds (1991, 161) has argued, "Children's worlds are not easy to record." This is in part because of the age gap between researcher and subject, weaknesses on behalf of the researcher to interpret the meaning of what children communicate, and potential reluctance on behalf of the child to provide his or her real thoughts. There are also ethical issues in gaining access to children that are extensively known about by most social and behavioral researchers. The potential for misunderstanding may be accentuated where there are cross-cultural communications. However, in this instance the lead author has been a close member of the Binga community, and we have employed a mix of methods.

Positivist methodologies using questionnaire surveys to generate large amounts of statistical data were inappropriate in this study as they rarely involve children in the research (Young and Barrett 2001). The study followed a descriptive non-experimental design, collecting data using multiple methods from multiple sources,

to establish the status of the role of children in contributing to building the resilience of their communities. Direct observation, semi-structured interviews and three focus group discussions were used to gather data from 40 children (20 boys and 20 girls). Of the 40 children, 18 had one parent surviving, six had both parents deceased and the remainder had both parents alive. The orphans were, however, not "heading households" but were being looked after mainly by their grandparents or their matrilineal kin (*basimukowa* or *basiluzubo*). While this study defined children as all those aged between zero and 18, the focus of this study was on children aged 10-17. With mean age of 13.3 and modal age of 14, the group generally was comprised of peers who would be comfortable talking to each other. School registers were used as the sampling frame for those who were attending school, while snowball sampling was used for those out of school as it was difficult to get data about them. No attempt was made to distinguish children orphaned as the result of HIV and AIDS or to determine whether they were suffering from AIDS or any other diseases in order to avoid stigmatizing them.

Eight key informants (five males and three females, all above the age of 35) also participated in the study. These informants, all people who generally work or interact with children, were selected from non-governmental organizations, local leaders, teachers and parents.

From a scientific viewpoint, it may be problematic to generalize from a small sample of 40 children and one ward, especially considering that children have a multitude of differences such as ethnicity, social class and culture (Greig and Taylor 1999). However, the literature is awash with examples of how small samples have contributed to theory development (Bryman 2001; Patton 2002). The depth of the material presented is sufficiently wide-ranging and adequately highlights a "subjective view" of children that may apply to children in other contexts. It is also worth noting that the participants were not considered to be objects providing numerical data but were viewed as reservoirs of untapped knowledge, intelligent and purposeful. Therefore, the level of detail from one ward was considered sufficient to gain an understanding of how children's contribution to building disaster resilience may be realized.

Participatory approaches were appropriate for this study. Data was collected through open-ended interviews, focused discussions and observations as well as participation by the lead researcher. First, the researcher participated in preparing supplementary feeding meals at one of the schools and also distributing food aid rations. This allowed the researcher to observe the actors in food aid distribution: officials from NGOs, village heads, village secretaries, household members and children. The researcher also had access to village household relief registers during interviews with two local leaders. This helped to gain more insight into the targeting and restricting of the coverage of an intervention on the basis of those perceived to be most at risk (Jaspars and Young 1995). Children were also involved in mapping disaster risks in the rural area of Siachilaba, which formed the basis for three focus group discussions. Each focus group was comprised on average of six to eight children, which is consistent with the literature that recommends between six and ten participants (Bruseberg and McDough 2003; Greig and Taylor 1999; May 1997).

The data represents "thick description" (Patton 2002, 437), using the participants' words or the researcher's descriptions of what has been observed and experienced (Bryman 2001; Sapsford and Jupp 1996). These methods allowed the children to digress and wander around the topic, which better represented everyday life. Interviews were conducted in the Tonga language, tape-recorded and later transcribed. The quotations used in this paper are therefore direct or literal translations from Tonga to English. Distortion of the actual words or meanings from Tonga to English was minimal as the lead author is a native speaker of the Tonga language and translated the participants' words into English. However, some English words have no equivalents in the Tonga language. For example, "emergency," "disaster" and "hazard" had no equivalents in the Tonga language and were used interchangeably. Resilience was another construct which was difficult to articulate in the local language. Further investigations into how these discourses are translated in the local context could provide some useful insights as to how they are adequate for informing disaster policy and practice beyond their origins in largely Western discourse.

The Context of Binga in Relation to Its History, Culture and External Influences

Binga District, located in the Zambezi Valley basin in the northwestern part of Zimbabwe, has a population of approximately 120,000 of which about 59 percent are children (CSO 2002). The district is relatively isolated, as it is over 400 kilometers from Bulawayo, the nearest major urban center and the provincial headquarters. There is only one tarred road (100 kilometers in length), which connects Binga with the main Bulawayo-Victoria Falls road. This tarred road was not constructed until 1990. There was no electricity supply until 1990 and even now only a few centers on or near the tarred road have electricity.

Binga, home of the Tonga ethnic group, has long been considered a chronic disaster area with the majority of the population requiring humanitarian aid every year (Chiduzha 1987; Conyers and Mbetu 1994; Manyena 2006b; Save the Children (UK) 2001; Tremmel 1994). It is semi-arid with a tropical dry savannah climate where dryland cultivation is precarious due to low and erratic rainfall (Chiduzha 1987; Dahl 1994). Binga is dominated by Lake Kariba, which was constructed in 1957. The World Bank-funded Kariba Dam project caused "forced" mass migration and displacement of more than 23,000 people from the fertile soils along the Zambezi River bank (Colson 1971; Dahl 1997;Tremmel 1994; WCD 2000). Livelihoods were disrupted as entitlements to riverine cultivation, fishing and hunting were lost. While the Kariba Dam project cannot escape blame for the people's vulnerability to disasters in the Zambezi Valley, the contemporary literature on the suffering of the Tonga has begun to shift blame towards the inability of the post-colonial government and civil society institutions to effectively deliver development programs. Local people's lack of control of and limited access to resources or political power, the worsening economic situation in Zimbabwe, unemployment rates of more than 70 percent, and dwindling support for crucial social services (Conyers and Cumanzala 2004; Manyena 2006b) makes their predicament a chronic "complex emergency."

This study was carried out in Siachilaba, a rural area about 50 kilometers from Binga center along the Bulawayo Road. It has a population of 5,264 of which 59 percent are females. Administratively, Siachilaba is divided into five villages (*magunzi*), with a total of 1,183 households (CSO 2002). In practice, the village (*gunzi*) is made up of homesteads (*myuunzi*). The village and homestead concepts are sometimes used interchangeably. For children, the homestead setting can play an important role in determining their interaction with other children and participation in household, homestead or community activities. In Siachilaba, a homestead 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 50 or more people. The homestead in Tonga culture is constructed around the matrilineal kinship, a structure known as *mukowa* (Cliggett 2001) or *luzubo*. The bond of kinship is between the mother and her children rather than between the father (*syanawisi or banakwabo)* and the children, yet the man still remains in control over marital affairs. Ties are traced through women to a common ancestress (Reynolds and Cousins 1991). When performing religious ceremonies, such as appeasing the ancestral spirits (*kupiila)* or rain-making (*kupundula),* it is the homestead, together with several kinship groups within the matrilineage, which is of paramount importance rather the household (Cliggett 2001). On a few occasions, children can assume the religious or ritual leadership if there is no adult to take up such a position in the lineage.

The village and household are formal structures which serve bureaucratic demands from government and non-governmental organizations (NGOs). These organizations assume a "Westernized" nuclear family type and do not take into account the matrilineal responsibilities of the family. These structures are alien to the Tonga tradition; they are a remnant of the colonial government structures imposed onto the local people by the British Empire, mainly for tax collection purposes. They, however, become important when registering for aid, census and participation in national surveys. Villages are led by village heads who are appointed by, and are at the discretion of, traditional chiefs in terms of the Traditional Leaders Act of 1999 (GoZ 1999). A village head is assisted by a Village Development Committee (VIDCO) who are, among others, actively involved in maintaining household relief registers for the village. In Siachilaba, like in most parts of the Poor Resource Kariba Valley Food Economy Zone, 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. New members of households such as orphans, those who lose employment and migrate to their rural homes, and those who migrate from other villages or wards are also entered into the registers. Prior to relief being distributed, village secretaries update the relief registers to take into account changes in the household composition. However, those who arrive after the registration process is closed, which is what often happens with orphans if their parents lived in urban areas, are likely to be excluded since the rations will be delivered according to the statistics that were provided by each village at the time of registration.

In terms of infrastructure, the most notable aspects of Siachilaba are 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. 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 such as beans, *telele* (*Corchorus olitorius*), okra (*Abelmoschus esculentus*), *bbobola* and *tende* (*Cocculus hirsutus*), which is used as relish. Children occasionally supplement the relish through their hunting and fishing. *Nsima* is mainly made from millet (*Pennisetum americanum*), maize and sorghum (*Sorghum bicolor*) flour. Millet and sorghum are grown in family fields while maize meal or grain is mainly obtained from shops, vendors and food aid.

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 "houses'" 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. Male children, normally around the age of four or five, are weaned from their mothers (*kweengezya*) to join the *chipala*. The advantage of this is that the "house" that does not have enough food can still have access to food. The leftover food, especially during times of plenty, is fed to the dogs (*bankala*) or kept (as *indala*) for the following morning for children to eat before they go to school or before performing household chores such as weeding the fields, looking after the livestock and fetching water and firewood.

People in Siachilaba live in pole and dagga grass-thatched huts (*nhanda*). A homestead may be made up of one to several huts (sometimes as many as 30), including huts on stilts (*ngazi*). Each homestead usually has a granary and several huts serving as a kitchen, harvest storage and bedrooms. The harvest storage is sometimes an open platform (*sanza*) or a hut on stilts. Boys and girls have separate huts that serve as their bedrooms. However, both boys and girls are expected to contribute their labor through gathering materials such as fiber and poles during the construction of their respective huts.

Ownership of assets by children, especially livestock, is a common practice in Tongaland. The assets are passed on mainly through gifts from relatives or parents or are inherited from a deceased relative.[i] When a woman dies, the grandmother, sisters or extended family take care of surviving children. The children or surviving spouse of a deceased woman or man must not, by custom, inherit the property. Instead, the property is shared among the lineage or *basimukowa*. While technically it is unlawful in terms of inheritance laws for the property of the deceased to be shared among the lineage, it is the customary practice that is negotiated to resolve issues around inheritance, despite the modern legal institutions.

This section has laid out the context of the study area paying particular attention to how the society is structured and how children fit into the social landscape. The next section focuses on the rationale for involving children in DRR.

Approaching Children's Involvement in DRR Programs

While participatory development was beginning to sound like a "mantra" by the 1990s, children and youth were not initially included in the varying development agendas (Mayo 2001). The justification for their involvement is based primarily on the rights framework, with the CRC being the most frequently cited.

The growing realization of the links between disaster recovery and resilience-building (Manyena 2006a) has added a new impetus to the concept of children's involvement in DRR programs. The major reason for this increasing focus on children is not difficult to understand: children remain one of, if not the most, vulnerable groups to disasters (World Disaster Report 2002). When food insecurity-related disasters strike, children are the most affected by experiencing limited or uncertain access to enough safe and nutritious food for an active and healthy life (Maxwell 2001; Sharp 2001). In 1985, following three successive years of drought, stunting affected 34 percent of the children in Zimbabwe (Rukuni and Jayne 1995). In their study of the 1994-95 drought in Zimbabwe, Hoddinott and Kinsey (2001) found that young children grew more slowly in the aftermath of the drought, a consequence that would affect them for the rest of their lives. In a study on the impacts of the Economic Structural Adjustment Programme (ESAP) in Zimbabwe, Mupedziswa (1997) illustrates the effects of malnutrition on children's performance at school. While predisposition to ill-health could be genetic in some instances, malnutrition, a disease in its own right, predisposes children and adults to infectious diseases (Collins 1998). This includes diseases of poverty such as measles and tuberculosis (Middleton and O'Keefe 1998). Mupedziswa (1997, 32) further claims that:

> *Malnutrition among girl children also weakens their reproductive system so that their own future children may also be vulnerable to ill-health even if the mothers are well. Good health of a child begins to take shape when still in the mother's womb.*

Although there is a lack of data on nutritional status, there is evidence that Binga suffers from chronic acute malnutrition. The proportion of children under five suffering from malnutrition in Binga district was estimated to be 29 percent in 1993 (Warndorff and Gonga 1993, cited in Tremmel 1994), between 20.5 percent and 28.3 percent in 2000 (Brunet and Mbuya 2001) and 30.9 percent in 2005 (Food and Nutrition Council 2005).

It has been noted by Mason et al. (2005) in their study on AIDS, drought and nutrition in Southern Africa (including Zimbabwe), that areas with higher rates of HIV and AIDS showed more deterioration in child nutrition. The growing number of child-headed households due to being orphaned by HIV and AIDS, especially in sub-Saharan Africa, is another reason for the growth in interest in children's involvement in DRR activities. In addition to the five million children who have been infected with the HIV virus, some 15 million children under the age of 18 have lost one or both parents to AIDS with the vast majority, more than 12 million, living in sub-Saharan Africa (UNAIDS 2006). In their study of child survival and HIV/AIDS, Walker et al. (2002) found that five countries (Botswana, Namibia, Swaziland,

Zambia, and Zimbabwe) had the highest rates of HIV-attributable under-five mortality with more than 30 deaths per 1,000. An additional 16 countries had rates between 10 and 25 per 1,000 while the remaining 18 countries had rates under 10 per 1,000. In Zimbabwe, about 160,000 children between the ages of 0 and 14 are living with HIV and AIDS, while more than one million children between 0 and 17 have been orphaned by HIV and AIDS (UNAIDS 2006). Although there are no statistics available on the number of child-headed households or children living with HIV and AIDS specifically in Binga district, about 7,500 children were orphans as a result of HIV and AIDS in 2005.[1] The rationale for children's involvement in disaster interventions could be argued from the point of view of the figures alone. From a human rights vantage point, children need to be involved in disaster interventions as it is one of their basic rights to maximize their survival (Jabry 2003).

Effective involvement of children in DRR activities means addressing the contested concept of "childhood." Evans (2007) explores representations of childhoods by academic disciplines such as psychology, history and anthropology. Evans (2007, 174) concludes that whatever notions of childhood exist, "the Northern notion of childhood retains sway and influences policy and practice with children around the world." Few would dispute that childhood is a unique development period when an individual's main physical, mental, emotional and social development and growth take place. Damage at this stage, especially due to protein-energy malnutrition resulting from food insecurity, often cannot be overcome later (Jabry 2003; Young 2001).

Children may be viewed as persons up to 14 years, as some children start working around that age in the global South (Hart 1997). However, the CRC defines children as all persons under the age of 18, unless by law the majority age is attained at earlier age. In Zimbabwe, there are no rights for children enshrined in the constitution apart from two pieces of legislation: The Children's Protection and Adoption Act of 1996 (GoZ 1996), and The Legal Age of Majority Act (LAMA) of 1982 (GoZ 1982). The former defines a child as any person under the age of 16 while the latter defines a person below the age of 18 as a minor, in line with the CRC definition. In addition to these "Western," "formal," "legal" or "official" definitions of a child, "customary," "cultural" and "traditional" definitions also exist. In practice, the definitions of a child can be as many as the ethnic groups found in Zimbabwe, including the Shona, Ndebele, Tonga, Nambya, Sotho, Kalanga, Venda and Shangani. In Tonga society, of which Binga is a part, children are those still under parental authority regardless of their chronological age. For instance, a Tonga woman above age 18 will need parental consent to get married although according to the LAMA, she does not need parental permission to register the marriage. The parents will charge the son-in-law *luselo*, or bride price, which must be settled before the daughter moves to the husband's homestead. Yet, children make a vital contribution to the day-to-day running of households. For example, women teach their daughters to work from a young age:

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[1] Interview with an official from Binga District.

> *A four-year old cares for infants, runs errands, helps to stack pots. An eight-year old begins agricultural work like weeding and scaring away birds. She also washes pots and plates and does some domestic work like sweeping. A 12-year old should be able to run a home when the senior woman is away. From the age of ten many girls carry full day's burden of labor* (Reynolds and Cousins 1991, 57).

It is therefore difficult to define childhood in the context of Tonga culture. Children assume adult roles at a young age, but that does not confer adult status on them. At the same time, adults can play dual roles of being both an adult and a child under parental authority. Childhood is indeed a social construct (Aitken 2001; Young and Barrett 2001), which depends on its social, economic and cultural contexts. No matter the context, childhood remains as one of the critical stages of human development as the child's hereditary endowments start interacting with the environment to prepare the child for adulthood. Children are "special" as they are different from adults who control and describe the world as we know it (Greig and Taylor 1999). It is not by coincidence that children's involvement in DRR is among those aspects emphasized in the Hyogo Framework for Action 2005–2015 to enhance the resilience of disaster-affected communities (UNISDR 2005). Some would argue that the overdue formalizing of such an instinctive piece of logic by international frameworks devised largely by external "experts" is an indictment of how Western-dominated notions of social "norms" have shaped development and relief industries. Investment in children's capacity to reduce risk is clearly an investment in risk reduction for future generations.

Children's potential to contribute to building disaster-resilient communities has been demonstrated. Penrose and Takaki (2006) illustrate the role played by children in the rescue and emergency stages of the aftermath of the 2004 Tsunami disaster, although this has not been widely acknowledged. They concluded that the active involvement of children can mitigate the loss of life and assets that result from "natural" disasters, and their involvement is also essential to the recovery of the community in the short-term, medium-term and long-term. In the Zambezi Valley of Zimbabwe, children have been involved in community-based management of water resources—the second major users after women (Save the Children 2002). Mayo (2001) points out how children have been actively involved in action research, using a variety of methods including drawing, collages, mapping and model-building, interviewing, and carrying out surveys as part of planning, developing and implementing projects and programs. Collins and colleagues (2005), using these types of methods in neighboring Mozambique, found that children—some of whom were members of child-headed households resulting from the decimation of parents through HIV/AIDS—readily participate in the activities even in extreme circumstances. However, this was not assessed over the longer time frame. As children's participation is still in its infancy, in most countries, children's participation is still suffering from tokenism—a practice where children are given a voice, but have little choice about the subject, the style of communicating it or any say in organizing the occasion (Mayo 2001).

Effective involvement of children in DRR activities means addressing some well-known problems. One of the major challenges, which needs careful consideration, is avoiding getting locked into justifying children and youth's involvement without practical action (Clark and Percy-Smith 2006) in DRR. Moving beyond the justification debate and focusing on issues that make a practical contribution towards building the resilience of children and their communities is more urgent than ever before. However, cultural issues are among those which may need particular attention in order to realize effective involvement of children in disaster preparedness activities. Children who have grown up in districts like Binga where multiple disasters have become a norm rather than exception, are likely to be able to provide rich accounts of how they could make their contributions towards enhancing community capacity to resist, withstand or adapt to disasters within the cultural constraints imposed. The sections that follow discuss the findings of the study, including children's perception of food insecurity, coping strategies, roles in disaster preparedness at the household and community levels, and their involvement in food distribution.

Children's Perception of Food Insecurity

The notion of food security is as old as humankind; it can be traced in folklores, legends and religious records such as the biblical story about Joseph's prediction of seven years of plenty and seven years of famine. In recent history, interest in food security began in the 1970s (Maxwell 2001) and has continued to grow to the extent of having approximately 200 definitions and 450 indicators (Mechlem 2004) growing out of the debates. The World Summit for Children in 1990 adopted eight goals on nutrition; the 1992 International Conference on Nutrition declared a goal of eliminating hunger and reducing all forms of malnutrition; and the Millennium Development Goals aim at halving the proportion of people who suffer from hunger by the year 2015—these are some of the indicators of the growth of interest in food security. Children's contribution to the debate could help inform policy and practice in building disaster-resilient communities.

To establish the potential of involving children in DRR activities in this study, the child participants' perceptions and descriptions of hunger were the starting point. Hunger can be distinguished from starvation and famine. Devereux (1993, 13) conceives of hunger as an individual's perception of the need to eat, while starvation is a continuation of hunger to the point where life is threatened, and famine is a crisis of mass starvation. However, these distinctions are problematic as they portray "outsiders'" representations following Sen's (1981) entitlement theory rather than "insiders'" views such as those of children. In this study, hunger and starvation were used synonymously and were conceived in terms of physiological effects on children rather than causes of famine. Unique pain in the stomach, rumbling stomach, weakness and dizziness, shivering and failing to walk, and trembling of the bones were common descriptions of hunger.

> *When I 'slept with hunger,'[2] I had some weakening pain in the stomach. I couldn't drink water, because if you drink water alone when you are hungry you can vomit.*
>
> —Boy (14)

> *It's not like a stomach ache but something that brings in some feeling of nausea... the stomach is light and rumbling... you feel feverish and shivering... bones tremble.*
>
> —Girl (12)

Hungry children were described by children who participated in the study as being dull, weak, stupid (*chifuba-fuba*), less attentive and did not participate in class. Because of the pain in the stomach, they feel weak and sometimes fall asleep in class. Hunger was said to have negative effects on the performance of children at school. Hungry children spent most of their learning time thinking about where to get the next meal. This confirms the long-asserted notion by parents, educators and health professionals that childhood hunger is associated with impaired physical and cognitive development (Foster and Leathers 1999; Young 2001).

On the causes of food insecurity, or lack of access to enough food, participants identified the following causes: low and unreliable rainfall, destruction of crops by wild animals (elephants, baboons and wild pigs), quelea birds, pests, poor soils, lack of implements, poor seeds, unemployment, and reduced labor input due to HIV and AIDS. Low and unreliable rainfall was said to be the major cause since Binga district relies on farming for its livelihood. However, most participants' responses demonstrated how complex and interlinked the factors are and how they reinforce each other:

> *Food gets finished quickly because it's eaten by elephants, wild pigs and baboons. If these animals get into your field, you reap nothing because they 'eat to destroy.' Quelea birds are even more difficult to scare from the fields. Sometimes my mother tells me to absent myself from school to tend the crops but I usually get so exhausted because I spend the whole day shouting and beating drums and broken metal but the birds don't run away. The worst things are the pests—chimvwinye and* nswabanda[3]—*which eat crops day and night. Besides eating* nswabanda *as relish, there is nothing you can do to chase them away.*
>
> —Girl (13)

Destruction of crops by wildlife was blamed on the CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) program which prevented residents from killing problem animals. That CAMPFIRE can bring positive conservation and development outcomes has become a common comment from the

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[2] "Slept with hunger" is a literal translation meaning sleeping without having eaten any food.
[3] *Chimvwinye* and *nswabanda* are pests which attack millet and maize grains before harvesting. *Chimvwinye* belongs to the cricket family while *nswabanda* belongs to the grasshopper family.

conservation community. They claim it has marked a shift from the fortress conservation model to community conservation and its abandonment would be somewhat premature and potentially detrimental. Contrary to the conservation community view, and consistent with the literature on CAMPFIRE (Alexander and McGregor 2000; Balint and Mashinya 2006; Campbell et al. 1999; Jones 2006; Logan and Moseley 2002; Vupenyu 2003), interviews revealed that CAMPFIRE brought with it some conflicts between communities and animals.

Food insecurity was also blamed on lack of assets which could be converted to money to enable families to buy maize meal. Interviews revealed that families who had relatives in employment, livestock to sell, or other income-generating activities such as vegetable gardening, beer brewing and fishing were able to purchase some grains from retailers to enhance their food stocks. Decisions to dispose of the assets was said to be difficult (also see Devereux 2001), especially in relation to cattle. Some "hard" parents, even if they had plenty of cattle, would choose to starve rather than sell them for that would leave them "naked" (*maya* or *chinkuna*), that is, without protection from future disasters.

Deaths of male parents who were formally employed before their deaths was another cause of food insecurity. Increase in morbidity and mortality of "bread winners" was blamed on the HIV and AIDS pandemic in Zimbabwe. For instance, one of the participants said:

> *We've had a lot of difficulties in buying food since the death of my father last year who was working for the Electricity Company. We sometimes 'sleep with hunger' because my mother says the money for pension is not adequate and also comes late.*
>
> —Girl (10)

Some participants attributed problems of food shortage to (white) commercial farmers who were said to be unhappy that land had been compulsorily acquired from them by the Zimbabwean government:

> *Shortage of food is a result of poor rains. Some of the crops withered due to lack of water. I also understand that the white people caused some shortages of food as they blocked the supply of commodities like cooking oil and sugar since they are the people who manufacture them.*
>
> —Boy (15)

First, the comments illustrate the children's awareness of the causes and acute consequences of food insecurity. Second, reference to Zimbabwe's land reform program as one of the causes of food insecurity illustrates their level of awareness of the politics in Zimbabwe. Indeed, the children's perception of food insecurity-related disasters is consistent with the famine literature (de Waal 1991; Devereux 1993; 2001; 2002; Sen 1981; Walker 1989; Wisner 1993; Young and Jaspers 1995). The children recognized that food insecurity resulted from a combination of natural and anthropogenic hazards, with the former having the major contribution.

The causes were said to be in a state of flux with one factor becoming more dominant at one time than the other.

Children's Coping Strategies

In order to have children-focused DRR programs, it is necessary to understand how children cope at both household and individual levels to food insecurity-related disasters. The famine literature often focuses on how communities cope with stresses and shocks in drought-prone areas (see, for example, de Waal 1991; Walker 1989). First, studies have demonstrated over the years that people want more than simply to attain the minimum standards associated with coping strategies; they want to adopt resilience thinking that goes beyond vulnerability reduction (Manyena 2006a). Ansell and van Blerk (2004) contend that the term "coping" does not imply that actions are invariably successful or carry no costs, and the term "strategy" does not imply the implementation of a carefully prepared plan. Second, existing studies have not disaggregated according to age and thus have not specifically focused on children. While children's actions cannot be understood in isolation from the household and community environment, lumping them with adults can cloud our understanding of how children cope. Children are actors within the household and not simply recipients of adult care (Ansell and van Blerk 2004).

In this study, children's coping strategies at the household level included the selling of livestock, fishing, skipping meals, cooking porridge instead of *nsima*,[4] cooking grain husks, eating vegetables without *nsima*, drinking pumpkin soup and gathering wild fruits and tubers such as *makuli (Ipomoea shirambensis)* and *bbonga (Raphionacme monteiroae)*. At the individual level, common coping strategies included begging from relatives, neighbors and teachers.

> *I mix baobab* [Adansonia digitata] *fruits with goat's milk or water to make some 'mulondo' [yogurt] which I drink. Although I don't get satisfied, it does help me quite a lot. I also eat tende* [Cocculus hirsutus] *wild vegetables with my young brothers especially when my mother is away.*
>
> —Boy (15)

Although children cope in various ways, girls have narrower coping strategies than boys due to different sanctions of movement imposed on girls. Beyond the affections of family ties, culturally girls are a protected possession or resource. More freedom of movement is believed to "spoil" the girl child and make her "loose" (*kusanguka*). The Tonga society, like many African societies, has specific roles for boys and girls. While both provide farm labor, boys spend most of their time herding goats and cattle, mainly in the bush where they can also gather fruits and tubers. Also, during the dry season, when herding is less intensive, boys are engaged in hunting and fishing activities during which they can access different types of food. Girls are "tethered" by tradition and culture to the "feminine" activities, mainly around the village: fetching water and firewood, cooking, and looking after siblings. This way, they are secured and given good grounding for motherhood. However, while there is need for further investigation, the results

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[4] Nsima is the name for a cooked pulverized grain meal that is the staple food in Zimbabwe.

suggest that boys tend to have wider opportunities to access food than the girls when food shortages strike.

> *As a girl, I can't have free movements like boys to go hunting or look for foods in the bush. I usually sit down or lie in the hut. However, I can gather some wild fruits found in the vicinity of the home such as* nji [Berchemia discolor], mateme [Strychnos madagascariensis], *and* mbubu [Lannea schweinfurthii] *fruits.*
>
> —Girl (12)

These accounts indicate that children's roles in personal coping are strongly influenced by the gender perspectives of the local culture.

Children's Role in Disaster Preparedness at the Household Level

Interviews revealed it was not a common cultural trait for parents and children to "sit down"[5] in preparing for emergencies. Decision-making was the domain of parents. Children were not involved or consulted about what actions should be taken to avert impending food shortages. Plans only reached the children when parents needed assistance, especially in looking for livestock or some assets that needed to be sold. Children in this study expressed a strong desire to be involved in preparedness planning not as an end in itself but as a means of mitigating the negative disaster impacts. Although children were conscious of the cultural constraints imposed on them by the Tonga traditions, they claimed that, mobile as they were, they could also (like adults) provide information about where food could be found. Some also claimed they could contribute money they got from fishing and basket making towards procurement of food.

> *It's important that I should be involved in the planning process because I can, for instance say to my mother, 'Look mum, there is that beast, can't we sell it, so that we can find someplace where they sell some mealie-meal [maize meal] so that we buy?' Sometimes, as I am more mobile than my mother, I'm usually more informed than my mother on where mealie-meal can be easily got.*
>
> —Boy (13)

> *It's bad for parents not to involve us in the decision-making processes when they are preparing for the disaster because sometimes I will be having money I get from making baskets[6] which I can contribute towards the procurement of grain. I sometimes get Z$10,000 from basket making.*
>
> —Girl (13)

Parents confirmed that "sitting down" with children to discuss issues including those related to preparing for disasters was not a common practice in the area. The only

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[5] "Sit down" with parents is a literal translation meaning "having some time to discuss" with parents.

[6] Basket making activities are associated with women. The baskets they make are mainly sold to tourists or agents for companies in South Africa and Europe.

time was when children were needed to provide labor or when children's assets like goats and cattle were involved. Children were informally consulted on some matters that affect the family. For instance, boys were consulted on decisions related to slaughtering or selling their livestock such as goats, sheep and chickens. The consultation was said to be unstructured, *ad hoc*, organic and could take place anytime. Further exploration of "informal" involvement of children in decision-making could suggest ways and means of enhancing their participation in DRR activities. The study also revealed that adults were being pushed to accept the involvement of children due to the increasing numbers of children orphaned by HIV and AIDS who are forced to assume adult roles. In this way, the onset of disaster has modified the role of children in the community with further implications for their potential role in DRR.

Children's Role in Disaster Preparedness at the Community Level

Children identified both early and stress indicators of food shortage, which included late onset of the rainy season, poor rainfall patterns, dwindling household stocks, grain shortages and escalation of grain prices.

> *There're many signs of an impending starvation. If there are no rains by Christmas time, then we are likely to have poor harvests.*
>
> —Boy (15)

Despite the general knowledge children had about disaster early warning signs, they were not invited to community meetings, which are open ostensibly to all residents in the ward; children were not invited because the meetings were said to be for adults. However, it is at these meetings where matters of importance including food aid targeting and distribution are discussed. Yet, participating in general meetings was not seen as beneficial for children, even among some of the children themselves, as demonstrated by the following:

> *We shouldn't have a combined meeting with the parents because adults will be discussing issues that are to do with adults. Children shouldn't argue with adults…. The best thing would be for one adult to consult with us at school and then we tell him/her our problems which he/she can relay at the community meeting.*
>
> —Girl (12)

Besides being awkward for children to attend general community meetings, children claimed adults would not give them space to be heard, and that they would not understand them.

> *If I were to attend these meetings to put across my ideas, they will say; 'That child is satisfied—that's why he's talking like that.'[7] Even if I have ideas, I just keep them in my heart. For instance, during distribution they*

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[7] This phrase is a literal translation meaning children who have enough food to eat have a tendency to show off and say anything that comes to their minds.

> *start with old people while the same people have livestock and other livelihood assets whereas children have none.*
>
> —Boy (14)

One parent remarked as follows:

> *I have never heard of a situation where parents discussed issues with children at the same level. It's not our culture… children can discuss with their teachers at school. Besides, children's participation in community activities should be balanced with their household roles such as looking after livestock, fetching firewood and water.*

A key informant from the government and another from the voluntary sector had this to say about the participation of children in development activities:

> *Although some strides have been made by civil society organizations to set up structures for children, the government is reluctant to see structures for children as this is seen as a threat to the family structure.*
>
> —Government official

> *While we appreciate the need for children not only to be involved but to be taken seriously when they make decisions, we need to be cautious in our approach. We need to take into account the socio-economic and cultural contexts of their respective communities. Make sure that the children are not harmed but protected in the process of advocating for their rights. You don't need to take a radical approach by waving the CRC in your hands, charging at parents. Parents are worried about the disruption of the family structure. The way forward is to demonstrate what children are capable of doing by setting up practical examples such as tree growing.*
>
> —Voluntary sector official

The varying perspectives as to how children should interact with their parents demonstrate the importance of recognizing parents as the gatekeepers in children's disaster reduction. It would suggest that the role of the child in disaster reduction requires examination of the cultures of parenthood. Yet, children were conscious of the risks of going against their parents as the gatekeepers of the traditional values in their community. Emotional or physical harm in exercising and demanding their rights was one of the risks to which children alluded if they should be involved in decision-making with adults. However, that does not mean children were unwilling to have their ideas fed into decision-making structures. The idea of a separate structure, where children would meet as a group with one or two adult mediators or advisors taking note of their concerns to report to the community meetings, was said to be more plausible. Douglas (2006) has similarly illustrated the ability of young people to design and implement collective action change programs to improve their local areas, particularly when they have access to advice from a supportive adult.

Yet, it can be argued that separate structures for children and adults are no different from the existing situation; it simply maintains the current *status quo*—two disparate worlds—one for adults and the other for children. To do nothing about narrowing the gap between the two worlds is accepting adults' perceptions of children, which are normally characterized by manipulation, decoration and tokenism (Hart 1997; Mayo 2001). This situation results from, among other issues, adult attitudes and intransigence, lack of clarity of adult roles, and the nature of organizations (i.e., their formality, complexity, bureaucracy and internal politics) (Cavet and Sloper 2004).

The issue here is the extent to which the *status quo* increases the vulnerability of children to disasters. Children's dependence on adults reduces their capacity for self-organization. Narrowing the gap between the two worlds may not be an easy task as it requires a new consciousness. Both outsider and local "interventionists," who may be guided by Western modernity, need a sound and properly grounded socio-cultural and political consciousness to enable programs to be assimilated within local traditions. "Waving the CRC" to address power relations between adults and children is likely to be rejected, unless it is embedded in local child and adult traditions. Consideration must be given to the ways in which children are viewed in order to gain a proper understanding of their opinions, as well as the ways in which adults can facilitate their participation (Skivenes and Strandbu 2006).

Children's Involvement in Food Aid Distribution

At the time of the study, two aid agencies were frequently distributing food handouts. Agency A distributed maize meal, beans and cooking oil while Agency B distributed nutrimeal (a blend of corn, soya and beans for wet supplementary feeding.) Although children were not aware where the food came from, they appreciated the handouts since they prevented the children from starving.

The participants were quite happy with the specific handouts they were receiving from Agency A. However, the majority were not happy with the way the distribution was being done as they alleged that only half the number of children in each household received the rations. "Household power relations" played a role in having some children included or excluded from receiving food rations from Agency A. Those households that commanded some respect in the community had fewer problems with getting their children "put in the register" than those that did not. The latter were either mainly from the poorest households or those households that had no connections with the former.

> *In terms of distribution, I'm not happy because the registration process is flawed. Some people are deliberately left out of the register. Those who compile the registers may leave you out if they hate you. Orphans staying with grandparents or those without birth certificates are sometimes excluded.*
> —Girl (14)

The question of who receives food aid is related to targeting, which has been noted to be problematic in other studies in Africa and Asia (Imai 2007; Jayne et al. 2000). In addition, some participants asserted that Agency A should have included seed

packs as some people had not reserved any grains for seed. Further, regarding children's role during the distribution of food rations, they all said that as minors, they did not have a special role other than helping parents transport the rations home.

> *We don't have roles to play during distribution. We'll be seated and help them to transport rations home and sometimes we are chased away from the distribution point by local leaders… Our role is merely that of porters after our parents have received their rations.*
>
> —Girl (11)

Agency B was distributing nutrimeal, which was used to prepare porridge for children attending school. The porridge was prepared on the school premises by parents appointed by the community. However, pupils also prepared the porridge when parents were absent.

On palatability and preference, interviews revealed that children had no choice but to like the nutrimeal porridge, as they could not "refuse a gift." If they were consulted prior to the distribution, they might have preferred maize meal, beans or *kapenta* and cooking oil to nutrimeal porridge.

> *Agency B did not consult with us before they gave us the nutrimeal. Because we are starving we have no choice but to like the porridge. We can't refuse the porridge when we know too well that we don't have food at home. This is how we have liked the porridge. If Agency B had consulted with us prior to the distribution of the nutrimeal, I would have told them to deliver mealie-meal for* nsima*. Nsima isn't like porridge. If you eat* nsima *in the afternoon, you can still be satisfied till sunset and you can walk a long distance while porridge lasts for only a short while in the stomach and then is passed as 'urine' as it is so light. Porridge is good supplementary food if you have some food at home.*
>
> —Boy (13)

The key informants confirmed the lack of consultation with children and stakeholders at the local level. The choice of nutrimeal was made within the socio-economic and political contexts of the country, mainly due to the shortages of cooking oil, maize meal and beans. Besides, nutrimeal is said to have all the nutrients that a child needs. In normal circumstances, preferences in accordance with the people's culture would have been taken into account.

> *The choice to have nutrimeal distributed for wet supplementary feeding program for children at the primary school, lactating mothers, pregnant mothers and under-fives was a national strategy made within the context of food shortages and in conformity with the World Food Programme (WFP) standards. Other food stuffs like maize meal,* matemba *and beans are quite expensive. In addition, logistical considerations were taken into account. Beans would take the whole day to cook while nutrimeal takes ten minutes. This also means that beans would need more fuel as compared with*

> *nutrimeal. In any case, it would have been a waste of time to consult with children, as they would say whatever funny food they preferred, which we would not be able to provide.*
>
> —Voluntary agency official

The children refuted the voluntary agency officials' claim that they would have given silly or non-informed responses. They were of the opinion that "logistical considerations" would not have been a problem as their parents would have handled it. Avoiding consultation with children prior to the distribution of nutrimeal was easier for the food aid agency than addressing what the children wanted when they might not be able to fulfill a request. However, underlying this is a lack of "inclusiveness" of children's aspirations. Inclusiveness here does not imply responsibility, as that would not be expected of children. However, results show that children have a desire to be part of the decision-making process.

Recognizing that the logistics involved in preparation, nutrient content and shortages of basic commodities were taken into account, the decision to distribute nutrimeal was on humanitarian grounds, and healthy both politically and economically. Interviews with agency representatives revealed a reduction in malnutrition and increased school attendance arising from this strategy. However, the danger of not involving children prior to or during distribution of aid reinforces the belief that *adults know what is best for children, not children themselves.* Yet, the children's comments demonstrate the need to involve them not only in the needs assessment before the delivery of relief but throughout the disaster preparedness and response processes. In child supplementary feeding programs where children are directly affected, there is a need to consult them at every stage so that their felt needs are taken on board as outlined in the Sphere Standards (IFRC 2004). While the strategy in this situation was acceptable on humanitarian grounds, consultation with children would have brought some new insights regarding children's preferences as well as opened up their potential roles in the overall program.

This study has demonstrated children's desire to be actively involved in DRR activities, which entails both a social and a practical role. Yet, children's participation is problematic because participation impinges on cultural values. Limited or more constrained coping opportunities for girls as compared with boys, exclusion of children in discussion of disaster preparedness matters, and their role as merely porters during food distribution are examples of some cultural impediments to the full participation of children. Further, socio-cultural roles such as herding cattle and goats, and fetching water and firewood, which are essential in livelihood assets creation and protection, will be unlikely to change; they need careful negotiation to create space for participation. Non-interventionist approaches, where programs work with children *in situ* and without necessarily creating artificial structures, are of value here. However, this demands resisting the lure of supply-led programs driven by Western notions of charity, or by the wider aid industry.

Conclusion

Involvement of children in DRR activities is among the new policy discussions following the adoption of the Hyogo Framework for Action. The growing realization of the connection between disaster recovery and localized resilience has also added a new impetus to the concept of children's involvement in DRR programs. Since children often constitute a large proportion of the affected population in disasters, ignoring their capacity means undermining the community as a whole (Penrose and Takaki 2006).

Because of new global statements on the matter, it might be taken for granted that children must be involved in DRR activities. Yet, effective children's involvement demands closer analysis of local cultures. The unresolved problems in participatory development are likely to surface in DRR, particularly in the case of children. Past and current approaches have suffered from tokenistic approaches, where children are given a voice, but have little choice about the subject, the style of communicating it or any say in organizing the occasion (Mayo 2001). Concentrating on the justification of children's participation is likely to lock us into circular reasoning where we repeat statements in different or stronger terms. Instead, the way forward is to demonstrate "children's resilience actions"—what children are capable of doing at the individual and community level as part of human agency. Further research is necessary to determine ways in which children's contributions to disaster resilience can be strengthened. For example, in what ways could unstructured, *ad hoc* processes be used in DRR in a rural setting like Siachilaba and how could these inform ways of formally involving children. This may involve ongoing assessment of local cultures' efforts to build community resilience that involves children.

This study has demonstrated that children have a desire to contribute to building the resilience of their community. The local cultural context can be either a major barrier or major opportunity depending on how the community characterizes the role of children. Results show that children represent invaluable assets and partners, although in most instances they play a subordinate role to adults. This subordinate role is based on the typically well-founded argument that adults have greater experience, greater capacity, greater responsibility, greater commitment of the whole family, and the legal status or traditional authority of parenting. In view of the increasing number of children orphaned by HIV and AIDS and heading households, however, children's involvement in DRR is an important, indeed vital, consideration.

Children's positive role in livelihood asset creation and protection, as well as their awareness of DRR issues, provides a unique opportunity to involve them. Yet, these are intertwined with the culture and traditions of the local community. Dealing with family and cultural pressures imposed on children may therefore be inherent aspects of community-based DRR programs. Ignoring or postponing addressing these contextual issues will mean that the input of children as partners in building disaster-resilient communities is likely to be of little consequence.

Understanding and nurturing children as inherent participants in DRR activities is an important step towards improved survival in vulnerable environments. Achieving this entails integration of parental and community activities with DRR activities. Although there is need for further investigation regarding the practical contribution children can make, this study suggests that they can contribute to community resilience. Interviews revealed that the added value of children as aware assets can include off- and on-farm labor contribution, income creation through fishing, hunting and basket making, as well as their role as sources of information. It is, therefore appropriate to promote involvement of children in DRR activities as they are already successfully involved in livelihood strengthening and protection, which are key drivers of vulnerability reduction.

Endnote

i. As Tonga society is matrilineal, when a man dies, the younger or elder brother or the religious or ritual leader (*simuzimu)* in the clan cleanses the widow (*mukamufu*) through sexual intercourse (*kwiinzya* or *kusalazya*) and inherits her. As in other parts of Zimbabwe, widow inheritance (*kunjila munhanda*) or levirate marriage (Malungo 2001) has become a less common ritual practice due to HIV and AIDS awareness (Chikovore and Mbizvo 1999; Foster and Williamson 2000). People have become increasingly aware that if the widow's late husband died of HIV and AIDS-related illness, if the surviving wife is HIV-positive there is a risk that the inheritor would be infected. And, the opposite is true if the inheritor is HIV-positive. Alternative ways of sexual cleansing have emerged such as what may be termed as "body stretching" or "massaging" (*koolola)* or through blessings from a Christian church leader.

Acknowledgements

Siambabala Bernard Manyena is a Research Associate at the Disaster and Development Centre, Northumbria University. His research interests are in disaster resilience, livelihoods and humanitarian assistance. He is also pursuing a Ph.D. in disaster resilience and humanitarian action.

Maureen Fordham is a Senior Lecturer in Disaster Management at Northumbria University and has been working with disaster-related research since 1988. Specialist areas of interest include gender, children's involvement in disaster management, disability issues and flood-related research generally.

Andrew Collins is Reader in Disaster and Development at Northumbria University and Director of the Disaster and Development Centre. His research interests are in health-related aspects of disaster, development and risk. He has been engaged in development, research and consultancy activity in Southern Africa since 1986.

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